

Search history

- Search 1: FT=fracture and bone* and (ball or sphere*) and (pin* or screw*) and (seat or groove) and clamp* (Results 122)
- Search 2: FT=external and fixat* and bone and fracture and (ball or sphere) and arm (Results 32)
- Search 3: FT=external and fixat* and (bone or fracture) and (ball or sphere) (Results 805)
- Search 4: FT=external and fixat* and (bone or fracture) and (ball or sphere) and arm (Results 144)

- session log created:30 May 2017 04:27:03

- Update information:

PatBase Coverage at Update 2017 Week 20 (Year 2017 Week 20)

PatBase Coverage includes 100+ million documents from over 100 patent-issuing authorities and includes patent applications, granted patents, utility models and designs â€” detailed in the below coverage listings.

Major countries

Publishing body	Document type	Bibliographic publication date		Full-Text publication date	
		Earliest	Latest	Earliest	Latest
CN China	Patent Applications	19850910	20170517	19850910	20170517
	Patents	19930106	20170517	19930106	20170517
	Utility Model Applications	19850409	19921230	19850409	19921230
	Utility Models	19930106	20170517	19930106	20170517
	Designs	19850910	20170517	19850910	20150819
DE Germany	Patent Applications	19211221	20170518	19650317	20170518
	Patents	18770101	20170518	19200113	20170518
	Utility Models	19280626	20170518	19610831	20170518
	EP/WO Patents	19871217	20140410		
EP European Patent Office	Patent Applications	19781220	20170517	19781220	20170517
	Patents	19800109	20170517	19800109	20170517
FR France	Patent Applications	19690307	20170519	19810102	20170428
	Patents	18550227	20170519	19600502	20170512
	Utility Model Applications	19720107	20170519	19800104	20170428
	Utility Models	19730112	20170519	19690802	20170512
GB United Kingdom	Unpublished Patent Applications	19830209	20170426		
	Patent Applications	19790104	20170517	19790104	20170503
	Patents	17820704	20170517	19020911	19811216
		19710116	20170518	19930108	20170427

	Patent Applications				
	Patents	19281026	20170426	19960529	20170510
	Utility Model Applications	19710723	20060209	19990817	20031107
	Utility Models	19640805	19960329		
	Registered Utility Models	19940726	20170427	19940726	20101216
	Designs	20141110	20170515		
KR Republic of Korea	Patent Applications	19781209	20170519	19940103	20170519
	Patents	19700820	20170519	19970104	20170519
	Utility Model Applications	19781127	20170519	19940730	20170519
	Utility Models	19780110	20170519	19970104	20170519
US United States of America	Patent Applications	20010315	20170518	20010315	20170518
	Patents	18360101	20170516	18560617	20170516
	Designs	18650912	20170516	19770719	20170516
WO World Intellectual Property Organization (WIPO)	Patent Applications	19781019	20170518	19781019	20170518
	Designs	20151127	20170519	20151127	20170519

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- **search:** SS1 FT=fracture and bone* and (ball or spher*) and (pin* or screw*) and (seat or groove) and clamp* (Results 122)
- List: SS1 1–50 (FT=fracture and bone* and (ball or spher*) and (pin* or screw*) and (seat or groove) and clamp*) (Results 122)

1) Family number: 48147546 (US2011081496A)

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Title:	PERFLUOROPOLYETHER COATING COMPOSITION FOR HARD SURFACES					
Priority:	AU20100269150	20100712	AU20100269152	20100712	AU20100269155	20100712
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Family:

Publication number	Publication date	Application number	Application date
AU2010269150 AA	20110113	AU20100269150	20100712
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Probable Assignee: MILUX HOLDING SA

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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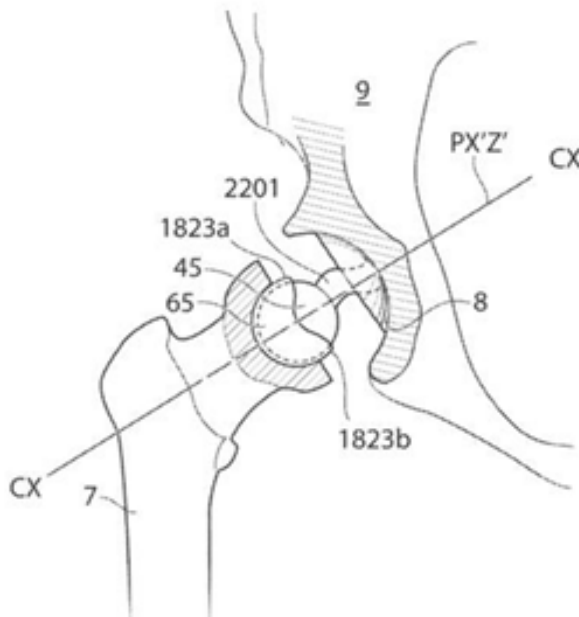
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Abstract:

Source: US2011081496A A composition and method of treating substrates, in particular substrates having a hard surface such as ceramics, metal or glass, to render them water, oil, stain, and dirt repellent is described.

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Fig.16d



2) Family number: 32843968 (US2006084982A)

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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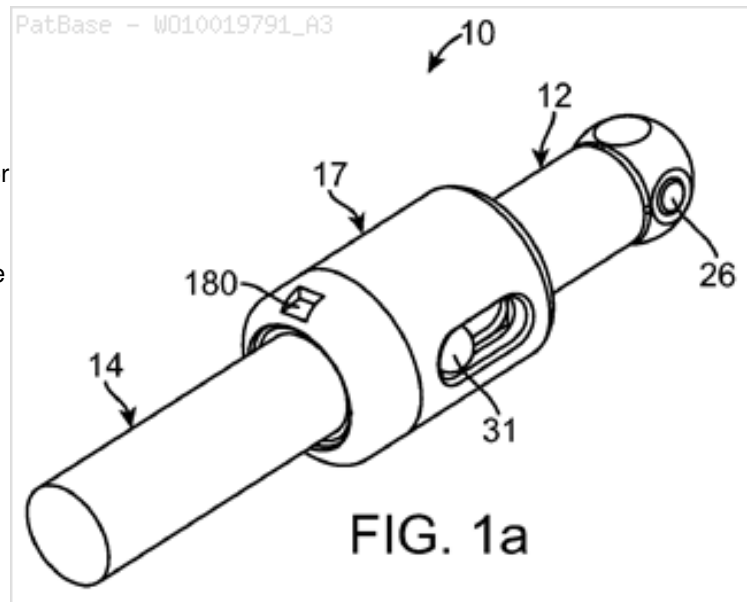
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Abstract:

Source: US2006084982A Systems and devices for dynamically stabilizing the spine are provided. The systems include a superior component for attachment to a superior vertebra of a spinal motion segment and an inferior component for attachment to an inferior vertebral of a spinal motion segment. The interconnection between the two components enables the spinal motion segment to move in a manner that mimics the natural motion of the spinal motion segment. Methods are also provided for stabilizing the spine and for implanting the subject systems.



3) Family number: 32099125 (US2003225344A)

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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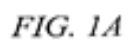
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Source: US2003225344A An apparatus for removing portions of bone marrow from a bone is provided. The apparatus includes a housing and a hollow drive shaft operable to engage a gear assembly. The hollow drive shaft includes a first end operable to penetrate the bone and a second end operable to allow retrieval of portions of bone and bone marrow. The apparatus also includes a removable trocar. The removable trocar includes an inner channel operable to convey portions of bone and bone marrow. The gear assembly is able to engage and rotate the hollow drive shaft. A motor operable to drive the hollow drive shaft into the bone marrow by rotation of the hollow drive shaft and a power supply and associated circuitry operable to power the motor are also included.



0) US2004102775A – BONE PLATES WITH SLOTS

4) Family number: 30589469 (US2004102775A)

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Title: BONE PLATES WITH SLOTS

Priority:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC

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A61F2/42 A61F2/46 A61F5/00 (Advanced/Invention);
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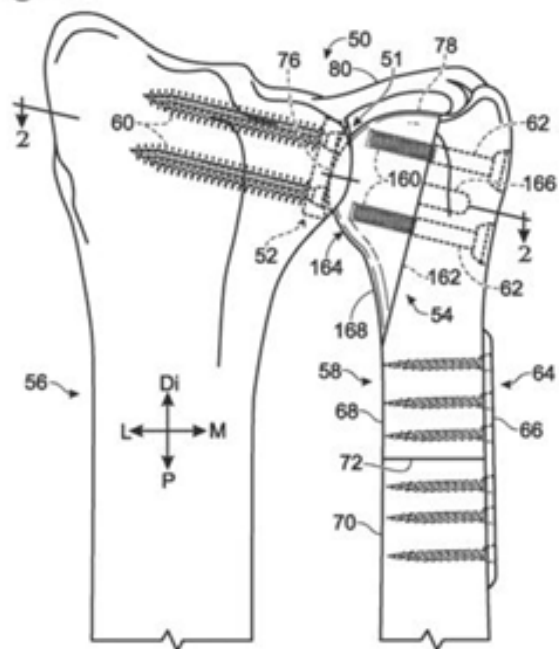
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Abstract:

Source: US2004102775A Bone plates having slots configured to permit positioning of the bone plates on bone, and methods of using the bone plates for bone fixation.

PatBase - W010054400_A1

Fig. 1



0) US2003014054A – SYSTEM FOR FUSING JOINTS

5) Family number: 24271992 (US2003014054A)

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Title: SYSTEM FOR FUSING JOINTS

Priority:

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Agent(s): KOLISCH HARTWELL PC

Designated states: AT AU BE CH DE DK ES FR GB GR IE IT JP KR LI LU MC NL PT SE US

International class
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US class: 1/1 411/115 411/263 411/307 411/395 411/413 411/415 411/423 411/426 470/10 470/10P 606/101 606/102 606/103 606/105 606/232 606/280 606/281 606/283 606/284 606/300 606/300P 606/304 606/305 606/316 606/317 606/317P 606/317S 606/318 606/321 606/328 606/329 606/54 606/57 606/59 606/60 606/62 606/64 606/64S 606/65 606/67 606/70 606/71 606/72 606/73 606/74 606/75 606/76 606/77 606/86 606/86 606/86.00R 606/86B 606/86R 606/87 606/87S 606/916 623/16 623/16.11 623/16.110P 623/19 623/19.11 623/19.110P 623/19.12 623/19.120S 623/19.14 623/19.140S 623/21 623/21.15 623/23.5 623/908 623/908S 623/909 D24/145

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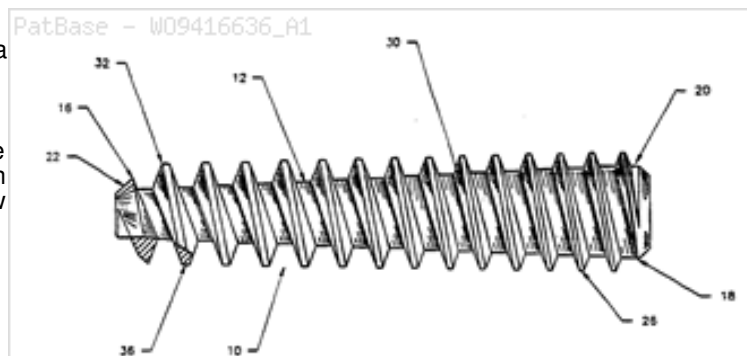
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Abstract:

Source: US2003014054A A method of fusing a joint between two bones, comprising boring a hole through one of the bones across the joint therebetween and into the other bone, placing the leading end of a screw into the hole, where the screw has a threaded region having a pitch that is larger toward a leading end of the screw and smaller toward a trailing end of the screw, and driving the screw into the bone until the threaded region spans the joint.



0) US2005131409A – LINKED BILATERAL SPINAL FACET IMPLANTS AND METH...

6) Family number: 33397877 (US2005131409A)

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Title: LINKED BILATERAL SPINAL FACET IMPLANTS AND METHODS OF USE

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Family:

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Probable Assignee: GLOBUS MEDICAL INC

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HELGERSON JOEL R ; SKINLO DAVID M ; GOBLE E MARLOWE ; MARLOWE GOBLE E ; HEIGERSON JOEL R ; JUSTIN DANILE F ; TRIPLETT DANIEL J

Assignee(s): TRIPLEPOINT CAPITAL LLC ; FACET SOLUTIONS INC LOGAN ; FALLIN T

Inventor(s):^(std): CHERVITZ ALAN ; CHORVITZ ALAN ; FALLIN T W ; FALLIN T WADE ; FAUTH ANDREW R ; GERBEC DANIEL E ; HELGERSON JOEL R ; DEVER JOEL ; HELGERSON JOEL R ; HOY ROBERT W ; JUSTIN DANIEL F ; MEIBOS DAVID W ; TRIPLETT DANIEL J ; SKINLO DAVID M ; JUSTIN DANILE F ; GOBLE E MARLOWE

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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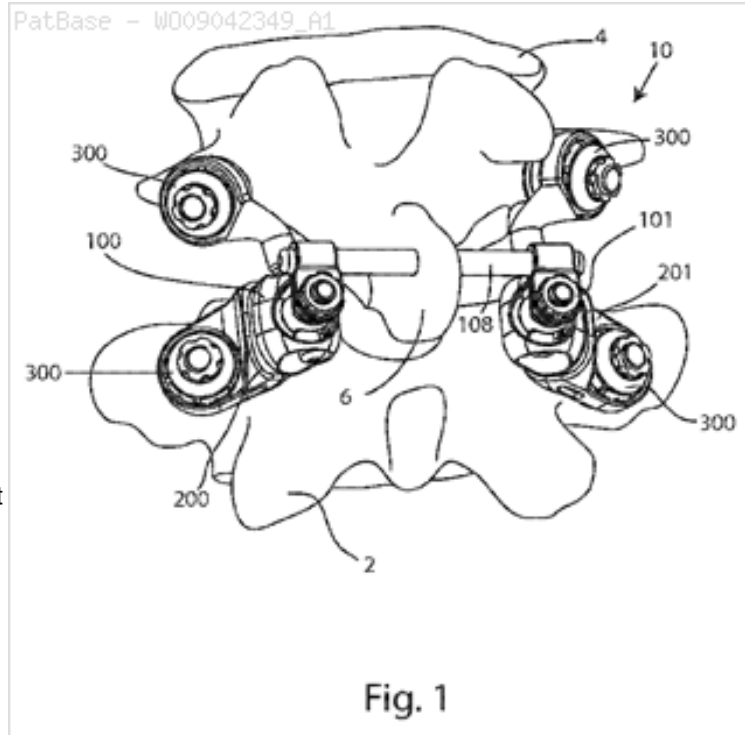
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Abstract:

Source: US2005131409A Superior and/or inferior facets of one or more facet joints may be replaced by superior and/or inferior facet joint prostheses. In one embodiment, a kit of superior or inferior prostheses is provided, in which the prostheses have at least two dimensions that vary among members of the kit independently of each other. Each prosthesis may have a bone engaging surface having a surface that is polyaxially rotatable against a corresponding resection of a vertebra. Each prosthesis may also have an articulating surface shaped such that, after attachment to the spine, the replaced or partially replaced facet joints provide a larger medial-lateral range of motion when the spine is flexed than when the spine is extended. Crosslinks may be used to connect left and right prosthesis together in such a manner that they are stabilized in a position in which they are seated directly against the vertebra.



0) US2005228326A – HEAD-TO-HEAD CONNECTOR SPINAL FIXATION SYSTEM

7) Family number: 32303172 (US2005228326A)

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Title: HEAD-TO-HEAD CONNECTOR SPINAL FIXATION SYSTEM

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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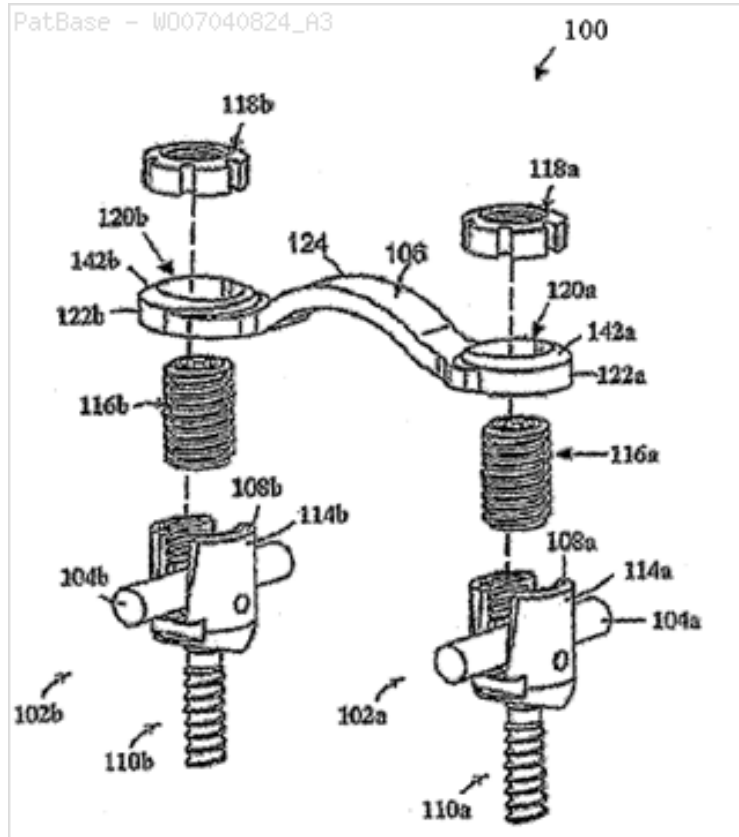
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GB2486608, GB2486608, FR3010893, EP2724679, EP2455031, EP2322107,
EP2303164, EP1935358, CN103845107, CN103549991, CN102458279, CN102458279,
AU2007307291,

Abstract:

Source: US2005228326A A spinal fixation system comprising at least two bone anchors, a rod connecting the bone anchors and a connecting plate extending from a proximal surface of at least one of the bone anchors. A method of fixing vertebrae relative to each other comprising the steps of: implanting bone anchors in two adjacent vertebrae, each bone anchor having a rod receiving portion; placing a rod in the rod receiving portions, thereby connecting the bone anchors; threadably engaging set screws in the rod receiving portions of at least a portion of the bone anchors, thereby fixing the rod to the bone anchors; mating one end of a connecting plate to a proximal bearing surface of at least a portion of the bone anchors; and engaging a cap with at least a portion of the set screws, thereby fixing the connecting plate to the bone anchors.



8) Family number: 38524553 (US2007233140A)

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Title: FEMORAL ADJUSTMENT DEVICE AND ASSOCIATED METHOD

Priority:

EP20070809326	20070605	EP20120156937	20120224	JP20130537691	20111021
GB20120007103	20100929	EP20130710642	20130220	JP20110511109T	20090529
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: BIOMET MFG LLC

Assignee(s):^(std): BELCHER NATHAN EMICK ; BEREND MICHAEL E ; BEREND KEITH R ; BIOMET MANUFACTURING CORP ; BIOMET SPORTS MEDICINE LLC ; BIOMET MFG LLC ; HAMMAN WILLIAM J ; HERSHBERGER TROY W ; FOX DUKE A ; BOLLINGER MARK A ; KATRANA NICHOLAS J ; DONALDSON THOMAS ; CLOHISY JOHN C ; KABATA TAMON ; DEMING SCOTT ; DURCHOLZ BRADLEY T ; FRIEND CHRISTOPHER W ; IBM ; DEMING J SCOTT ; GELAUE FREDERIK ; CLIJMANS TIM ; BLOMET MFG LLC ; METZGER ROBERT ; SCHOENEFELD RYAN J ; PERRY LANCE D ; LOMBARDI ADOLPH V ; SHEEHAN ALEXANDER BRANTLEY ; SALYER BRIAN D ; KIPHART RORY ; MERIDEW JASON D ; SCHMIDT KURT ; RAISH THOMAS C ; UTHGENANNT BRIAN A ; STONE KEVIN T ; MAY BRIAN M ; SIEBENECK TONY ; SMITH AARON P ; WHITE JOHN R ; MORRISON BRYAN ; WITT TYLER D ; SLONE W JASON ; VANASSE THOMAS M ; LOMBARDI JR ADOLPH V ; KEPPLER LOUIS J ; MAXSON WILLIAM ; PIERCE ANDREW L ; SERBAN RADU ; MUNSTERMAN MATTHEW D ; WOLFE ALEXANDER P ; NAIRUS JAMES G ; NYCZ JEFFREY H ; SHEFFER GARRETT A ; WORRELL KAI ROBERT ; MAUCH THOMAS J ; MITOLOGICS ; UNIV VERSAILLES SAINT QUENTIN EN YVELINES UVSQ ; SUSARABA JOHN M ; BEREND KEITH ; BELCHER NATHAN E ; BIOMET MFG CORP ; CATANZARITE JOSHUA B ; CANADA MICHAEL ; CENTRE NAT RECH SCIENT ; VANASSE THOMAS

Assignee(s): LA SOC THERAPTOSIS ; CROSS MEDICAL PRODUCTS LLC ; EBI HOLDINGS LLC ; EBI LLC ; EBI MEDICAL SYSTEMS LLC ; ELECTR O BIOLOGY LLC ; IMPLANT INNOVATIONS HOLDINGS LLC ; INTERPORE CROSS INT LLC ; INTERPORE SPINE LTD ; DE VERSAILLES SAINT QUENTIN EN YVELINES UNIV ; CENTER NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS ; INT BUSINESS MACHINES CORP ; BIOMET MFG ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURED PARTIES AS ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURE ; LVB ACQUISITION INC ; KIRSCHNER MEDICAL CORP ; DE VERSAILLES SAINT QUENTIN EN YVELINES UVSQ UNIV ; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS ; BIOMET MANUFACTURING LLC ; BIOMET INC ; BIOMET HOLDINGS LTD ; BIOMET INT LTD ; BIOMET LEASING INC ; BIOMET MICROFIXATION LLC ; BIOMET ORTHOPEDICS LLC ; BIOMET TRAVEL INC ; BIOMET MFG LLC WARSAW ; BIOMET MANUFACTURING CORP ; BIOELECTRON INC ; BIOMET 3I LLC ; BIOMET BIOLOGICS LLC ; BIOMET EUROPE LTD ; BIOMET FAIR LAWN LLC ; BIOMET FLORIDA SERVICES LLC

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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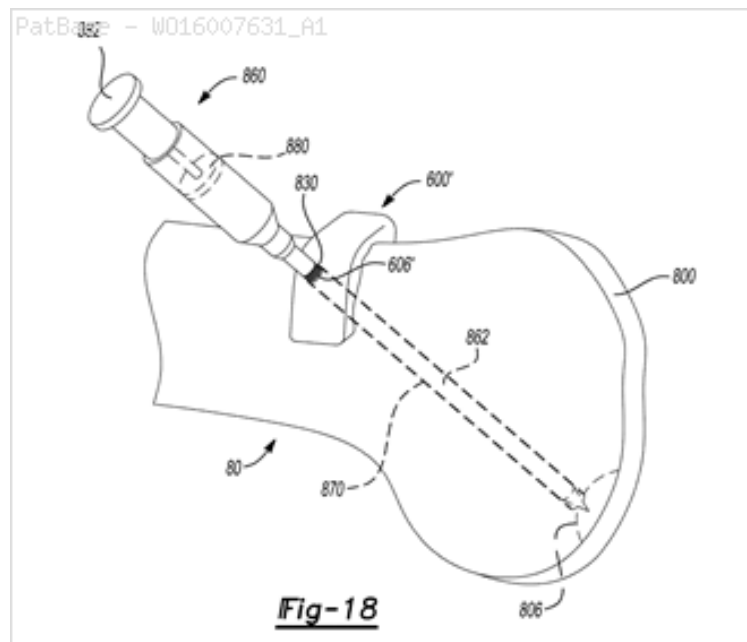
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Abstract:

Source: US2007233140A A femoral adjustment device to balance a flexion gap. The device includes a body attachable to a distal femur, the body having a cutting guide and an adjustment mechanism operable to balance the flexion gap, wherein upon balancing the flexion gap, the cutting guide is operable to guide at least one cut in the distal femur.



0) US2008287998A – POLYAXIAL BONE SCREW

9) Family number: 42524981 (US2008287998A)

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Title: POLYAXIAL BONE SCREW

Priority: US20070749615 20070516 US20080114515P 20081114 US20090484054 20090612
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WO12006554 A3	20120419	WO2011US43403	20110708

Probable Assignee: SPINAL LLC

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Assignee(s): SPINAL LLC

Inventor(s):^(std): DOUBLER ROBERT L ; HAMMILL JOHN E ; HAMMILL JOHN E SR ; HAMMILL SR JOHN E

Inventor(s): JOHN E HAMMILL SR ; ROBERT L DOUBLER ; HAMMILL SR

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SCHLICH GEORGE WILLIAM; Schlich George William; MCHALE AND SLAVIN PA; MCHALE AND SLAVIN P A; SLAVIN MICHAEL A; CAMPBELL A KEITH ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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A61B17/04 A61B17/56 A61B17/58 A61B17/68 A61B17/70 (Core/Invention)

CPC: A61B17/7038 A61B17/7034 A61B17/863 A61B17/864 A61B17/7035 A61B17/7037
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European class: A61B17/70B2L A61B17/70B5B A61B17/70B5D A61B17/86B2 K61B17/70B2 K61B17/86D

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Abstract:

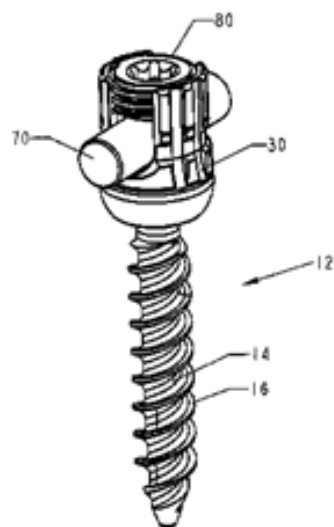
Source: US2008287998A A fastening system for bone screws used in spinal fixation systems for reshaping the spine of a patient. The bone screw has threads on one end for anchoring in the spine. The other end has a spherical head with a multi sided recess formed therein for engagement with an appropriate driving tool. The system includes a stabilizing rod, a saddle member, a cap member and a set screw with at least one bone screw having a outer diameter that exceeds the diameter of a cavity formed in the saddle, wherein placement of the bone screw is made possible by matching the threads of the set screw to the threads of the bone screw. The head of the bone screw providing proper positioning of the stabilization rod within the patient.

PatBase - W012006554_A2

WO 2012/06554

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PCT/US2011/015403

*Fig. 1*

10) Family number: 32084033 (US2005154392A)

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Title: FRACTURE FIXATION SYSTEM**Priority:** EP20040756245 20040625 US20040754462 20040108 US20070655666 20070119
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Family:	Publication number	Publication date	Application number	Application date
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	<u>CA2552746 AA</u>	20060706	CA20042552746	20040625
	<u>CA2552746 C</u>	20120306	CA20042552746	20040625
	<u>DE602004048710 D1</u>	20160414	DE200460048710T	20040625
	<u>EP1706049 A2</u>	20061004	EP20040756245	20040625
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	<u>EP1706049 B1</u>	20160302	EP20040756245	20040625
	<u>ES2565234 T3</u>	20160401	ES20040756245T	20040625
	<u>JP2007517584 T2</u>	20070705	JP20060549226T	20040625
	<u>US2005154392 AA</u>	20050714	US20040754462	20040108
	<u>US2007118126 AA</u>	20070524	US20070655666	20070119
	<u>US7195633 BB</u>	20070327	US20040754462	20040108
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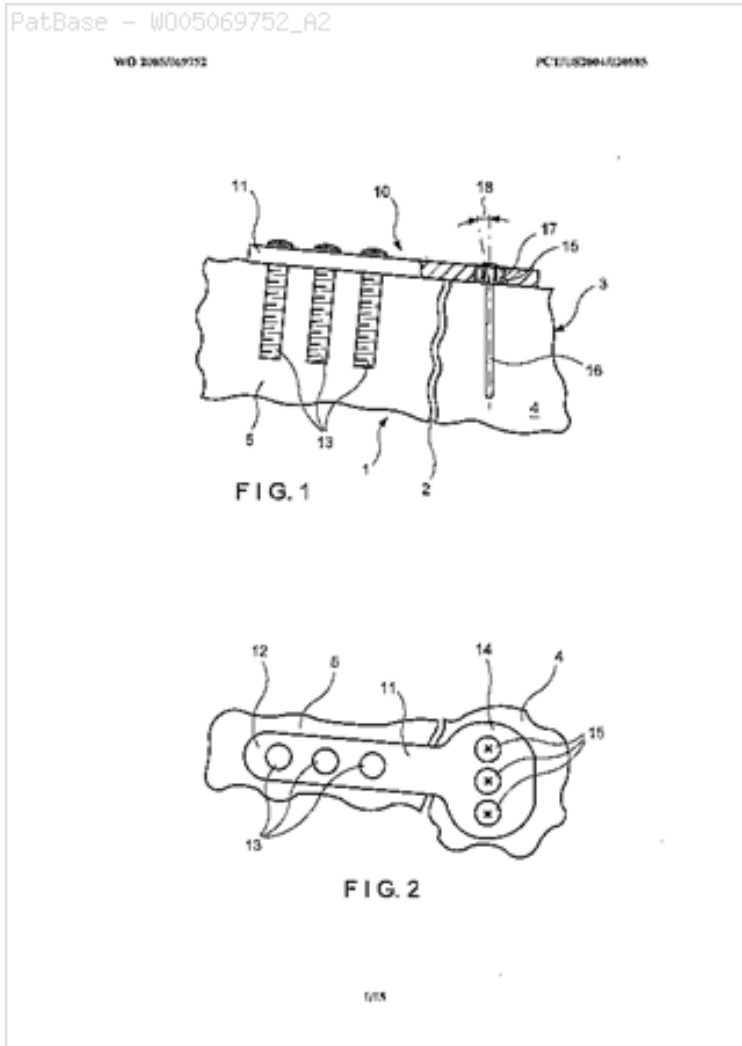
Probable Assignee: DAVID MEDOFF**Assignee(s):^(std):** DAVID MEDOFF ; LARS TELLMAN ; MEDOFF DAVID ; MEDOFF ROBERT ; MEDOFF ROBERT J ; TELLMAN LARS G ; ROBERT MEDOFF ; TELLMAN LARS**Assignee(s):** MEDOFF ROBERT J KAILUA ; TRIMED INC ; MEDOFF DAVID VALENCIA**Inventor(s):^(std):** LARS G TELLMAN ; MEDOFF DAVID ; MEDOFF ROBERT J ; ROBERT J MEDOFF ; TELLMAN LARS G**Inventor(s):** TELLMAN LARS ; MEDOFF ROBERT J SUITE 506 KAILUA ; MEDOFF ROBERT**Agent(s):** WRAYS; MARKS AND CLERK; RICHARDS JOHN; DE ELZABURU ALBERTO; JULIAN H COHEN LADAS AND PARRY; LADAS AND PARRY; LADAS AND PARRY LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class** A61B17/56 A61B17/58 A61B17/80 A61F2/30 F16B35/06 (Advanced/Invention);
(IPC 8-9); A61B17/56 A61B17/68 A61F2/30 (Core/Invention)**International class** A61B17/58 A61B17/80
(IPC 1-7);**CPC:** A61B17/8047 A61B17/8061**European class:** A61B17/80D6 K61B17/80H**US class:** 606/287 606/309 606/309P 606/326 606/326S 606/327 606/328 606/328S 606/69 606/70[Classification Explorer](#)**Cited documents:** US6454769 BB, US6364882 BA, US6358250 BA, US6235033 BA, US6206882 BA, US6030389 A, US5954722 A, US5647873 A, US5607426 A, US5053036 A, US4388921 A, US2006241618 AA, US2005251137 AA, US2005049594 AA, US2005033298 AA, US2004267261 AA, US2003199876 AA, US2003105461 AA, US2003083661 AA,

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Abstract:

Source: US2005154392A A fracture fixation system in which a plate is secured to stable bone and posts are inserted at varying angles into an unstable bone fragment by engaging in rotatable bearings which are fixedly secured in the plate when the posts are fully engaged in the bone fragment. The bearings are formed as truncated spherical members having a number of longitudinal slots extending partway along the length of the bearing to form petals which are expanded outwardly when the posts are advanced in the bearing to produce non-uniform distribution of forces between the bearing and the plate which generate force couples to resist angulation of the posts and loss of fracture fixation. Various other ways of producing non-uniform force distribution are described.



0) US2007055274A – APPARATUS AND METHODS FOR TREATING BONE

11) Family number: 34083610 (US2007055274A)

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Title: APPARATUS AND METHODS FOR TREATING BONE

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Assignee(s): SYNTHES (USA) ; DEPUY SPINE LLC ; SYNTHES U S A ; HFSC COMPANY ; HAND INNOVATIONS LLC

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Inventor(s): RENOIT ALFRED ; STOLL THIERY ; ROTHLSBERGER ERICH AND ; NATHYS STEFAN

Agent(s): PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP; SPARING ROEHL HENSELER; LUSUARDI WERTHER ET AL; LUSUARDI WERTHER; JONES DAY; STROOCK AND LAVAN LLP; MCKEON MEUNIER CARLIN AND CURFMAN; STRADLEY RONON STEVENS AND YOUNG LLP; NUTTER MCCLENNEN AND FISH LLP; ROTHERY BRIAN M ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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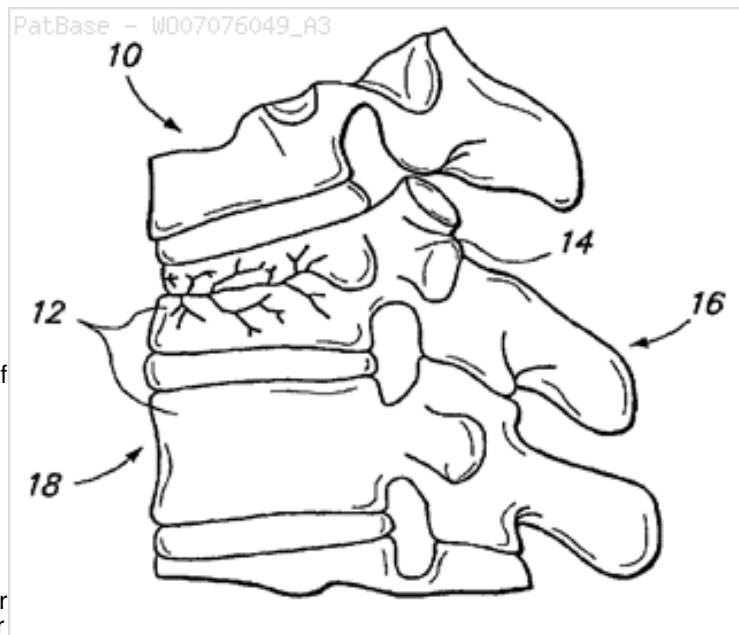
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any other fiber may be coiled, woven, matted, tangled or otherwise formed into a wool-like mass or body having a desired configuration. Expansion of the expandable member within the vertebral body or other bone may reposition the fractured bone to a desired height and augment the bone to maintain the desired height. A bone cement or other filler can be added to further treat and stabilize the vertebral body or other bone.



12) Family number: 31873333 (US2005096653A)

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Title: BONE FIXATION SYSTEM WITH LOW PROFILE FASTENER**Priority:** EP20040800758 20041103 EP20110169372 20041103 US20030701349 20031103
WO2004US36819 20041103 US20080799469 20080509**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2004285611 AA</u>	20050512	AU20040285611	20041103
<u>AU2004285611 BB</u>	20101021	AU20040285611	20041103
<u>CA2544021 AA</u>	20060427	CA20042544021	20041103
<u>CA2544021 C</u>	20121002	CA20042544021	20041103
<u>DE602004036644 D1</u>	20120419	DE200460036644T	20041103
<u>DE602004046373 D1</u>	20150219	DE200460046373T	20041103
<u>EP1682016 A2</u>	20060726	EP20040800758	20041103
<u>EP1682016 A4</u>	20081224	EP20040800758	20041103
<u>EP1682016 B1</u>	20120222	EP20040800758	20041103
<u>EP2371312 A1</u>	20111005	EP20110169372	20041103
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<u>ES2531041 T3</u>	20150310	ES20110169372T	20041103
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<u>WO05041821 A2</u>	20050512	WO2004US36819	20041103
<u>WO05041821 A3</u>	20051013	WO2004US36819	20041103

Probable Assignee: SPINAL LLC**Assignee(s):**^(std): SPINAL LLC**Assignee(s):** SPINAL LLC TOLEDO ; DOUBLER ROBERT L ; HAMMILL JOHN E ; HAMMILL JOHN E SR ; SILICON VALLEY BANK**Inventor(s):**^(std): DOUBLER ROBERT ; DOUBLER ROBERT L ; HAMMILL JOHN E ; HAMMILL JOHN E SR ; HAMMILL SR JOHN E ; JOHN E SR HAMMILL ; ROBERT L DOUBLER**Inventor(s):** HAMMILL JOHN E SR ROSSFORD ; DOUBLER ROBERT L IDA ; DOUBLER ROBERT L MONROE ; HAMMILL JOHN**Agent(s):** DAVIES COLLISON CAVE PTY LTD; DAVIES COLLISON CAVE; FINLAYSON AND SINGLEHURST; LAUER JOACHIM DIPL PHYS DRRERNAT; WITTMANN HERNANDEZ PATENTANWAELTE PARTNERSCHAFT MBB; SCHLICH GEORGE WILLIAM; SCHLICH GEORGE; IZQUIERDO MARIA ALICIA; MICHAEL A SLAVIN ESQ MCHALE AND SLAVIN PA; MCHALE AND SLAVIN PA; CARTER DELUCA FARRELL AND SCHMIDT LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
^{(IPC 8-9):} A61B17/56 A61B17/58 A61B17/68 A61B17/70 A61F2/30 (Advanced/Invention);
A61B17/56 A61B17/58 A61B17/70 A61F2/30 (Core/Invention);
A61F (Subclass/Invention)**International class**
^{(IPC 1-7):} A61B17/56 A61B17/58 A61F A61F2/30

CPC: A61B17/7011 A61B17/7032 A61B17/7037 A61B17/7041
European class: A61B17/70B2 A61B17/70B5B A61B17/70B6 K61B17/70B1G K61B17/70B2 K61B17/70B6
US class: 606/277 606/309 606/60 606/61

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Abstract:

Source: US2005096653A A low profile orthopedic device is used to fix and stabilize bones to correct anomalies in skeletal structure occurring naturally or by trauma. Bone screws are screwed into bones by application of torque. Clamps are movably attached to the screws. Each clamp includes a compression ring. A connecting rod connects several screws through slots in the clamps. The clamps are tightened to hold the rod and the heads in a pre-selected position by linear movement of the compression rings.

PatBase - W005041821_A2

WO 2005/041821

PCT/US2004/004619

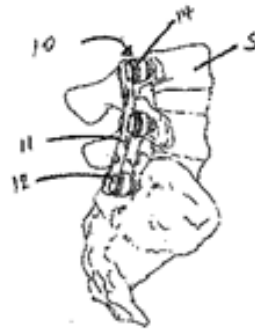


FIG 1

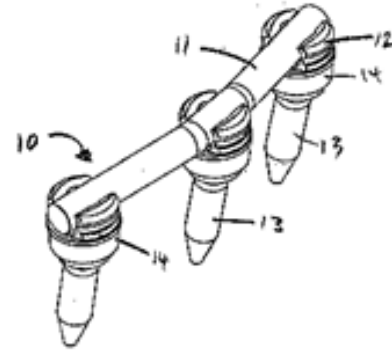


FIG. 2

13) Family number: 30726788 (US2004138659A)

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Title: EXTERNAL FIXATION APPARATUS AND METHOD

Priority: US20030439195P 20030110 US20030607010 20030626 US20070823178 20070627
WO2003US39307 20031210

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2003296463 AA</u>	20040810	AU20030296463	20031210
	<u>AU2003296463 BB</u>	20090903	AU20030296463	20031210
	<u>CA2512074 AA</u>	20050629	CA20032512074	20031210
	<u>EP1581127 A1</u>	20051005	EP20030815197	20031210
	<u>JP2006512970 T2</u>	20060420	JP20040566531T	20031210
	<u>US2004138659 AA</u>	20040715	US20030607010	20030626
	<u>US2007255280 AA</u>	20071101	US20070823178	20070627
	<u>US7608074 BB</u>	20091027	US20030607010	20030626
	<u>US8382755 BB</u>	20130226	US20070823178	20070627
	<u>WO04062514 A1</u>	20040729	WO2003US39307	20031210

Probable Assignee: SMITH AND NEPHEW INC

Assignee(s):^(std): AUSTIN ED ; AUSTIN GENE EDWARD ; JAMES ANTHONY ; JAMES ANTHONY H ; MASON JOHNNY ; MASON JOHNNY R ; RANKHORN WAYNE ; RODRIGUEZ CARLOS ; SMITH AND NEPHEW INC

Assignee(s): N A

Inventor(s):^(std): AUSTIN ED ; AUSTIN GENE EDWARD ; MASON JOHNNY ; MASON JOHNNY R ; RANKHORN WAYNE ; RODRIGUEZ CARLOS ; JAMES ANTHONY ; JAMES ANTHONY H

Inventor(s): JOHNNY MASON ; ANTHONY JAMES ; WAYNE RANKHORN ; CARLOS RODRIGUEZ ; ED AUSTIN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; BORDEN LADNER GERVAIS LLP; CHIEF PATENT COUNSEL SMITH AND NEPHEW INC; FISH AND RICHARDSON PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

International class A61B17/00 A61B17/56 A61B17/60 A61B17/64 (Advanced/Invention);
(IPC 8-9): A61B17/00 A61B17/56 A61B17/60 (Core/Invention)

International class A61B17/60 A61B17/64
(IPC 1-7):

CPC: A61B17/6416 A61B17/6425

European class: A61B17/64C A61B17/64D

US class: 606/54 606/54P

[Classification Explorer](#)

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Forward Citations:

WO16086162, WO16014911, WO14152559, WO11019367, WO09042653, US9622781, US9610103, US9579122, US9517086, US9510870, US9463045, US9445841, US9393045, US9351763, US9308037, US9308025, US9220533, US9155562, US9155561, US9101398, US9066757, US8945128, US8940020, US8906020, US8894648, US8858555, US8834467, US8764750, US8758343, US8562606, US8454661, US8409202, US8382755, US8343166, US8282636, US8262701, US8251937, US8187308, US8147491, US7955333, US7887537, US7887498, US7806843, US7758582, US7608074, US2016022315, US2015100057, US2014324045, US2014276816, US2013218217, US2012226277, US2011313419, US2011245830, US2011208186, US2010204733, US2010145336, US2009292320, US2009254086, US2009248026, US2009234462, US2009177197, US2009131935, US2009082709, US2009018541, US2008200952, US2007255280, US2007012491, US2006247629, US2006247622, US2006155276, US2005245939, US2005119656, CN101785691, AU2006239825,

Abstract:

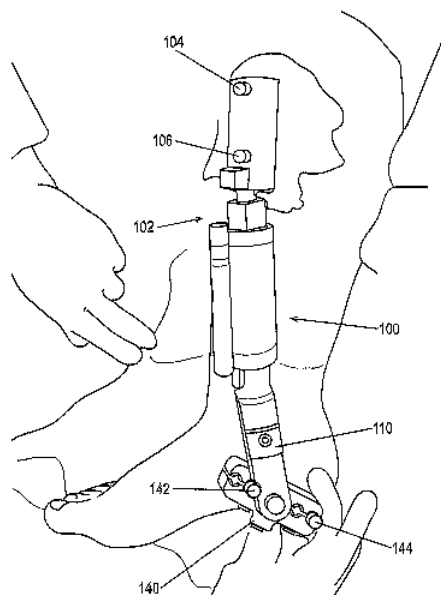
Source: US2004138659A Apparatuses and methods for externally fixing and precisely adjusting fractures, such as fractures near the ankle, are disclosed. In one embodiment, an external fixation apparatus includes a first member attachable to a first bone segment through pins, a second member coupled to the first member through a lockable ball joint, wherein first and second ends of the second member may be translated transversely relative to a longitudinal axis of the second member, and a pin clamp coupled to and rotatable about the second member through a lockable joint and attachable to a second bone segment. The pin clamp and the second member may be releasably coupled.

PatBase - W004062514_R1

WO 2004/062514

PCT/US2003/039307

1/16

**Fig. 1**

14) Family number: 44130668 (US2011144643A)

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Title: DEVICE FOR EXTERNALLY FIXING BONE FRACTURES**Priority:** CH20080000929 20080617 CH20080092908 20080617 WO2009CH00208 20090617
EP20090765315 20090617**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2009260109 AA</u>	20091223	AU20090260109	20090617
<u>AU2009260109 BB</u>	20140313	AU20090260109	20090617
<u>AU2009260109 BI</u>	20140410	AU20090260109	20090617
<u>BRPI0914297 A2</u>	20151103	BR2009PI14297	20090617
<u>CH702239 B1</u>	20110531	CH20080000929	20080617
<u>CN102083378 A</u>	20110601	CN200980122751	20090617
<u>CN102083378 B</u>	20141029	CN200980122751	20090617
<u>EA019443 B1</u>	20140331	EA20110070029	20090617
<u>EA201170029 A1</u>	20110630	EA20110070029	20090617
<u>EP2323572 A1</u>	20110525	EP20090765315	20090617
<u>EP2323572 B1</u>	20161102	EP20090765315	20090617
<u>ES2604217 T3</u>	20170303	ES20090765315T	20090617
<u>IL209757 A0</u>	20110228	IL20100209757	20101205
<u>IL209757 A1</u>	20131128	IL20090209757	20090617
<u>JP2011524214 T2</u>	20110901	JP20110513838T	20090617
<u>JP5572878 B2</u>	20140820	JP20110513838T	20090617
<u>MY153724 A</u>	20150313	MY20100005895	20090617
<u>PL2323572 T3</u>	20170228	PL20090765315T	20090617
<u>US2011144643 AA</u>	20110616	US20090999422	20090617
<u>US8685022 BB</u>	20140401	US20090999422	20090617
<u>WO09152633 A1</u>	20091223	WO2009CH00208	20090617

Probable Assignee: DURST HEIKO**Assignee(s):^(std):** DUERST HEIKO ; DURST HEIKO ; GRASSHOFF JENS ; HAUSER MARCEL ; LORENZ KAI UWE ; JENS GRASSHOFF ; JENS GRASSHOFF OF ; KAI UWE LORENZ ; HEIKO DURST OF ; HEIKO DURST ; MARCEL HAUSER ; MARCEL HAUSER OF**Assignee(s):** SWISSMEDTECHSOLUTIONS AG ; HEIKO DUERST**Inventor(s):^(std):** DUERST HEIKO ; DURST HEIKO ; HEIKO DURST ; JENS GRASSHOFF ; KAI UWE LORENZ ; LORENZ KAI UWE ; MARCEL HAUSER**Inventor(s):** GRASSHOFF JENS ; HAUSER MARCEL ; HEIKO DUERST**Agent(s):** SHELSTON IP; SHELSTON IP PTY LTD; RENTSCH AND PARTNER; GLUECK KRITZENBERGER PATENTANWALTE PARTGMBB; SAEZ ANA; REINHOLD COHN AND PARTNERS; OSTROLENK FABER LLP**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): A61B17/00 A61B17/60 A61B17/64 (Advanced/Invention);
A61B17/60 (Core/Invention);
A61B (Subclass/Invention)**CPC:** A61B17/6408 A61B17/6416 A61B2017/606**European class:** A61B17/64C K61B17/60S K61B17/64B

US class: 606/256 606/259 606/59 606/59P

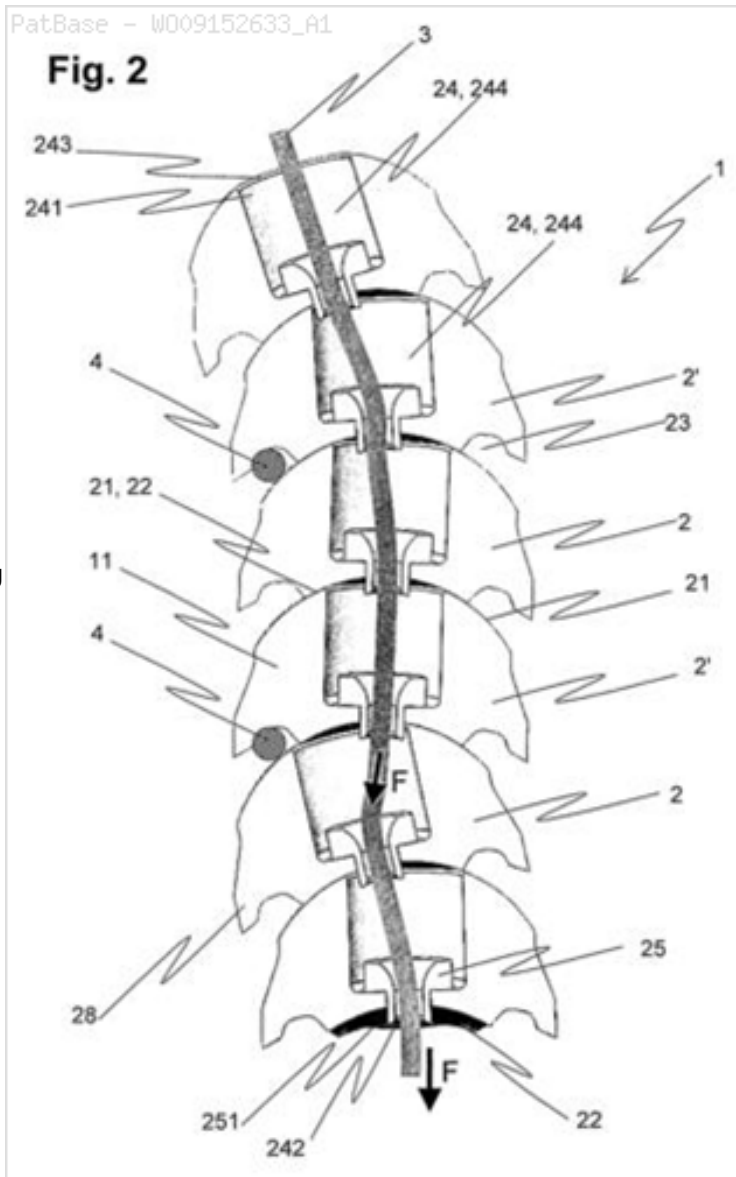
[Classification Explorer](#)

Cited documents: WO9920194 A1, WO07001945 A1, WO03068085 A1, US7785325 BA, US7634874 BB, US5944719 A, US5649925 A, US5449206 A, US3858578 A, US2009048599 AA, US2009018541 AA, US2007288011 AA, US2007093813 AA, US2005203509 AA, US2005131407 AA, US2003187432 AA, JP2004525727 T2, JP2004298253 A2, JP2004/298253, JP10043204 A2, EP0807419 A2, DE10125742 C1,

Forward Citations: US9604370, US9517086, US9456848, US9155562, US9144506, US2016066955, US2014324045, US2013199327, US2013090690, US2013041469, EP2779928,

Abstract:

Source: US2011144643A A device (1) according to the invention for externally fixing broken bones (62, 62') of a patient, particularly the extremities, comprises a support (11) composed of a plurality of joint elements (2, 2') that are strung together, wherein said support can be disposed outside the body of the patient. The proximal ends (41) of at least two percutaneously disposed pins (4) are anchored in the bone tissue (61) of the patient, and the distal ends (42) are fixed to the support (11). The joint elements (2) are strung on a central tensile force element (3), and in each case two adjoining joint socket (22). The individual ball joints, and thus the support (11), can be fixed in a reversible frictionally engaged manner by applying a tensile force of the central tensile force element (3). The joint elements (2, 2') in turn are designed such that a pin (4) can be fastened to the support (11) in a clamping and/or frictionally engaged manner by applying the tensile force of the central tensile force element (3).



15) Family number: 8737815 (US5620442A)

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Title: METHOD AND APPARATUS FOR EXTERNAL FIXATION OF SMALL BONES
Priority: US19950439696 19950512 US19960647096 19960509 WO1996US06679 19960510
Family:

Publication number	Publication date	Application number	Application date
AT256994 E	20040115	AT19960916452T	19960510
AU199659195 A1	19961129	AU19960059195	19960510
DE69631247 D1	20040205	DE19966031247	19960510
EP0835079 A1	19980415	EP19960916452	19960510
EP0835079 A4	19990519	EP19960916452	19960510
EP0835079 B1	20040102	EP19960916452	19960510
HK1009735 A1	20040423	HK19980110582	19980910
JP11505140 T2	19990518	JP19960534284T	19960510
JP3669707 B2	20050713	JP19960534284T	19960510
US5620442 A	19970415	US19950439696	19950512
US5743898 A	19980428	US19960647096	19960509
WO9635385 A1	19961114	WO1996US06679	19960510

Probable Assignee: BIOMET MFG LLC

Assignee(s):^(std): ELECTRO BIOLOGY INC ; CURRY SEAN P ; BAILEY KIRK JAY ; MAHAFFEY JOHN SCOTT

Assignee(s): MAHAFFEY JOHN S ; LVB ACQUISITION INC ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURE ; BAILEY KIRK J ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURED PARTIES AS ; BIOMET MFG LLC ; BIOMET INC ; EBI LP ; EBI LLC

Inventor(s):^(std): BAILEY JAY ; BAILEY KIRK J ; BAILEY KIRK JAY ; CURRY P ; CURRY SEAN P ; MAHAFFEY JOHN S ; MAHAFFEY JOHN SCOTT ; MAHAFFEY SCOTT

Inventor(s): SEAN P CURRY ; JOHN SCOTT MAHAFFEY ; KIRK JAY BAILEY

Designated states: AL AM AT AU AZ BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LI LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN

International class
^{(IPC 8-9):} [A61B17/17](#) [A61B17/60](#) [A61B17/64](#) [A61B17/66](#) [A61B17/88](#) [A61B19/00](#) (Advanced/Invention);
[A61B17/60](#) [A61B17/66](#) [A61B19/00](#) (Advanced/Non-Invention);
[A61B17/16](#) [A61B17/60](#) [A61B17/88](#) (Core/Invention);
[A61B19/00](#) (Core/Non-Invention)

International class
^{(IPC 1-7):} [A61B17/56](#) [A61B17/60](#)

CPC: [A61B17/88](#) [A61B17/171](#) [A61B17/6416](#) [A61B17/6425](#) [A61B17/66](#) [A61B2017/00902](#)
[A61B2017/603](#) [A61B17/1782](#)

European class: [A61B17/17E](#) [A61B17/64C](#) [A61B17/88](#) [K61B17/00S25](#) [K61B17/60P](#) [K61B17/64D](#)
[K61B17/66](#)

US class: [606/54](#) [606/57](#) [606/58](#) [606/59](#)

[Classification Explorer](#)

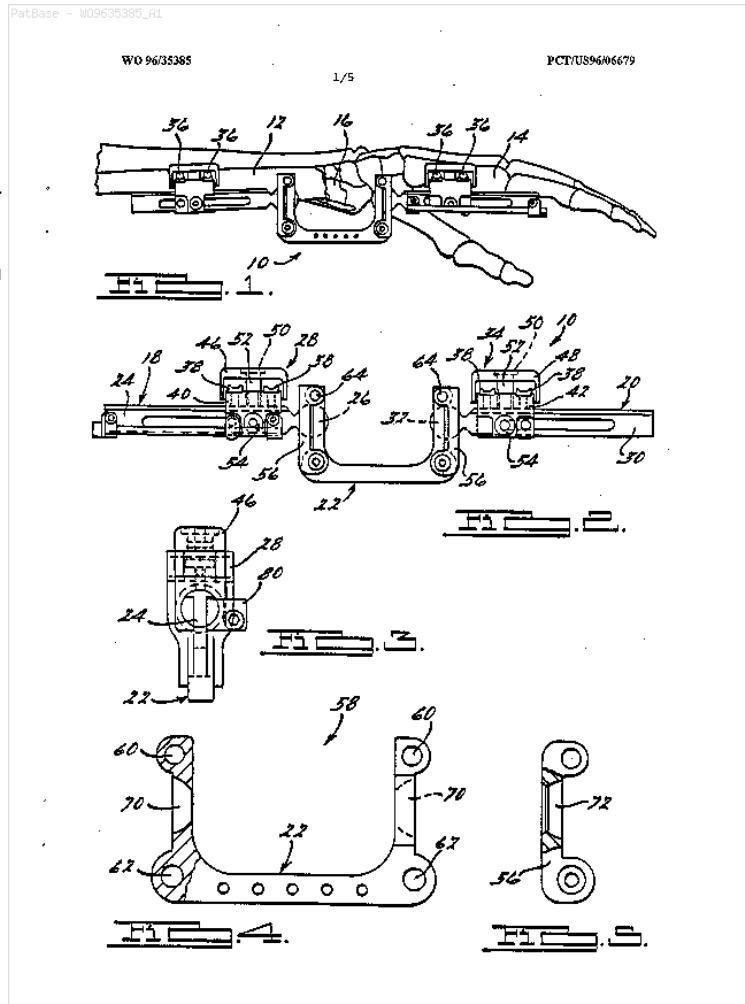
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Forward Citations: WO9935990, WO9930626, WO14140879, WO11019367, WO05092220, WO03105704, WO03068082, USRE45888, US9622781, US9463045, US9408635, US9393045, US9339296, US9173649, US9155561, US9132012, US9066757, US8968327, US8845568, US8808306, US8808291, US8758343, US8679185, US8585711, US8562686, US8486069, US8460390, US8444698, US8419798, US8382757, US8382755, US8282636, US8277448, US8273093, US8251937, US8235994, US8182483, US8137347, US8002838, US7985221, US7887537, US7887498, US7806843, US7771378, US7758582, US7731738, US7608074, US7588571, US7575575, US7507240, US7479142, US7291148, US7261713, US7147640, US7131955, US7048735, US7004943, US6746448, US6709433, US6678562, US6652524, US6428540, US6423061, US6283964, US6245071, US6171308, US6162223, US6162222, US6152925, US6056748, US6010501, US5976136, US5941879, US5941877, US5931837, US2016022315, US2014276820, US2014276816, US2011208186, US2010222778, US2010100096, US2009312838, US2009177197, US2009099565, US2009082709, US2008221571, US2008200952, US2008021451, US2007255280, US2007162028, US2007123858, US2007078519, US2006229605, US2006229604, US2006229603, US2006229602, US2006142872, US2006142871, US2005288681, US2005245939, US2005240136, US2005143829, US2005119656, US2004249375, US2004181221, US2004138659, US2003069580, US2002164905, US2002135395, KR101190447, JP2011529748, EP1136041, EP1041936,

Abstract:

Source: US5620442A An external fixator for securing a first bone portion in a fixed relationship with respect to a second bone portion. The fixator includes a bone screw clamp for receiving a first bone screw which is connected to the first bone portion and which includes a spherical portion. The fixator further includes a bone screw clamp which is operable to receive a second bone screw which is connected to the second bone portion and which has a spherical portion. The fixator also includes a connection member having a radiographic window to permit radiographic examination of the bone fracture, as well as a cantilever member operable to secure the circle portions of the first and second bone screw clamps to the connection member.



16) Family number: 30573783 (US2004097933A)

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Title: VERTEBRAL ANCHORING DEVICE AND ITS BLOCKING DEVICE ON A POLYAXIAL SCREW

Priority: DE200410011612 20040310 FR20020014454 20021119 US20030472578P 20030522
 US20080154448 20080523 US20040592611 20041201 US20040848946 20040519
 US20030527060P 20031204 US20120507857 20120802 US20140163797 20140124
 WO2004IB01663 20040521 WO2003FR03054 20031016 WO2004DE002644 20041201

Family:

Publication number	Publication date	Application number	Application date
AT444716 E	20091015	AT20040802853T	20041201
AU2003302363 AA	20040618	AU20030302363	20031016
AU2003302363 AH	20090430	AU20030302363	20031016
BRPI0418472 A	20070619	BR2004PI18472	20041201
CA2560542 AA	20060921	CA20042560542	20041201
CA2560542 C	20100914	CA20042560542	20041201
CN100479774 C	20090422	CN200480042917	20041201
CN1946349 A	20070411	CN200480042917	20041201
DE102004011612 A1	20050929	DE200410011612	20040310
DE502004010218 D1	20091119	DE200450010218T	20041201
EP1624819 A1	20060215	EP20040734306	20040521
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US2004097933 AA	20040520	US20030697034	20031031
US2004236330 AA	20041125	US20040848946	20040519
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WO04047657 A3	20090402	WO2003FR03054	20031016
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WO05087120 A1	20050922	WO2004DE02644	20041201

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Assignee(s):

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DEERFIELD PRIVATE DESIGN INT II LP ; DEERFIELD SPECIAL SITUATIONS FUND
LP ; DEERFIELD SPECIAL SITUATIONS INT MASTER FUND LP ; GLOBUS MEDICAL
INC

Inventor(s)^(std): ARNAUD POMMIER ; FRECH TAMAS T ; HAIR DON ; JEAN YVES LEROY ; JOHN
SUTCLIFFE ; LEROY JEAN YVES ; LOURDEL RODOLPHE ; MACH THOMAS ; MACK
THOMAS ; MARCUS RICHTER ; NICHOLAS SUTCLIFFE JOHN MACK T ; NICHOLAS
WILLMANN ; PASCAL ROKEGEM ; POMMIER ARNAUD ; PURCELL THOMAS ;
RICHTER MARCUS ; RICHTER MARENS ; RODOLPHE LOURDEL ; ROKEGEM
PASCAL ; SUTCLIFFE JOHN ; THOMAS MACK ; WILLMANN NICHOLAS ; WILLMANN
NICOLAS

Inventor(s): SUTCLIFFE JOHN MACK THOMAS RICHTER MARCUS ; SUTCLIFFE JOHN MACK
THOMAS RICHTER MARCUS WILLMANN

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COLLARD AND ROE PC; JOHN C MCMAHON; MCMAHON JOHN C; JOHN C;
LUEDEKA NEELY AND GRAHAM PC; GARIN ETIENNE

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC
MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC
SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA
ZM ZW

International class
(IPC 8-9): A61B17/04 A61B17/70 A61B17/86 (Advanced/Invention);
A61B17/88 (Advanced/Non-invention);
A61B17/04 A61B17/68 A61B17/70 (Core/Invention);
A61B17/88 (Core/Non-invention);
A61B (Subclass/Invention)

International class
(IPC 1-7): A61B17/58 A61B17/70 A61B17/86

CPC: A61B17/7035 A61B17/7098 A61B17/8625 A61B17/863 A61B17/864 A61B2017/8655
A61B17/7038 A61B17/7037 A61B17/7032

European class: A61B17/70B2 A61B17/70B5 A61B17/70B5B A61B17/86B K61B17/70B2 K61B17/70V2
K61B17/86B2 K61B17/86D K61B17/86L K61B17/88N

US class: 606/246 606/246S 606/248 606/264 606/264P 606/265 606/265S 606/266 606/266P
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[Classification Explorer](#)

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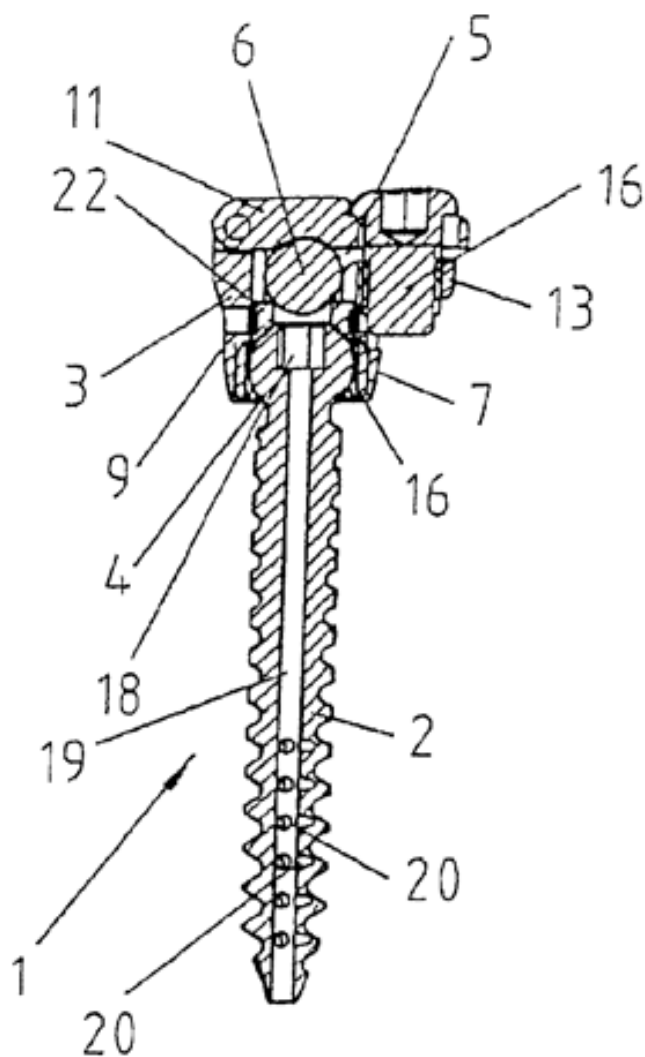
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DE102007042959, CN104323845, CN103153219, CN102949233, CN102949231,
CN102711636, CN101984926, AU2004317731,

Abstract:

Source: US2004097933A The vertebral anchoring device according to the present invention comprises a connector (2), a connecting rod (10) and a polyaxial anchoring screw (3) comprising a spherical head (15) and a screw-threaded body (16) whose external diameter d at a summit of the screw threads (17) is greater than the external diameter a of the spherical head (15), each connector (2) being constituted by a connecting element (4) comprising vertical branches (5, 6) delimiting an opening (7) of U shape, and by a locking clip (8) provided with a pressure screw (9) for blocking in the bottom of the U the connecting rod (10), said connecting element (4) being pierced at its middle with a vertical bore (11) permitting receiving opposite the opening (7) a blocking device (19) formed by a ring (20) and a screw-threaded socket (21) for the emplacement and positioning of the connector (2) on the spherical head (15) of the anchoring screw (3).

PatBase - W005087120_A1



17) Family number: 3310707 (US4584995A)

© PatBase

Title: External fixation device

Priority: US19840604047 19840426 US19850791222 19851025 WO1988US04070 19881115
US19860828051 19860210 US19870122397 19871119

Family:	Publication number	Publication date	Application number	Application date
	<u>AU198927957 A1</u>	19890705	AU19890027957	19881115
	<u>US4584995 A</u>	19860429	US19840604047	19840426
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	<u>US4757809 A</u>	19880719	US19860828051	19860210
	<u>US4895141 A</u>	19900123	US19870122397	19871119
	<u>WO8905126 A1</u>	19890615	WO1988US04070	19881115

Probable Assignee: HARRINGTON ARTHRITIS RES

Assignee(s):^(std): HARRINGTON ARTHRITIS RES ; ORTHOTIC LIMITED PARTNERSHIP ; ORTHOTIC PARTNERSHIP LTD

Assignee(s): ORTHOTIC LTD ; ORTHOTIC PARTNERSHIP A PARTNERSHIP OF AZ LTD ; HARRINGTON ARTHRITIS RESEARCH CENTER ; HARRINGTON ARTHRITIS RESEARCH CENTER 1800 EAST VAN

Inventor(s):^(std): HANSEN THOMAS M ; KOENEMAN JAMES B ; PHILLIPS MARK ; WEINSTEIN ALLAN M

Inventor(s): ALLAN M WEINSTEIN ; THOMAS M HANSEN ; MARK PHILLIPS ; JAMES B KOENEMAN

Designated states: AT AU BB BE BG BJ BR CF CG CH CM DE DK FI FR GA GB HU IT JP KP KR LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG

International class A61B17/64 A61B17/66 (Advanced/Invention) ;
(IPC 8-9) : A61B17/60 (Core/Invention)

International class A61B17/60 A61F5/04
(IPC 1-7) :

CPC: A61B17/6416 A61B17/66 A61B17/645 Y10T24/3978 Y10T403/7016 Y10T403/7069

European class: A61B17/64C A61B17/64H A61B17/66 K61B17/66

US class: 128/84B 128/92A 128/92R 128/92Z 128/92ZW 24/136B 248/316.2 403/354 403/374 403/374.4 606/54 606/57 606/59

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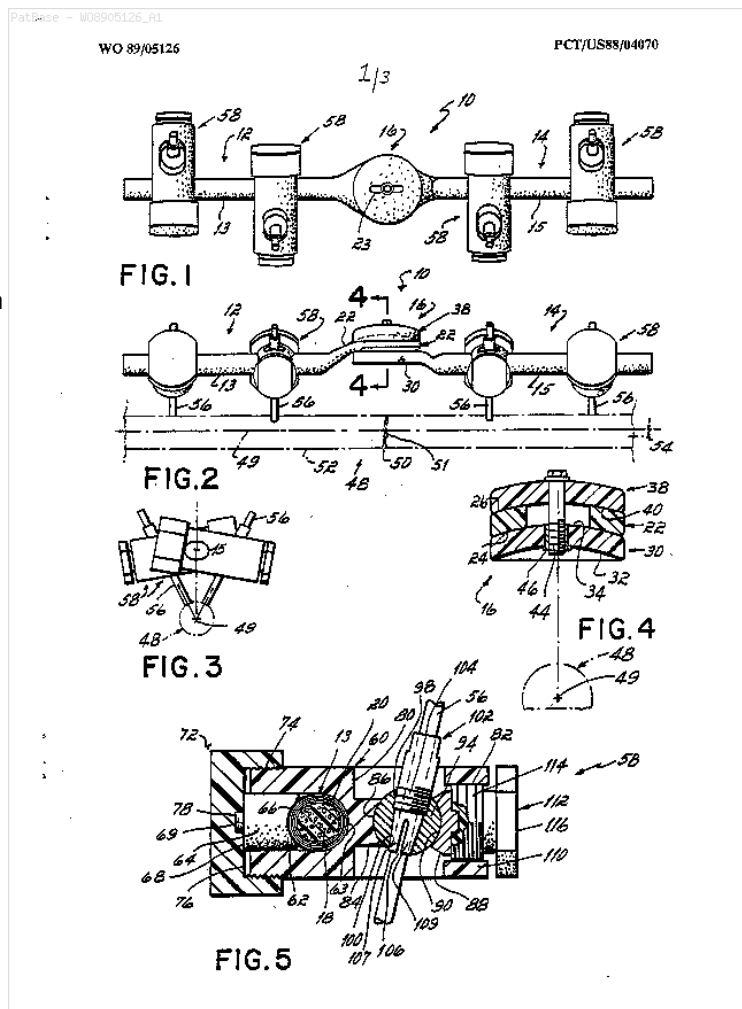
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Abstract:

Source: US4584995A An external fixation device for the reduction of severely compounded or infected long bone fractures with substantial soft tissue involvement comprises at least two sets of retaining pins, each set including at least one retaining pin adapted to secure the bone portion distally or proximally of the fracture, a frame having a center section disposed between spaced end sections, and a pair of coupling elements mounted to the end sections of the frame each connecting one set of retaining pins to the frame. One of the coupling elements is adapted to move longitudinally, parallel to the longitudinal axis of the frame so as to properly position and secure one set of retaining pins and the bone portion connected thereto. The other coupling element is connected to a second set of retaining pins and is adapted to translate and pivot such pins, and the bone portion attached thereto, about three mutually orthogonal axes independently of the first coupling element. The frame and coupling elements of the fixation device are preassembled to simplify installation of the device during a surgical procedure and to facilitate post-operative distraction or compression of the fracture site.



18) Family number: 44564598 (US2010222778A)

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Title: ORTHOPAEDIC DEVICE TO BE ASSOCIATED WITH THE OUTSIDE OF A BONE

Priority: EP20090812749 20090908 IT2008BO00548 20080911 WO2009IB06785 20090908
WO2009IB06785 20090909 US20090676648 20090908 US20090283790 20090908

Family:	Publication number	Publication date	Application number	Application date
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	CN102209499 A	20111005	CN200980144980	20090908
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MONICA; MORI HIROYUKI; HUSCH BLACKWELL SANDERS LLP HUSCH BLACKWELL
SANDERS LLP WELSH AND KATZ; HUSCH BLACKWELL LLP; BAKER AND MCKENZIE
LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST
SV SY SZ TD TG TJ TM TN TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A61B17/00 A61B17/60 A61B17/64 A61B17/66](#) (Advanced/Invention);
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CPC: [A61B17/6483 A61B17/66 A61B2017/00398](#)

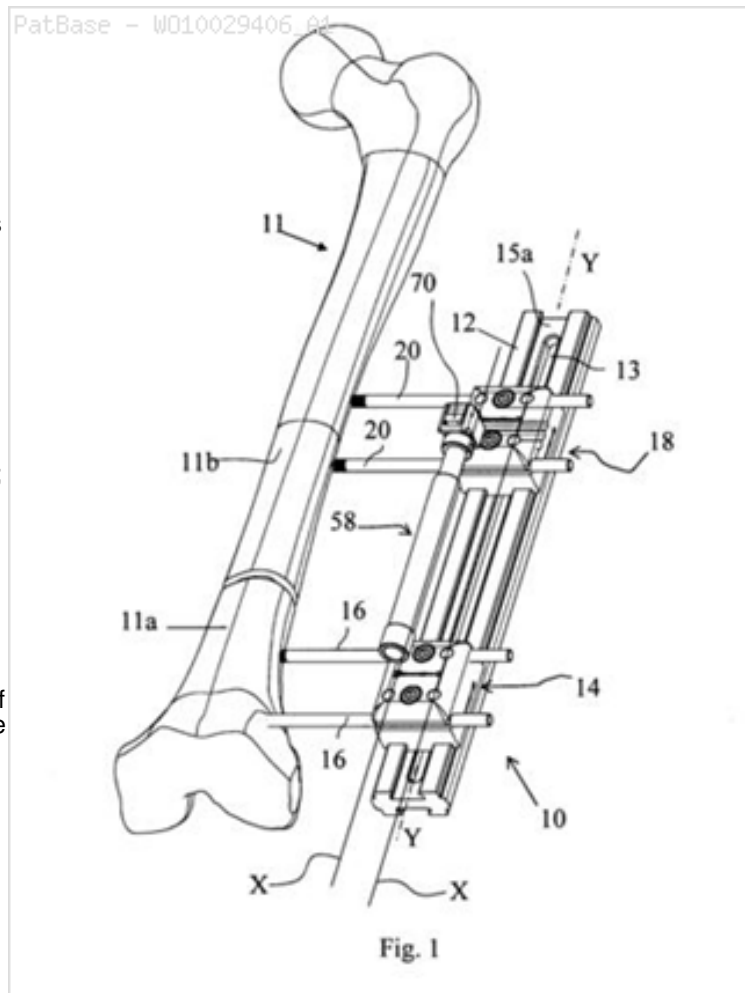
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[Classification Explorer](#)

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Source: US2010222778A The present invention regards an orthopaedic device (10; 110) to be associated with the outside of a bone and of the type comprising a support rail (12; 112), extended along a central longitudinal axis (Y-Y) substantially parallel to the bone (11; 111), at least two clamps (14, 18; 114, 118) mounted slidably along said axis (Y-Y) on the support rail (12; 112) and supporting endosseous screws (16, 20; 116, 120) insertable into the bone, and a distractor/compressor device (58) removably attachable to the two clamps (14, 18; 114, 118) by means of respective connection pins (68) inserted into corresponding holes (64; 164) of each clamp, wherein each clamp comprises a clamp body having a base or lower jaw (24; 124) and a lid, or upper jaw (23; 123) as well as two screws (25, 26; 125, 126) for fixing the upper jaw (23; 123) to the lower jaw (24; 124). Advantageously the holes (64; 164) for the connection pins (68) are aligned along a line (X; X') that is extended substantially parallel to said axis (Y-Y) with at least one hole for the connection pins of the remaining clamp also being aligned along said line (X; X'), thus making the overall structure of the clamps mounted on the orthopaedic device (10; 110) particularly compact.



0) US5364399A – ANTERIOR CERVICAL PLATING SYSTEM

19) Family number: 28186326 (US5364399A)

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Title: ANTERIOR CERVICAL PLATING SYSTEM

Priority: EP19940907308 19940124 US19930014415 19930205 US19930145079 19931029
WO1994US00851 19940124 WO1994US12259 19941026

Family:

Publication number	Publication date	Application number	Application date
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Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IT JP KE KG KP KR KZ LI LK LR LT LU LV MC MD MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SI SK SN SZ TD TG TJ TT UA UZ VN

International class
(IPC 8-9): A61B17/16 A61B17/17 A61B17/56 A61B17/58 A61B17/70 A61B17/80 A61B17/88 A61B17/90 C07D213/71 (Advanced/Invention);
A61B17/16 A61B17/56 A61B17/58 A61B17/80 (Advanced/Non-invention);
C07D213/00 (Core/Invention)

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(IPC 1-7): A61B17/16 A61B17/17 A61B17/56 A61B17/58 A61B17/68 A61B17/70 A61B17/88 A61B17/90

CPC: A61B17/80 A61B17/808 A61B17/7059 A61B17/1655 A61B17/1728 A61B17/1757 A61B17/8042 A61B17/8052

European class: A61B17/17P A61B17/70K A61B17/80F A61B17/80J K61B17/80 K61B17/80D4 K61B17/80F

US class: 606/281 606/286 606/291 606/295 606/61 606/69 606/86.00B 606/86B 606/96

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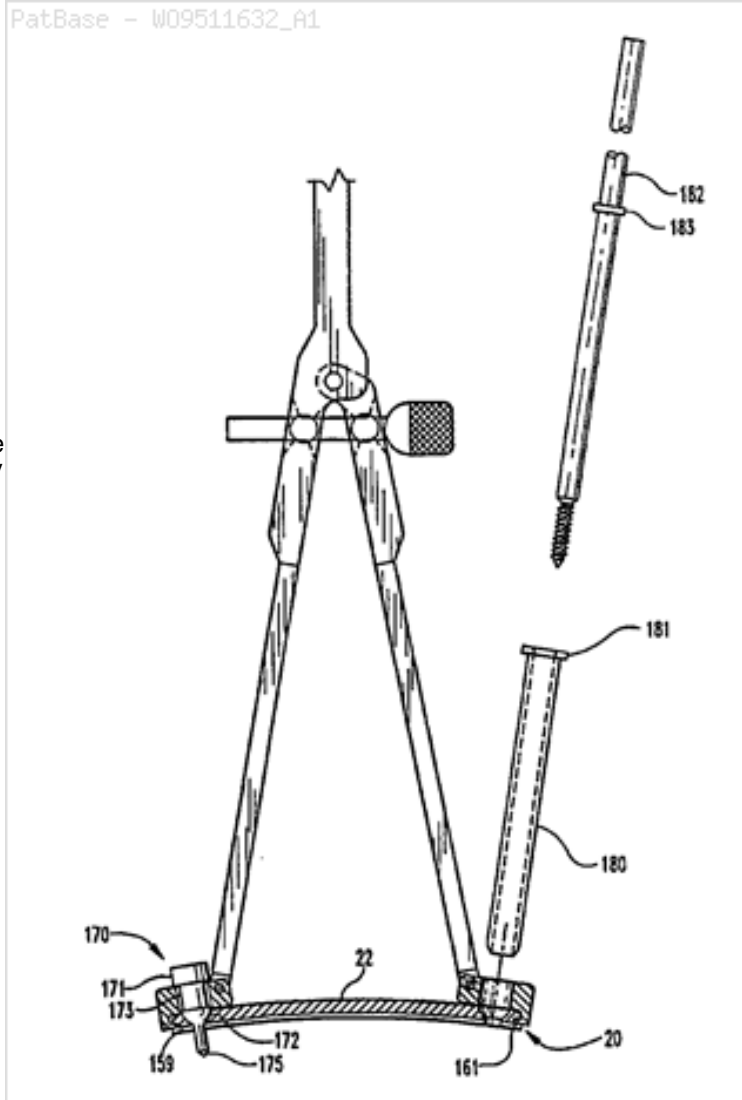
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Abstract:

Source: US5364399A An anterior cervical plating system is disclosed which includes an elongated plate having a pair of bone screw bores at opposite ends of the plate, and with bone screw slot configurations in the middle bridge portion of the plate. A single locking screw is provided at each end of the plate which engages the heads of the bone screws trapped within recesses of the plate. The locking screw provides a rigid fixation of the screws to the plate, while the heads of the screws are flush or recessed below the upper surface of the plate. The invention further contemplates a drill and tap guide assembly which can be mounted on the fixation plate to provide a firm foundation for accurately drilling and tapping screw holes into the vertebra to be instrumented. The drill and tap guide assembly includes an assembly support which is engaged to the plate by way of a positioning screw and cross pins mounting the positioning screw to the guide body. A tap sleeve and drill guide can then be supported by the assembly support, which both thereby provide accurate positioning for a drill.



20) Family number: 51716732 (US2013309632A)

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Title: SYSTEM, APPARATUS AND METHOD FOR IMPLEMENTING IMPLANTS
Priority: US20110438681P 20110202 US20120981754 20120201 WO2012US23436 20120201
Family:

Publication number	Publication date	Application number	Application date
AU2012212284 AA	20120809	AU20120212284	20120201
AU2012212284 BB	20161117	AU20120212284	20120201
CA2825630 AA	20130724	CA20122825630	20120201
CN103501723 A	20140108	CN201280016648	20120201
CN103501723 B	20161207	CN201280016648	20120201
EA201391075 A1	20140630	EA20130091075	20120201
EP2670340 A1	20131211	EP20120741463	20120201
EP2670340 A4	20160720	EP20120741463	20120201
IL227709 A0	20130930	IL20120227709	20120201
IN01498MN2013 A	20141010	IN2013MN01498	20130803
JP2014511217 T2	20140515	JP20130552586T	20120201
MX2013009010 A1	20131104	MX20130009010	20120201
SG192261 A1	20130930	SG20130058680	20120201
US2013309632 AA	20131121	US20120981754	20120201
US9283057 BB	20160315	US20120981754	20120201
WO12106397 A1	20120809	WO2012US23436	20120201

Probable Assignee: MID CORP**Assignee(s):**^(std) MID CORP ; SANDERS DANIEL**Inventor(s):**^(std) SANDERS DANIEL**Agent(s):** WRAYS; MARKS AND CLERK; VIRDEE CROFTS KULWINDER KAUR; DOBRUSIN LAW FIRM PC; FINERMAN TERRY M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A61C A61C1/08 A61C13/12 A61C13/225 A61C8/00](#) (Advanced/Invention);
 (IPC 8-9) [A61C](#) (Subclass/Invention)

CPC: [A61C8/0068 A61C8/0022 A61C1/084 A61C8/0043 A61C8/0087 A61C8/0089 A61C8/0053 A61C8/0066 A61C8/008](#)

European class: [A61C1/08F1 A61C8/00F2 A61C8/00F30M A61C8/00G1S A61C8/00T K61C8/00S](#)

US class: [1/1 433/173 433/174](#)

[Classification Explorer](#)

Cited documents: WO12106397 A1, WO10089698 A2, WO10061124 A2, WO10061124 A1, WO09115617 A1, WO09002154 A1, WO08125049 A1, WO06136637 A2, WO06082610 A2, USRE36689 E, US8900277 BB, US8622739 BB, US8287278 BB, US8231388 BB, US7959439 BB, US7806685 BA, US7798812 BB, US7704076 BB, US7621913 BB, US7481829 BB, US7291013 BB, US7108511 BA, US7097451 BB, US7048739 BB, US6863529 BB, US6854972 BA, US6776781 BA, US6527554 BB, US6419491 BA, US6250924 BA, US6123546 A, US6093023 A, US6068478 A, US6017345 A, US5954769 A, US5871486 A, US5863200 A, US5829977 A, US5727942 A, US5569251 A, US5513989 A, US5196016 A, US5116337 A, US4832601 A, US4713077 A, US4682951 A, US3955280 A, US2012122057 AA, US2011159455 AA, US2011151408 AA, US2011151400 AA, US2010312280 AA, US2010305613 AA, US2010145397 AA, US2010055646 AA, US2010003639 AA, US2010003638 AA, US2010003635 AA,

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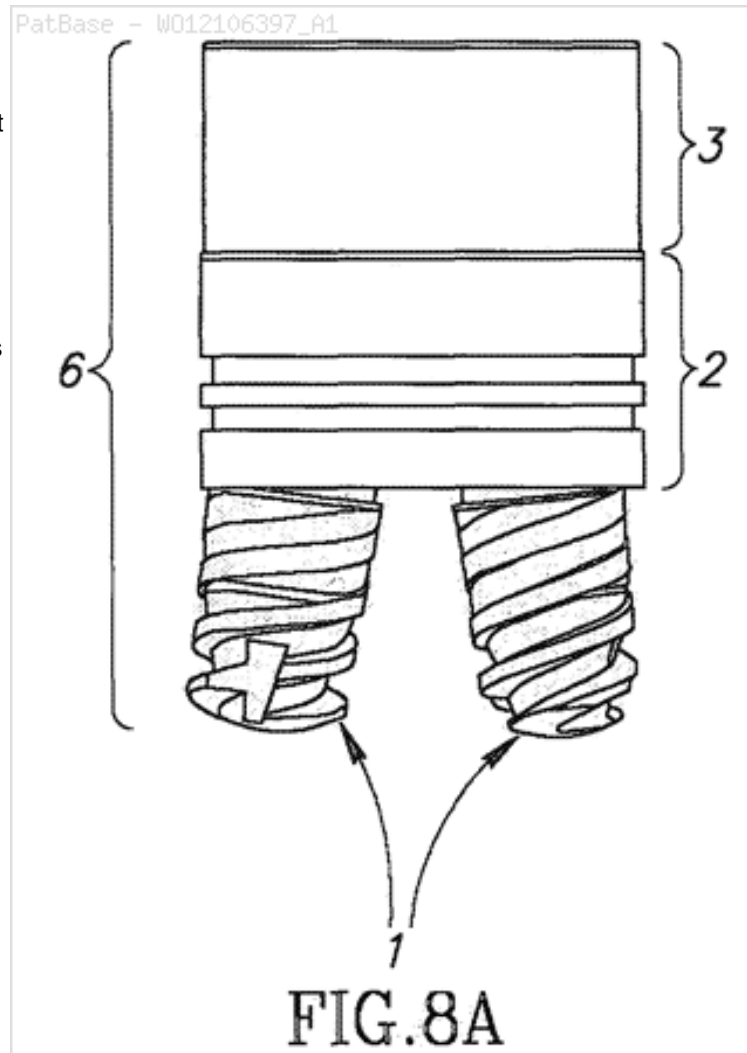
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EP2168531 A1, EP0580945 A1, CN101947139 A, CA2416348 AA,

Forward Citations: WO15162612, WO15149937, WO15104714, WO14150464, WO14150464, US9283057, US9128462, US2014342313, US2014205968, US2014193772, US2014177398, KR101577746,

Abstract:

Source: US2013309632A Systems, apparatuses, devices, kits and processes are provided to enhance bone implants. The bone implant includes one or more bone attachment components for securing the implant into a bone and a head component independent of and separable from the bone attachment components. In one embodiment, each bone attachment component includes an internally threaded bore hole sleeve for receiving a connector component. The head component preferably is adapted so as to be secured to the one or more bone attachment components at the time of initial implantation of the one or more bone attachment components and the head component into the bone. The head component preferably is adapted to be oriented relative to at least one of the one or more bone attachment components at a predetermined tilt angle, so that the implant generally conforms with a natural root structure of a missing tooth.



21) Family number: 50927866 (US2012089142A)

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Title: SINGLE LOCK EXTERNAL FIXATION CLAMP ARRANGEMENT AND METHOD

Priority: US20100392298P 20101012 US20100392325P 20101012 US20100392339P 20101012
US20110271744 20111012 US20140470307 20140827 US20160355802 20161118
WO2011US55980 20111012

Family:	Publication number	Publication date	Application number	Application date
	EP2627272 A1	20130821	EP20110773954	20111012
	US2012089142 AA	20120412	US20110271744	20111012
	US2014364853 AA	20141211	US20140470307	20140827
	US2017065300 AA	20170309	US20160355802	20161118
	US8840611 BB	20140923	US20110271744	20111012
	US9532805 BB	20170103	US20140470307	20140827
	WO12051312 A1	20120419	WO2011US55980	20111012

Probable Assignee: ZIMMER INC

Assignee(s):^(std) AUSTIN WILLIAM BRIAN ; EXTRAORTHO INC ; MILLER STEPHEN T ; MULLANEY
MICHAEL W ; ZIMMER INC

Inventor(s):^(std) AUSTIN WILLIAM BRIAN ; MILLER STEPHEN T ; MULLANEY MICHAEL W

Agent(s): MAYS JULIE; SCHWEGMAN LUNDBERG AND WOESSNER PA; JOHNSON DUSTIN ET
AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM
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International class [A61B17/00](#) [A61B17/64](#) (Advanced/Invention);
(IPC 8-9); [A61B17/64](#) (Advanced/Non-invention)

CPC: [A61B17/6466](#) [A61B17/645](#)

European class: [A61B17/64M](#) [K61B17/64H](#)

US class: [269/254CS](#) [606/54](#) [606/54P](#) [606/59](#)

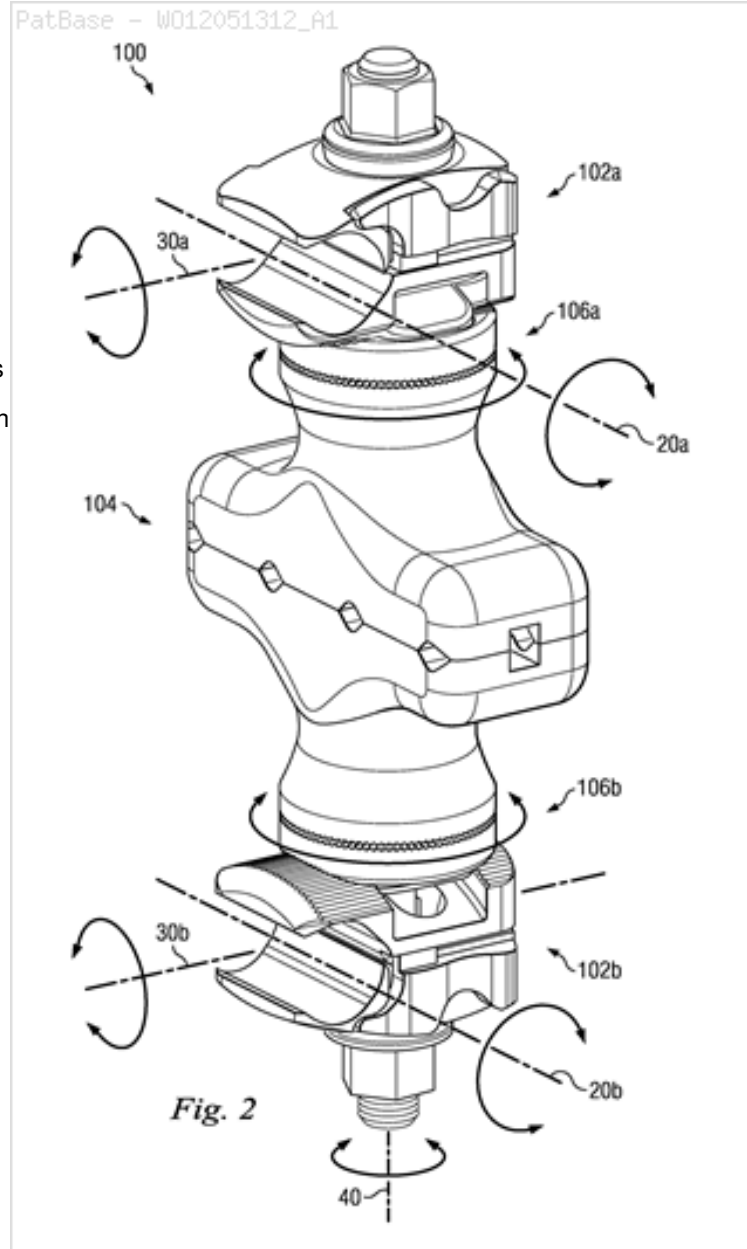
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Abstract:

Source: US2012089142A A clamping device for an external fixation system includes a post component having a yaw axis, a first clamp secured to the post component and rotatable about the yaw axis, and a second clamp secured to the post component and rotatable about the yaw axis relative to the first clamp. The device includes a tightening component configured in a manner that an action of tightening the tightening component simultaneously locks both the first and second clamps in a gripping arrangement and substantially eliminates their relative rotation about the yaw axis. Interdigitating components can be spaced apart by high spring rate biasing elements that so as to allow for smooth adjustment of the clamping device components relative to each other until the appropriate position is achieved and until after a sufficiently high clamping load has been applied.



22) Family number: 45942068 (US2013165981A)

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Title: BONE PLATE SYSTEM FOR OSTEOSYNTHESIS

Priority: DE200910060396 20091222 DE201020005260U 20100420 WO2010DE075167 20101221
WO2010DE075167 20101221 EP20100805682 20101221

Family:	Publication number	Publication date	Application number	Application date
	<u>DE102009060396 A1</u>	20110630	DE200910060396	20091222
	<u>DE102009060396 B4</u>	20170413	DE200910060396	20091222
	<u>DE202010005260 U1</u>	20100624	DE201020005260U	20100420
	<u>DE502010011168 D1</u>	20160414	DE201050011168T	20101221
	<u>EP2515779 A1</u>	20121031	EP20100805682	20101221
	<u>EP2515779 B1</u>	20160302	EP20100805682	20101221
	<u>ES2573811 T3</u>	20160610	ES20100805682T	20101221
	<u>US2013165981 AA</u>	20130627	US20100517949	20101221
	<u>US9161795 BB</u>	20151020	US20100517949	20101221
	<u>WO11076205 A1</u>	20110630	WO2010DE075167	20101221

Probable Assignee: ARISTOTECH IND GMBH

Assignee(s):^(std): CLASBRUMMEL BERNHARD ; KAHL SUSANNE ; KRANZ CURT ; MERETE MEDICAL GMBH

Assignee(s): ARISTOTECH IND GMBH ; CLASBRUMMEL

Inventor(s):^(std): CLASBRUMMEL BERNHARD ; KRANZ CURT

Agent(s): BITTNER THOMAS L; TORNER ELISABET; ANDRUS INTELLECTUAL PROPERTY LAW LLP; BITTNER THOMAS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/58 A61B17/68 A61B17/80 A61B17/86 (Advanced/Invention)
(IPC 8-9).

CPC: A61B17/8038 A61B17/863 A61B17/8033 A61B17/8042 A61B17/8057 A61B17/8605

European class: A61B17/80D A61B17/80D4 A61B17/80F2 A61B17/86A A61B17/86B2

US class: 1/1 606/289

[Classification Explorer](#)

Cited documents: WO9829058 A1, WO9709000 A1, WO12000627, WO11163092, WO11076205, WO10115403, WO10059497, WO09058969, WO07025520 A1, WO06014436 A1, WO05053111 A1, WO05041796 A1, WO05041769 A1, WO02096309 A1, WO0154601 A1, WO0053110 A1, US8632545 BB, US8246661 BB, US8118848 BB, US7976570 BB, US7771457 BB, US7655029 BB, US7468069 BB, US7354441 BB, US7008428 BB, US6886799 BB, US6730091 BA, US6719759 BB, US6716957 BB, US6669701 BB, US6423068 BA, US6398783 BA, US6306140 BA, US6293949 BA, US6206883 BA, US6203545 BA, US6152927 A, US6129728 A, US5709686 A, US5529075 A, US4959065 A, US4903691 A, US4720225 A, US4616634 A, US4454876 A, US4408601 A, US3757591 A, US3741205 A, US2662988 A, US2013190829 AA, US2012265254 AA, US2011295325 AA, US2011264149 AA, US2010256687 AA, US2009210010 AA, US2009024172 AA, US2008300637 AA, US2008132955 AA, US2008051786 AA, US2007276386 AA, US2007233106 AA, US2007123885 AA, US2007016205 AA, US2006241607 AA, US2006235396 AA, US2006173458 AA, US2006015102 AA, US2005261688 AA, US2005192577 AA, US2005182408 AA, US2005165401 AA, US2005165400 AA, US2005124994 AA, US2005085818 AA, US2005065521 AA, US2005049594 AA, US2005015092 AA, US2004236332 AA, US2004215192 AA, US2004167522 AA, US2004102778 AA, US2004073218 AA, US2004034356 AA,

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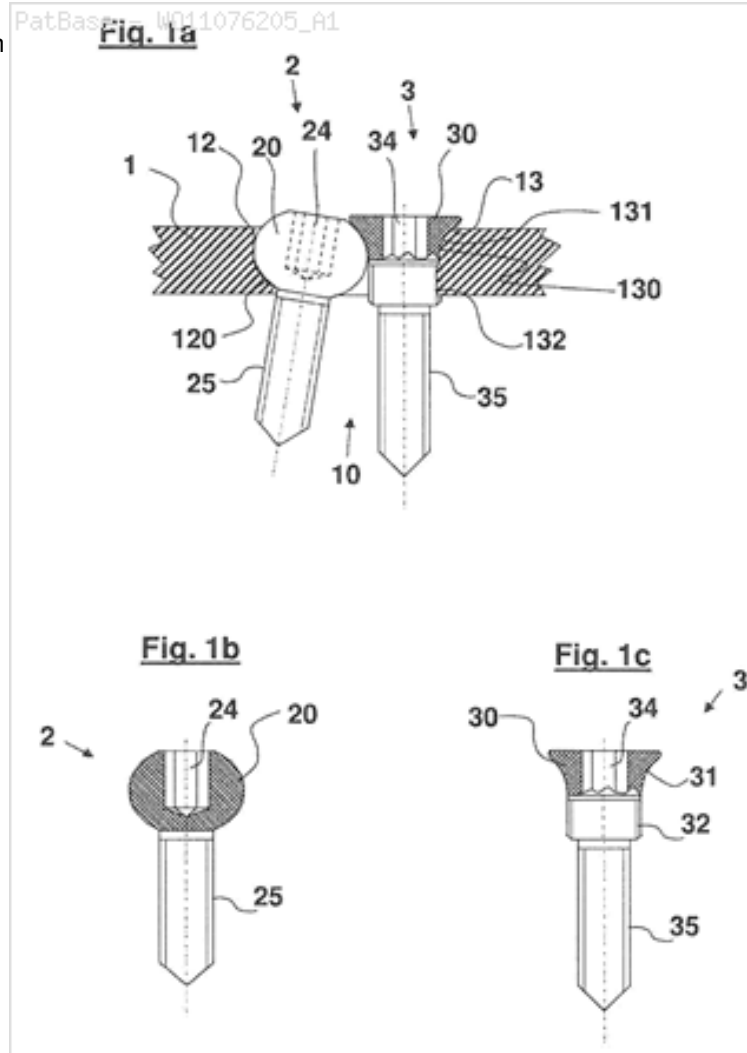
DE102005042766 B4

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Forward Citations: WO16142502, WO13163985, WO13059090, US9545280, US9480516, US9387013, US9161795, US9060813, US8940029, US2017086896, US2015073487, US2013261673, US2013060291, DE102013109569, DE102012103894, DE102012103894, CN105213017,

Abstract:

Source: US2013165981A A bone plate system for osteosynthesis comprises a bone plate, a swivel screw, a clamping screw, a swivel hole formed in the bone plate as a through hole for receiving the swivel screw polyaxially, and a clamping hole, which is associated with the swivel hole and is formed in the bone plate as a further through hole for receiving the clamping screw. When the swivel screw and the clamping screw are screwed in, they are fixed with angular stability in multiple dimensions, as the screw heads of the swivel screw and of the clamping screw are secured by one another and by the bone plate against relative movement. The swivel screw and the clamping screw are each designed as a bone screw.



23) Family number: 30398796 (US2004059331A)

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Title: UNILATERAL FIXATOR

Priority: JP20040538201 20030917 US20020411291P 20020917 US20020426439P 20021114
 US20070841091 20070820 US20100967957 20101214 WO2003US29435 20030917
 US20030714225 20031114 US20030664769 20030917 WO2003US36590 20031114

Family:

Publication number	Publication date	Application number	Application date
AU2003272557 AA	20040408	AU20030272557	20030917
AU2003272557 BB	20081218	AU20030272557	20030917
AU2003297280 AA	20040615	AU20030297280	20031114
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Probable Assignee: AMDT HOLDINGS INC

Assignee(s):^(std): VISIONMED L L C ; VISIONMED LLC ; EBI LP ; EXTRAORTHO INC ; SIXFIX INC ;
 MULLANEY MICHAEL W ; EBI L P

Assignee(s): EBI LLC ; EVI LLC ; LVB ACQUISITION INC ; MORAN DAN ; AMDT HOLDINGS INC ;
 BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR
 SECURE ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURED
 PARTIES AS ; BIOMET INC

Inventor(s):^(std): MULLANEY MICHAEL W**Inventor(s):** MICHAEL W MULLANEY ; MULLANEY MICHAEL

Agent(s): FB RICE; FINLAYSON AND SINGLEHURST; HARNESS DICKEY AND PIERCE PLC;
 HAYNES AND BOONE LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
 CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ

GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC
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International class A61B17/00 A61B17/56 A61B17/58 A61B17/60 A61B17/64 A61B19/00 A61B6/00
(IPC 8-9); A61F5/01 G06K9/00 G06T1/00 (Advanced/Invention);
A61B17/56 A61B17/66 A61B19/00 A61F5/01 (Advanced/Non-invention)

International class A61B1/00 A61B17/56
(IPC 1-7);

CPC: A61B34/10 A61B2090/376 A61B90/36 A61B2034/2068 A61B2090/364 A61B17/6458
A61B17/66 A61B2017/564

European class: A61B17/64K A61B19/52 K61B17/56M K61B17/64K K61B17/66 K61B19/50
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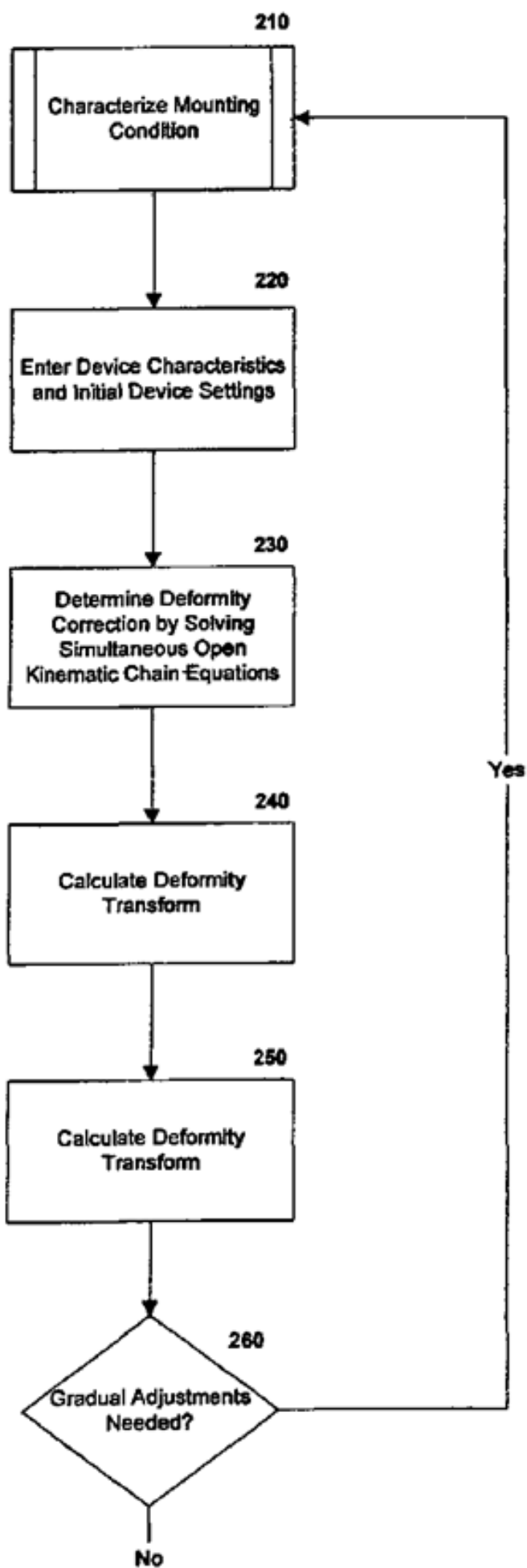
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RU2588316, JP2013526377, JP2012081268, EP3069673, EP2767252, EP2438869,
EP2417924, EP2417923, EP1690506, EP1690506, CN104983455, CN103429180,
CN103126755, CN102883671, CN102883671, CN102858262, CN102283732,
AU2011226864,

Abstract:

Source: US2004059331A A unilateral external fixator device that allows for gross manipulation and fine adjustment of deformities in six degrees of freedom. The device may comprise a strut assembly and two compound movable joints, one at each end of the strut assembly. One compound movable joint may comprise two revolute joints, each containing a gear reduction mechanism and may rotate about the strut. The second compound movable joint may contain two revolute joints, each containing a gear reduction mechanism, and may move along the length of the strut assembly. The gear reduction mechanisms may comprise helical spline assemblies that allow for gross and fine adjustment of the fixator.

PatBase - W004045377_A3



24) Family number: 29990894 (EP1016381A1)

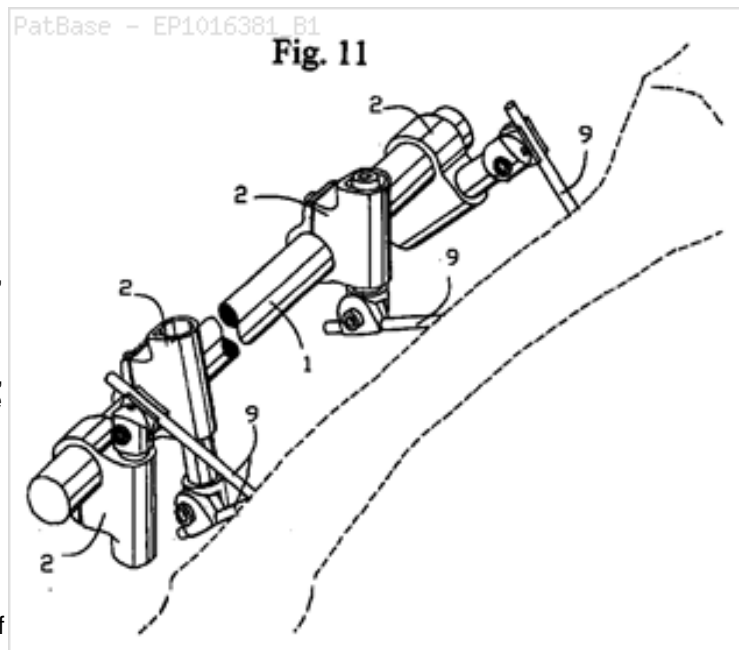
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Title: External fixation system with telescopic pin or arm holding unit**Priority:** EP19980600018 19981123

Family:	Publication number	Publication date	Application number	Application date
	AT255852 E	20031215	AT19980600018T	19981123
	DE69820464 D1	20040122	DE19986020464	19981123
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	EP1016381 A1	20000705	EP19980600018	19981123
	EP1016381 B1	20031210	EP19980600018	19981123

Probable Assignee: KONSTANTINOS MALIZOS**Assignee(s):**^(std) KONSTANTINOS MALIZOS ; KOURTIS HRAKLIS ; KOURTIS LAMBROS**Inventor(s):**^(std) KOURTIS LAMBROS ; KOURTIS HRAKLIS ; KONSTANTINOS MALIZOS**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**International class**
(IPC 1-7): [A61B17/64](#)**CPC:** [A61B17/645](#) [A61B17/6466](#)**European class:** [A61B17/64M](#) [K61B17/64H](#)[Classification Explorer](#)**Cited documents:** WO9812975 A2, WO9202185 A1, WO9111149 A1,**Forward Citations:** WO04112625, US9622781, US9492198, US9220533, US9155561, US9101398, US8945128, US8906020, US8834467, US8758343, US8641714, US8114077, US8062293, US8057474, US7914557, US7591838, KR100861395, JP2007505267, EP2085035, DE102004056091, DE102004056091, DE102004056091, AU2009200332,**Abstract:**

Source: EP1016381A1 The invention belongs to the field of Orthopedic Surgery, Traumatology and Distraction Osteogenesis and consists of a telescopic unit used in an external fixation system, as well as of an external fixation system with telescopic units and has a wide range of applications in all therapeutic surgical practices which today use systems of external fixation. The telescopic mechanism carried by each unit of the system, in combination with the way the telescopic units are attached to the rod of the system, allow for each held pin the choice of five degrees of free spatial movement and, indeed, separately and independently of the rest of the held pins. Furthermore, it offers a wide range of choices to the user, with regard to the number of the telescopic units and the combination of the components he will choose to place on the rod, in order to achieve the best, in his opinion, stabilisation of the bone to be restored, while, for the same reason, he may incorporate in the system a second rod with the same wide range of choice, number of telescopic units and combination of components he will choose to place, which he will attach to the first rod.



25) Family number: 28928112 (US2003153910A)

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Title: EXTERNAL FIXATION APPARATUS AND METHOD
Priority: US20020074607 20020211 US20040951925 20040928

Family:	Publication number	Publication date	Application number	Application date
	<u>US2003153910 AA</u>	20030814	US20020074607	20020211
	<u>US2005043730 AA</u>	20050224	US20040951925	20040928
	<u>US6860883 BB</u>	20050301	US20020074607	20020211

Probable Assignee: PIONEER SURGICAL TECHNOLOGY INC

Assignee(s):^(std): PIONEER LAB INC

Assignee(s): PIONEER LABORATORIES INC ; PIONEER SURGICAL TECHNOLOGY INC ; TD BANK NA ADMINISTRATIVE AGENT AS ; PIONEER LABORATORIES INC AB

Inventor(s):^(std): JANOWSKI BRIAN P ; TRUDEAU JEFFREY L

Inventor(s): JANOWSKI BRIAN ; TRUDEAU JEFFREY

Agent(s): FITCH EVEN TABIN AND FLANNERY

International class
 (IPC 8-9): A61B17/64 (Advanced/Invention);
A61B17/60 (Core/Invention)

International class
 (IPC 1-7): A61B17/56 A61B17/58 A61F5/04

CPC: A61B17/6416 A61B17/645 A61B17/6466

European class: A61B17/64H K61B17/64C K61B17/64M

US class: 606/56 606/59

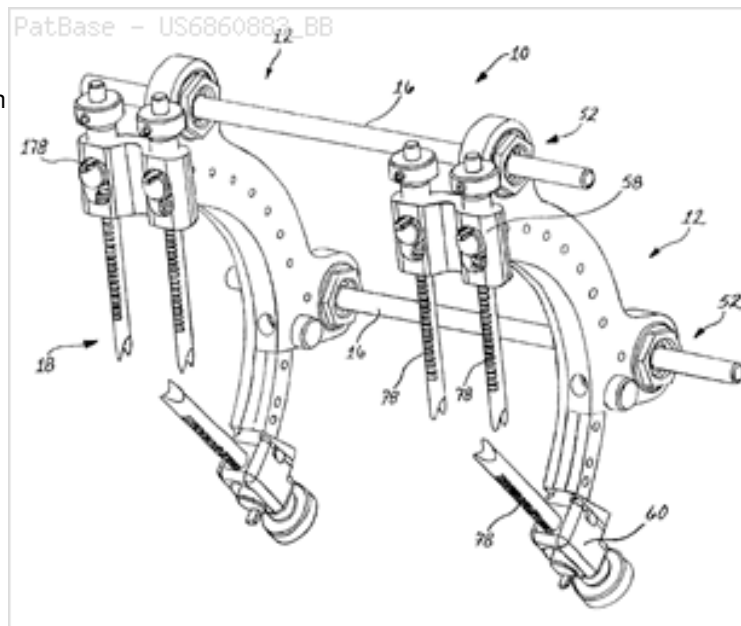
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Forward Citations: WO11055252, WO09006604, US9655665, US9463045, US9408635, US9393045, US9381046, US9351763, US9301782, US9265529, US9265528, US9220533, US9155560, US9101398, US8968367, US8945128, US8915914, US8906020, US8858555, US8834467, US8808291, US8758343, US8702706, US8679116, US8623019, US8486069, US8419733, US8377061, US8361126, US8277448, US8262657, US8235994, US8192449, US8172885, US8172849, US8123747, US8100828, US8083740, US8002773, US7717916, US7488323, US7485121, US7468063, US7449023, US6942664, US2016066956, US2015257788, US2015209081, US2014276820, US2014276816, US2014031822, US2012136355, US2011319939, US2011082458, US2010318084, US2010100096, US2010082028, US2010076436, US2010076435, US2009312757, US2009216231, US2009131944, US2009062862, US2009048599, US2009012571, US2008228185, US2008221571, US2007123916, US2007123879, US2006111729, US2005251136, US2005113829, US2005049712, US2005015087, US2004230191, KR101230124, ITBO20090726, GB2467908, GB2454961, EP2832307, CN103445832, CN103445832,

Abstract:

Source: US2003153910A A bone fixation apparatus and method are provided that allow a user to push bone pins into engagement with bones with more precision and accurate feel as to proper engagement and the clamping forces between the pins and bone over prior devices utilizing applicator guns and the like. Fine tuning of the clamping forces is also contemplated. Compact and highly ergonomic bone fixators are provided which allow the user to remain close to the pin application site during clamping of the pins onto the bone. Significant flexibility is preferably incorporated by having two adjustably connected positioner bodies which can each mount a pin holder module releasably attached thereto. A fixation system with improved rigidity is also provided by way of independent clamping members for each of a pair of rod mounts on each pin positioner. The independent clamp members keeps their size to a minimum while allowing the angular separation of connecting rods secured in the rod mounts and spanning and interconnecting two fixators to be optimized, e.g. approximately eighty degree angular spacing, from a system stability standpoint.



26) Family number: 28132548 (US2001007957A)

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Title: Method and apparatus for segmental bone replacement

Priority: US19930146510 19931101 US19950535532 19950928 US20040797692 20040309
 US20020305620 20021127 US20010776584 20010202 US19980003061 19980105
 US20060351227 20060209 US20060385004 20060320 US20040838885 20040504
 US20060326561 20060105 US20110285426 20111031

Family:

Publication number	Publication date	Application number	Application date
<u>EP1574174 A1</u>	20050914	EP20050251364	20050308
<u>US2001007957 AA</u>	20010712	US20010776584	20010202
<u>US2003078669 AA</u>	20030424	US20020305620	20021127
<u>US2004172138 AA</u>	20040902	US20040797692	20040309
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<u>US2006129247 AA</u>	20060615	US20060351227	20060209
<u>US2006161261 AA</u>	20060720	US20060385004	20060320
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<u>US8696757 BB</u>	20140415	US20110285426	20111031

Probable Assignee: BIOMET MFG LLC**Assignee(s):^(std):** BIOMENT MFG CORP ; BIOMET INC ; BIOMET MFG CORP ; MAY BRIAN M ; WHITE JOHN R ; BIOMET MFG LLC ; BOLLINGER MARK A ; BROWN DAVID R**Assignee(s):** LVB ACQUISITION INC ; WHITE JOHN ROBERT ; MARTIN DANIEL L ; O DONNELL RICHARD J ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURE ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURED PARTIES AS ; BIOMET MFG**Inventor(s):^(std):** BOLLINGER MARK A ; BROWN DAVID R ; MARTIN DANIEL L ; MAY BRIAN M ; O DONNELL RICHARD J ; WHITE JOHN R ; WHITE JOHN ROBERT**Inventor(s):** WHITE JOHN ; MAY BRIAN ; BROWN DAVID ; BOLLINGER MARK**Agent(s):** HARNESS DICKEY AND PIERCE PLC; HARNESS DICKEY**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

International class A61B17/16 A61B17/17 A61B17/72 A61F2/28 A61F2/30 A61F2/32 A61F2/34 A61F2/36
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US class:

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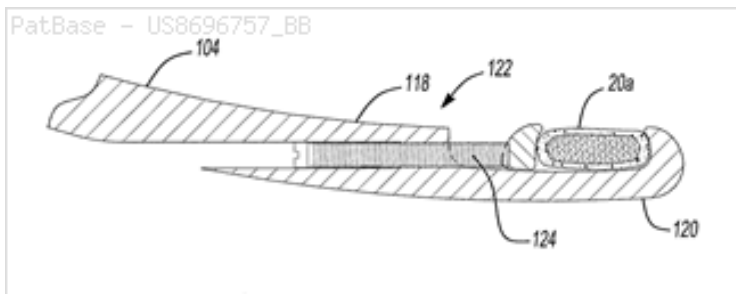
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EP2151207, EP1758512, EP1586276, EP1574174, CN105326583, CN104207862,
CN103528817, CN103040546,

Abstract:

Source: US2001007957A A bone attachment assembly for a remaining portion of a long bone diaphysis following resection is provided. The assembly includes a main body, means for anchoring the device with respect to the remaining bone portion, such as an anchor body, and means for attaching the main body to the means for anchoring. The means for attaching the main body may preferably be in the form of one or more washer springs retained upon a connecting rod attached to the means for anchoring. The assembly may be connected to an orthopedic appliance, an interposed orthopedic appliance connected to a second bone attachment assembly, or a transcutaneous bar for attaching an external appliance. A reaming device for creating an intramedullary cavity, a guide device for guiding an aperture-forming procedure in a remaining bone portion, and a milling device for shaping an interface surface of the bone in a preselected geometry are also provided. In the method of the present invention, a cavity is created within a remaining bone portion using the reaming device. At least one aperture is created using the guide device, and the bone surface is milled to a preselected geometry using the milling device. The above components are then assembled together within the cavity to form the device of the present invention. The device may then be connected to other devices as stated above. A bone attachment assembly may also be provided having a compliant section integrally disposed that is operable for being converted to a preselected condition of expansion prior to or following implantation.



27) Family number: 42776369 (US2011245883A)

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Title: BONE FIXATION DEVICE
Priority: EP20090753176 20091105 GB20080020251 20081105 WO2009GB02612 20091105
Family:

Publication number	Publication date	Application number	Application date
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EP2344056 A1	20110720	EP20090753176	20091105
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US2011245883 AA	20111006	US20090127776	20091105
US8657857 BB	20140225	US20090127776	20091105
WO10052462 A1	20100514	WO2009GB02612	20091105
WO10052462 A8	20100930	WO2009GB02612	20091105

Probable Assignee: DALMATIC LYSTRUP AS

Assignee(s):^(std): BUNGER CODY ERIC ; DALL VAGN ERIK ; DALMATIC LYSTRUP AS

Assignee(s): DALMATIC LYSTRUP A S

Inventor(s):^(std): BUENGER CODY ERIC ; BUNGER CODY ERIC ; DALL VAGN ERIK

Inventor(s): VAGN ERIK DALL ; CODY ERIC BUNGER

Agent(s): MARKS AND CLERK LUXEMBOURG LLP; HITCHCOCK ESMOND ANTONY; PROCK THOMAS; KATHERINE H; WOODS OVIATT GILMAN LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A61B17/58](#) [A61B17/68](#) [A61B17/70](#) [A61B17/86](#) (Advanced/Invention);
^{(IPC 8-9):} [A61B17/70](#) (Core/Invention)

CPC: [A61B17/58](#) [A61B17/7001](#) [A61B17/7035](#) [A61B17/701](#) [A61B17/7011](#) [A61B17/7032](#)
[A61B17/7037](#) [A61B17/7049](#) [A61B17/705](#)

European class: [A61B17/70B5](#) [K61B17/70B1E](#) [K61B17/70B1G](#) [K61B17/70B2](#) [K61B17/70B5B](#) [K61B17/70D](#)
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US class: [606/267](#) [606/268](#) [606/305](#) [606/305P](#)

[Classification Explorer](#)

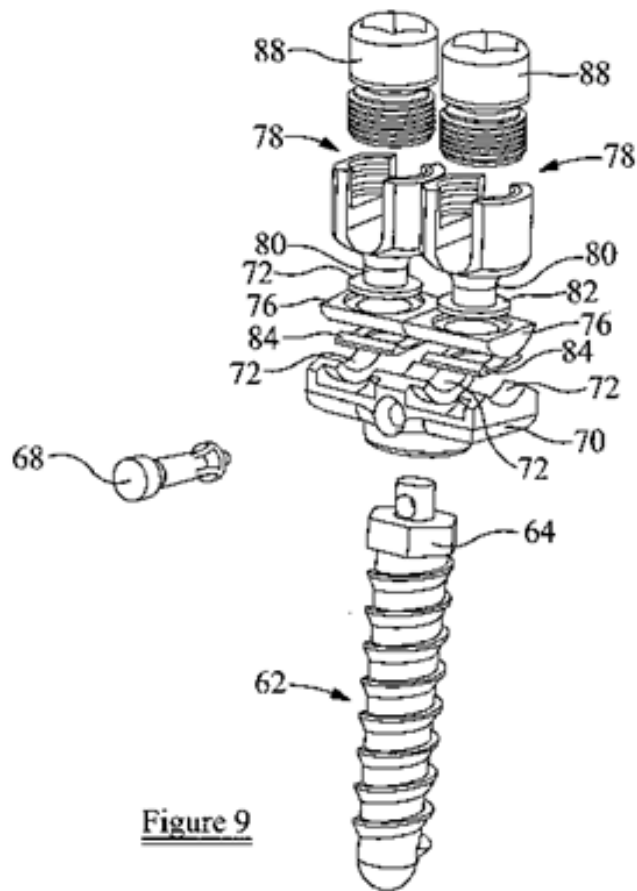
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Forward Citations: WO11027126, US9603635, US8758411, US2016008035, US2015223844, US2013123854,

Abstract:

Source: US2011245883A A bone fixation device has a housing on the exposed head of a screw mounted in a bone part from which it projects. A clamp for a fixation rod is mounted on a plate extending from each of opposite lateral sides of the housing in such a manner that allows the plate to rotate about a lateral axis relative to the housing. Each clamp is itself rotatable on its plate about an axis perpendicular to its respective lateral axis, and thereby provides universal movement relative to the housing. Mechanisms are provided for closing the clamps, for locking each plate against rotation about its lateral axis, and blocking each clamp against rotation about its perpendicular axis. In this way rods can be fixed in the clamps and relative to the device. In a particular embodiment, the plates are supported for pivotal movement about their lateral axes, on part-cylindrical surfaces on opposite lateral sides of the housing. Each clamp is mounted on a boss extending through its respective plate to a locking element in a groove beneath the part-cylindrical surfaces. Each clamp has jaws forming a groove for receiving a fixation rod and a clamping element over the rod. The groove depends into the boss such that a rod received in the groove engages the plate at either end of the groove. Activation of the clamping element thereby locks the rod and clamp relative to the plate, and the plate relative to a housing bracket, to prevent any movement of the rod relative to the head of the screw. In an alternative embodiment of the invention the housing on the head of the screw has jaws defining adjacent grooves for receiving fixation rods, and a split ball element for clamping a rod in the groove. Each groove has a central section in which the base has a part-spherical surface, and opposed end sections in which the base has a surface divergent from the central section base. The split ball element has a diametrical bore therethrough, and a clamping element is provided for compressing each ball element to clamp the rod in the ball element, and the element against the part-spherical surface of the groove central section.

PatBase - W010052462_A8

**Figure 9**

28) Family number: 29775961 (US2005101959A)

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Title: INTERNAL FIXATOR OF BONES**Priority:** WO2001YU00029 20011120 YU20000000730 20001122**Family:**

Publication number	Publication date	Application number	Application date
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Probable Assignee: MITKOVIC MILORAD**Assignee(s):**^(std) MITKOVIC MILORAD**Assignee(s):** MILORAD MITKOVIC**Inventor(s):**^(std) MITKOVIC MILORAD**Inventor(s):** MILORAD MITKOVIC**Agent(s):** JOHN RUSSELL UREN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN ZA ZM ZW

International class
 (IPC 8-9): [A61B17/58](#) [A61B17/68](#) [A61B17/74](#) (Advanced/Invention);
[A61B17/64](#) [A61B17/72](#) [A61B17/80](#) (Advanced/Non-invention);
[A61B17/68](#) (Core/Invention);
[A61B17/60](#) (Core/Non-invention)

International class
 (IPC 1-7): [A61B17/56](#) [A61B17/58](#) [A61B17/70](#) [A61B17/74](#) [A61B17/80](#)

CPC: [A61B17/6466](#) [A61B17/68](#) [A61B17/7225](#) [A61B17/746](#) [A61B17/8052](#)**European class:** [A61B17/68](#) [A61B17/74D4](#) [K61B17/64M](#) [K61B17/72C2](#) [K61B17/80F](#)**US class:** [606/261](#) [606/261S](#) [606/286](#) [606/286P](#) [606/298](#) [606/298S](#) [606/308](#) [606/308S](#) [606/69](#)
[606/73](#)[Classification Explorer](#)

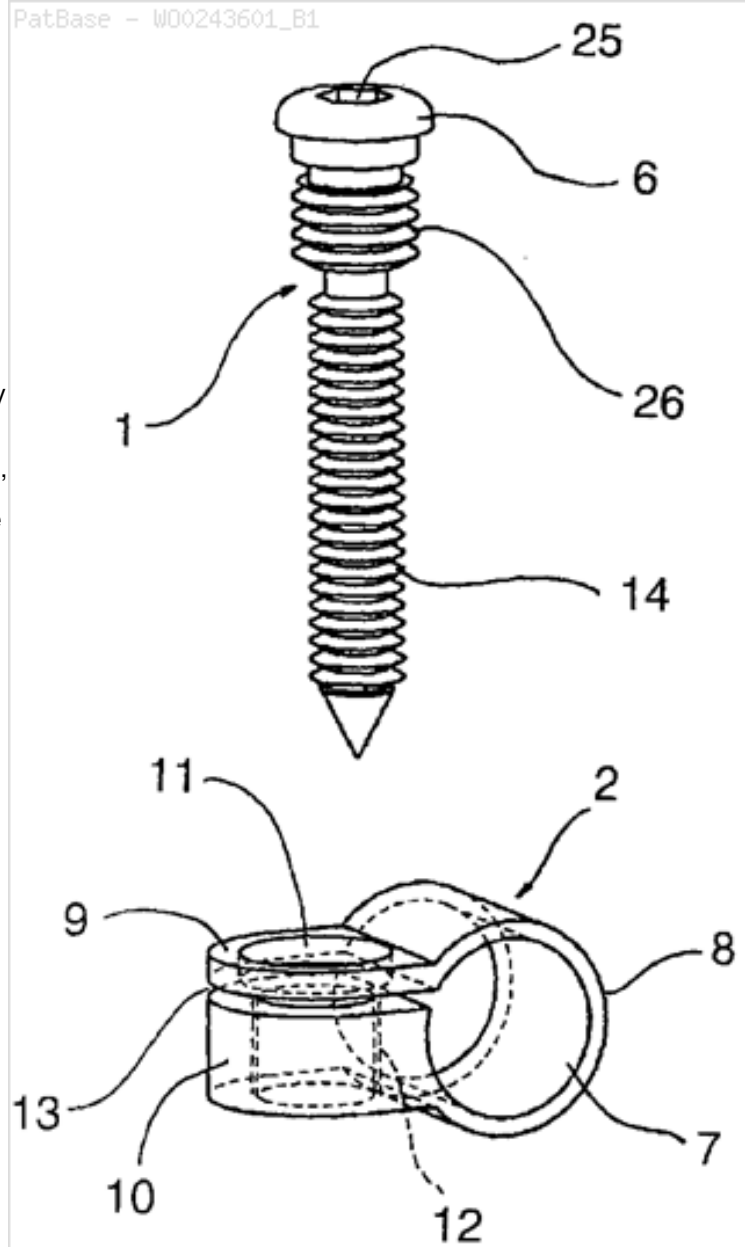
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Forward Citations: WO13103709, WO10103494, WO10103494, USD779065, US9522070, US9474557, US9408648, US8939978, US8894649, US8834469, US8715284, US8668695, US8617161, US8506604, US8449544, US8398637, US8337534, US8298234, US8187275, US8105326, US7931652, US7918853, US7883509, US7833254, US7799030, US7780667, US7534244, US7527627, US2014148859, US2012253404,

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Abstract:

Source: US2005101959A Invention is related to the internal bone fixation device by which we solve a problem of fixation and compression of bone fragments, in case of fractures or other operative interventions on bones, in the field of orthopedic surgery. Aim of the invention is to decrease contact between the implant and surface of the bone, providing minimally invasive application of the implant. Depending on the type of the bone, several ways of construction of the invention are provided. The basic construction is shown on the example of the femur (6) with fracture (I) close to the hip joint, and fracture (II) on a bone shaft. The invention consists of assembly of connecting rod (1) with clamps (2) and screws (3, 4, 5). The connecting rod (1) has trochanteric thicker plate (8) with three parallel, slanting, cylindrical holes (10, 10' 10'') for screws (5) through fracture (I), whereas on the diaphyseal end has flat, thin part (9) with longitudinal slot (11) and rounded tip (12), to accept screw (4). On the cylindrical, rod-like part (7) of the connecting rod (1), two clamps (2) are pulled above fracture (II) and beneath it, with screws (3) that, when screwed into bone fragments, fix the connecting rod (1) with clamp (2) at the same time. The other shown ways of construction of the internal fixation device are condylar, diaphyseal, epiphyso-metaphyseal, telescopic epiphyso-metaphyseal and telescopic trochanteric-condylar fixator.



29) Family number: 34968192 (US2008262495A)

© PatBase

Title: INTRAMEDULLARY NAIL COMPRISING ELEMENTS OF SHAPE-MEMORY MATERIAL

Priority: AU20050229558 20050331 AU20100226866 20100930 EP20040007787 20040331
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DK1820462 T3	20111219	DK20050009998T	20050331
EP1582159 A1	20051005	EP20040007785	20040331
EP1582160 A1	20051005	EP20040007786	20040331
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EP1740113 A1	20070110	EP20050734396	20050331
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EP1815813 B1	20120328	EP20070009999	20050331
EP1820462 A1	20070822	EP20070009998	20050331
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ES2323273 T3	20090710	ES20050734396T	20050331
ES2373120 T3	20120131	ES20070009998T	20050331
ES2384890 T3	20120713	ES20070009999T	20050331
HK1099911 A1	20091106	HK20070107138	20070703
HK1099911 A3	20070831	HK20070107138	20070703

<u>IL178285 A0</u>	20061231	IL20060178285	20060925	
<u>IL178285 A1</u>	20101031	IL20050178285	20050331	
<u>IL204279 A1</u>	20140331	IL20050204279	20050331	
<u>IL204280 A1</u>	20140331	IL20050204280	20050331	
<u>IN03884CN2011 A</u>	20120907	IN2011CN03884	20110603	
<u>IN03886CN2011 A</u>	20120907	IN2011CN03886	20110603	
<u>IN03990CN2006 A</u>	20070706	IN2006CN03990	20061031	
<u>IN249205 B</u>	20111014	IN2006CN03990	20061031	
<u>JP2007530194 T2</u>	20071101	JP20070505506T	20050331	
<u>JP2011177566 A2</u>	20110915	JP20110111722	20110518	
<u>JP2011177567 A2</u>	20110915	JP20110111723	20110518	
<u>JP4809326 B2</u>	20111109	JP20070505506T	20050331	
<u>JP5203486 B2</u>	20130605	JP20110111723	20110518	
<u>KR101235983 B1</u>	20130221	KR20067022634	20050331	
<u>KR20070022256 A</u>	20070226	KR20067022634	20050331	
<u>MXPA06011261 A1</u>	20070509	MX2006PA11261	20050331	
<u>US2008262495 AA</u>	20081023	US20050599502	20050331	
<u>US8162942 BB</u>	20120424	US20050599502	20050331	
<u>WO05094705 A2</u>	20051013	WO2005EP03392	20050331	
<u>WO05094705 A3</u>	20060316	WO2005EP03392	20050331	
<u>WO05094706 A1</u>	20051013	WO2005EP03395	20050331	

Probable Assignee: ORTHOFIX SRL

Assignee(s):^(std): COATI MICHELE ; COATI MICHELE GIANCARLO ; DANIELE VENTURINI ; GRAZIANO MARINI ; ORTHOFIX INT BV ; ROSSI GRAZIANO ; ROSSI LUIGI ; VENTURINI DANIELE ; MARAZZI GIANCARLO ; MARINI GRAZIANO ; ORTHOFIX INTERNAT B V ; ORTHOFIX SRL ; VERTURINI DANIELE

Assignee(s): MICHELE COATI GIANCARLO ; ORTHOFIX SRL BUSSOLENGO ; ORTHOFIX S R L BUSSOLENGO ; ORTHOFIX S R L ; LUIGI ROSSI ; ORTHOFIX INTERNATIONAL B V ; GIANCARLO MARAZZI ; GRAZIANO ROSSI ; MICHELE COATI

Inventor(s):^(std): COATI MICHELE ; MARAZZI GIANCARLO ; MARINI GRAZIANO ; ROSSI GRAZIANO ; ROSSI LUIGI ; VENTURINI DANIELE ; VERTURINI DANIELE ; MICHELE COATI ; MARNI GRAZIANO ; LUIGI ROSSI ; GRAZIANO ROSSI ; GRAZIANO MARINI ; GIANCARLO MARAZZI ; DANIELE VENTURINI

Inventor(s): GRAZIANO MARNI ; MARINI GARZIANO ; MICHELE COATI GIANCARLO

Agent(s): WALLINGTON DUMMER; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE CANADA SENCRL SRL LLP; PATENTANWAELE BAUER VORBERG KAYSER PARTNERSCHAFT MBB; BOTTI MARIO; FERRECCIO RINALDO; ARIZTI MONICA; DR MARK FRIEDMAN LTD; AKERMAN SENTERFITT

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [A61B17/00 A61B17/04 A61B17/56 A61B17/58 A61B17/68 A61B17/72](#) (Advanced/Invention);
[A61B17/00 A61B17/68 A61B17/72](#) (Advanced/Non-invention);
[A61B17/00 A61B17/04 A61B17/56 A61B17/58 A61B17/68](#) (Core/Invention);
[A61B17/00](#) (Core/Non-invention);
[A61B](#) (Subclass/Invention)

International class
(IPC 1-7): [A61B17/00 A61B17/72](#)

CPC: [A61B17/7266 A61B2017/00867 A61B17/7258 A61B17/7275](#)

European class: [A61B17/72E6 A61B17/72E6B A61B17/72E6E A61B17/72G K61B17/00S12](#)

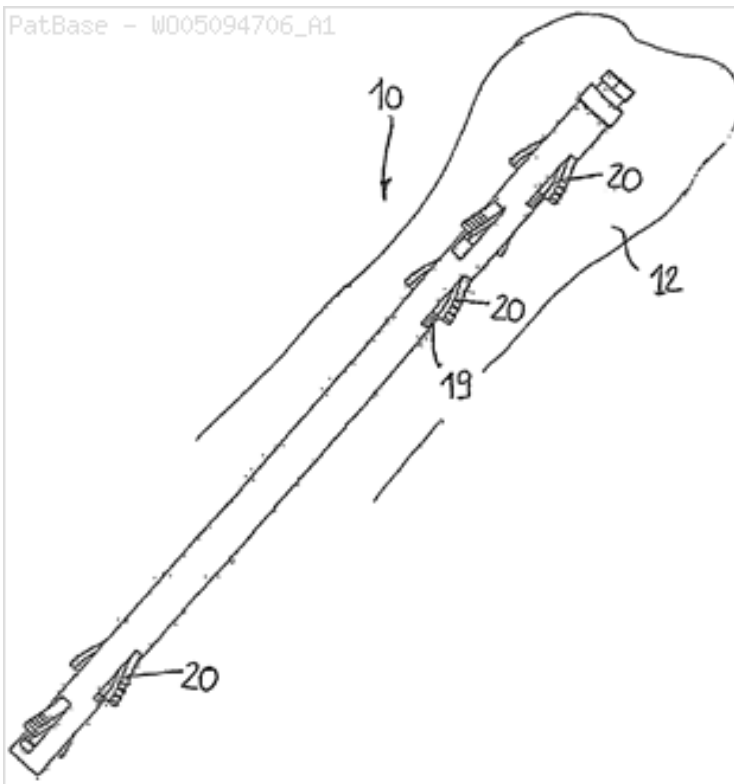
US class: [606/329 606/329S 606/62 606/62P 606/63](#)

Cited documents: WO9851228 A1, WO03015840 A2, WO03007830 A1, WO03007830, WO0247587 A2, WO0134045 A1, WO0128443 A1, US7828802 BB, US6575973 BA, US6575973, US6488684 BB, US6332885 BA, US6261289 BA, US6127597 A, US6077264 A, US5702215 A, US5534004 A, US5534004, US5415660 A, US5147370 A, US5057103 A, US2005187555 AA, US2005159749 AA, US2004230193 AA, US2003130660 AA, US2002068939 AA, US2002032444 AA, US06575973, US05534004, JP61279392, JP61279392, JP2004045232 A2, JP2004045232, JP2002303693 A2, JP2002303693, JP11507120 T2, JP11507120, JP10057398 A2, JP10057398, GB2114005 A1, FR2794019 A1, FR2787313 A1, FR2783702 A1, FR2727304 A1, EP772420, EP772420, EP0882431 A1, EP0772420 A1, DE3838388 A1, DE2260839 B1,

Forward Citations: WO15124720, WO12089331, WO12089330, WO12010184, WO11163402, WO11025098, WO10037038, WO10037038, WO09150691, WO09108194, WO09106951, WO08109870, WO08109566, WO08044011, WO08044011, WO08037454, USD760894, USD756513, USD745163, US9636155, US9629670, US9603643, US9545274, US9539001, US9532881, US9526541, US9522022, US9517093, US9504582, US9498273, US9498266, US9492215, US9474561, US9456857, US9445805, US9283007, US9259250, US9168074, US9161789, US9155574, US9078707, US9060820, US9044313, US9044287, US8998966, US8998923, US8961518, US8961516, US8951268, US8945232, US8906022, US8900233, US8758406, US8721650, US8632543, US8617226, US8568413, US8551106, US8545499, US8496658, US8475456, US8460293, US8439917, US8439916, US8430879, US8414583, US8394097, US8382760, US8287541, US8287539, US8287538, US8133226, US8128627, US8118952, US8012155, US7985222, US7942875, US7938847, US2016100867, US2015201979, US2015141994, US2014309657, US2014067073, US2013310835, US2013231665, US2012203339, US2011087291, US2011087227, US2010256640, US2010087820, US2010023010, US2009018542, US2008294163, JP4897791, JP2014507969, JP2014507968, JP2011522663, JP2008537696, FR2908626, EP2910209, EP2471478, EP2471477, EP2298201, EP2155119, EP2155119, EP1923012, EP1905367, DE102008017741, DE102008017741, CN105250054, CN104323848, CN101953709, CN101782178,

Abstract:

Source: US2008262495A An intramedullary nail (10, 110, 210, 310, 410, 510, 610) suitable for insertion in a fractured elongate bone (12), of the type comprising a stem (14, 114, 214, 314, 414, 514, 614) extended between a proximal end (16, 116, 216, 416, 516, 616) and a distal end (18, 118, 218, 418, 518, 618). The nail comprises a plurality of elements (20, 120, 220, 320, 420, 520, 620) realised with at least one shape-memory material, a plurality of seats (19, 119, 219, 319, 419, 519, 619) formed in the stem (14, 114, 214, 314, 414, 514, 614) for housing the elements (20, 120, 220, 320, 420, 520, 620). The elements (20, 120, 220, 320, 420, 520, 620) are suitable to take a first shape wherein they are retractably housed in the respective seats (19, 119, 219, 319, 419, 519, 619) and a second shape wherein they project from the respective seats (19, 119, 219, 319, 419, 519, 619).



30) Family number: 11038599 (US6102911A)

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Title: Orthopaedic apparatus, particularly for the surgical correction of bone deformities**Priority:** CA19982229362 19980212 IT1997VR00011 19970213

Family:	Publication number	Publication date	Application number	Application date
	AT225632 E	20021015	AT19970122920T	19971228
	CA2229362 AA	19980813	CA19982229362	19980212
	CA2229362 C	20060523	CA19982229362	19980212
	CN1130168 C	20031210	CN19981003825	19980211
	CN1191104 A	19980826	CN19981003825	19980211
	DE69716230 D1	20021114	DE19976016230	19971228
	DE69716230 T2	20030618	DE19976016230T	19971228
	EP0858780 A2	19980819	EP19970122920	19971228
	EP0858780 A3	19990506	EP19970122920	19971228
	EP0858780 B1	20021009	EP19970122920	19971228
	ES2184021 T3	20030401	ES19970122920T	19971228
	IT1293941 B1	19990311	IT1997VR00011	19970213
	ITVR970011 A1	19980813	IT1997VR00011	19970213
	JP10225465 A2	19980825	JP19970358684	19971226
	PT858780 T	20021231	PT19970122920T	19971228
	TR9800223 A2	19990621	TR19980000223	19980213
	US6102911 A	20000815	US19980023018	19980211
	ZA9711413 A	19980624	ZA19970011413	19971219

Probable Assignee: ORTHOFIX SRL**Assignee(s):^(std):** ORTHOFIX SRL**Assignee(s):** ORTHOFIX SRL VIA DELLE NAZIONI ; TEN VELDHUIJS SANDER ; VENTURINI DANIELE ; FACCIOLI GIOVANNI ; ORTHOFIX INT ; ORTHOFIX INT BV ; ORTHOFIX S R L ; ORTHOFIX S R L BUSSOLENGO**Inventor(s):^(std):** TEN VELDHUIJS SANDER ; TEN VELDHUIJS SANDER ; VELDHUIJS SANDER TEN ; VELDHUIS SANDER TEN ; VELDHUIJS SANDER TEN ; VENTURINI DANIELE ; VENTURINI D ; VELDHUIJS S T ; FACCIOLI GIOVANNI ; FACCIOLI G**Inventor(s):** DANIELE VENTURINI ; D VENTURINI ; SANDER TEN VELDHUIS ; SANDER TEN VELDHUIJS ; S T VELDHUIJS ; GIOVANNI FACCIOLI ; G FACCIOLI**Agent(s):** SMART AND BIGGAR**Designated states:** AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

International class
 (IPC 8-9): [A61B17/17](#) [A61B17/56](#) [A61B17/68](#) [A61B17/88](#) (Advanced/Invention);
[A61B17/66](#) (Advanced/Non-Invention);
[A61B17/16](#) [A61B17/56](#) [A61B17/68](#) [A61B17/88](#) (Core/Invention);
[A61B17/60](#) (Core/Non-Invention)

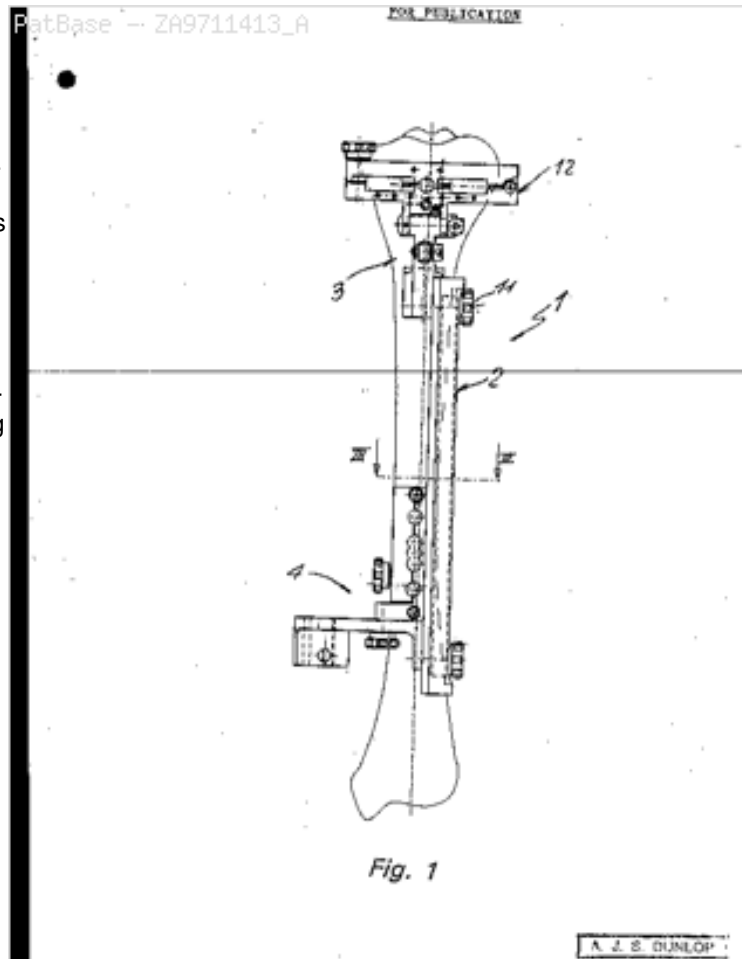
International class
 (IPC 1-7): [A61B17/17](#) [A61B17/56](#) [A61B17/58](#) [A61B17/60](#) [A61B17/68](#)

CPC: [A61B17/171](#) [A61B17/66](#) [A61B17/8866](#)**European class:** [A61B17/17E](#) [A61B17/66](#) [A61B17/88H](#)**US class:** [606/54](#) [606/55](#) [606/59](#) [606/96](#)[Classification Explorer](#)**Cited documents:** WO9635386 A1, WO9605777 A1, WO9111151 A1, US5728096 A, US5342360 A, US5292322 A, US5207676 A, US5160335 A, US5152280 A, US4920959 A, US4628922 A, US4502473 A, US2391537 A, FR2557933 A1, DE4238582 A1,

Forward Citations: WO05032383, WO04071314, US9532805, US9510859, US9301782, US9277937, US9259250, US9186179, US9155574, US9149296, US9138260, US9084631, US9084630, US9060820, US8961516, US8888777, US8840611, US8758343, US8734446, US8728078, US8439917, US8419732, US8388619, US8382757, US8361073, US8287541, US8287539, US8241285, US8114093, US7942875, US7938829, US7914533, US7909825, US7846162, US7731738, US7645279, US7588571, US7575575, US7507240, US7455685, US7282052, US7261713, US6780877, US6500177, US6482206, US6409729, US2015133933, US2011172663, US2011103676, US2011098707, US2011098706, US2010234845, US2008039850, US2007282338, US2006161168, US2004097922, US2004059331, US2003069580, RU2472462, JP2008501396, EP1136041, CN103919593, CN103919593,

Abstract:

Source: US6102911A An orthopaedic apparatus, particularly for the surgical correction of angular and longitudinal defects of the bones of limbs, of the femur and tibia type, comprising a longitudinal rod externally positionable substantially parallel to a bone for correction, a first clamp movably anchored to the rod for supporting drilling guides for screws insertable in a proximal portion of the bone, and at least one second clamp movably anchored to the rod for supporting drilling guides for screws insertable in a distal portion of the bone. The first and second clamps are orientable and selectively lockable, before the surgical intervention, in predetermined angular positions with respect to the rod corresponding to the angular deformations of the bone, and are repositionable with respect to the rod in correct angular positions after the osteosynthesis for the proximal and distal portions of the bone so as to eliminate the angular deformations of the bone.



31) Family number: 33090565 (US2008154311A)

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Title: BONE FIXING DEVICE**Priority:** CH20040002143 20041223 WO2005CH00768 20051222

Family:	Publication number	Publication date	Application number	Application date
	AT450220 E	20091215	AT20050815861T	20051222
	DE502005008648 D1	20100114	DE200550008648T	20051222
	EP1827271 A2	20070905	EP20050815861	20051222
	EP1827271 B1	20091202	EP20050815861	20051222
	JP2008525062 T2	20080717	JP20070547145T	20051222
	JP4922184 B2	20120425	JP20070547145T	20051222
	US2008154311 AA	20080626	US20050722404	20051222
	US8753343 BB	20140617	US20050722404	20051222
	WO06066440 A2	20060629	WO2005CH00768	20051222
	WO06066440 A3	20060908	WO2005CH00768	20051222

Probable Assignee: STAEUBLI HANS ULRICH**Assignee(s):**^(std) STAEUBLI HANS ULRICH**Inventor(s):**^(std) STAEUBLI HANS ULRICH**Agent(s):** LUSUARDI WERTHER; RANKIN HILL AND CLARK LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class [A61B17/56](#) [A61B17/58](#) [A61B17/72](#) [A61B17/80](#) (Advanced/Invention);
 (IPC 8-9): [A61B17/56](#) [A61B17/58](#) [A61B17/68](#) (Core/Invention)

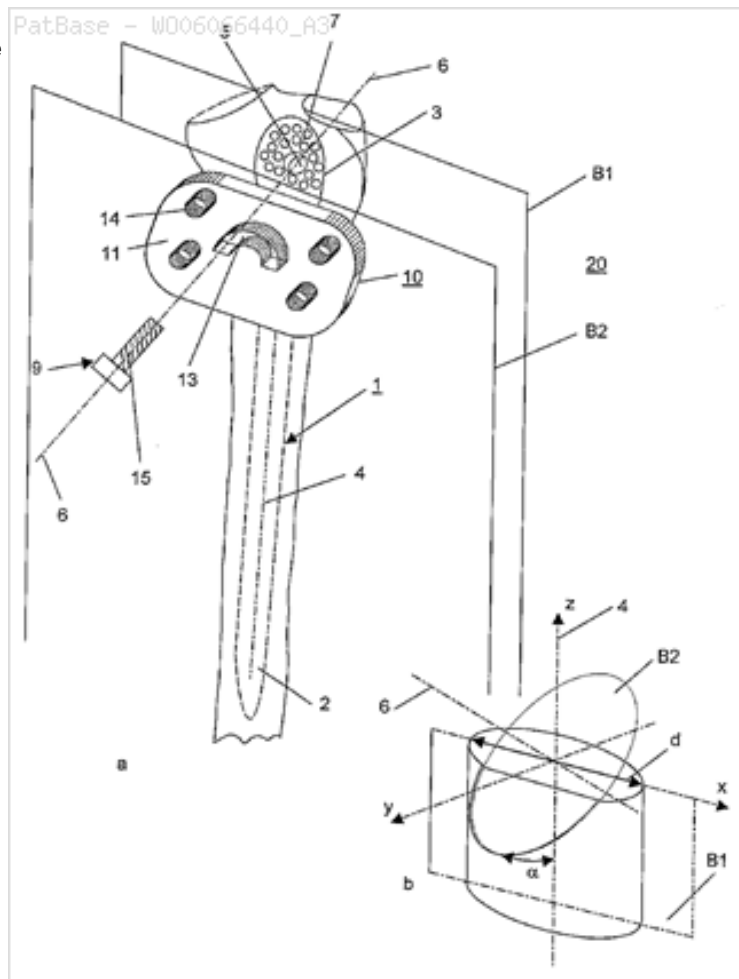
CPC: [A61B17/8095](#) [A61B17/7233](#) [A61B17/72](#) [A61B17/8004](#) [A61B17/8061](#)**European class:** [A61B17/72](#) [A61B17/72E](#) [A61B17/80A](#) [A61B17/80H](#)**US class:** [606/246](#) [606/246S](#) [606/280](#) [606/280P](#) [606/62](#) [606/62S](#) [606/67](#) [606/67S](#)[Classification Explorer](#)

Cited documents: WO9920195 A1, WO9109571 A1, WO04021904 A2, WO02080790 A1, US6926720 BB, US6767351 BB, US6527775 BA, US6338734 BA, US6270499 BA, US6245436 BA, US6077264 A, US6019761 A, US6010506 A, US5782920 A, US5749875 A, US5620448 A, US5603715 A, US5562557 A, US5462547 A, US5443466 A, US5356410 A, US5122141 A, US4973332 A, US4794919 A, US4794918 A, US4733654 A, US4703751 A, US4506662 A, US4473069 A, US4467793 A, US4101985 A, US4091806 A, US3977398 A, US3842825 A, US3763855 A, US3709218 A, US2010063504 AA, US2006100623 AA, US2003149486 AA, US2003135212 AA, US2003083661 AA, US2003083660 AA, US2003073999 AA, US2003033019 AA, US2002193794 AA, US2002151898 AA, US2001021851 AA, US2001012939 AA, RU2206290 C2, JP48004631 B4, JP48004631 B4, JP48004631 B1, JP11047170 A2, GB2299941 A1, FR2785518 A1, FR2614524 A1, EP0689800 A2, DE7519604 U, DE7519604, DE689800, DE2459257 A1,

Forward Citations: WO13133887, WO13075730, WO10127460, US9636161, US9468466, US9463054, US9439703, US9427267, US9414864, US9402667, US9333014, US9283014, US9283008, US9278004, US9271776, US9271772, US9254154, US9198700, US9125700, US9114016, US9078712, US9066764, US8998998, US8961573, US8906023, US8882848, US8870963, US8845724, US8790343, US8764808, US8690916, US8597362, US8469999, US8419735, US2015073415, US2014107795, US2013131802, US2013060342, US2011152943, US2011112534, US2009177240, KR20120023625, KR101683566, JP2012525870, FR2948555, EP2238936, DE102007037872, CN104771221, CN102413779, AT510553, AT510553,

Abstract:

Source: US2008154311A A bone fixing device includes an intramedullary nail (1) with a distal end part (2), a proximal end part (3), a center line (4), and a bore (5) that extends perpendicular to the center line (4) in the proximal end part (3) and is provided with a bore axis (6). The bone fixing device further includes a bone plate (10) with a top face (11), a bottom face (12) that is to be in contact with the bone, a continuous, central opening (13) which is located in the central portion of the bone plate (10) and connects the top face (11) to the bottom face (12), and several plate holes (14) that are also continuous and are disposed peripherally around the central opening (13).



32) Family number: 29520468 (US5304177A)

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Title: AUXILIARY DEVICE FOR OSTEOSYNTHESIS

Priority: CA19932099240 19930625 DE19924220936 19920626 DE19930020834U 19930622
 EP19930912613 19930622 DE19930020849U 19930622 DE19935005741 19930622
 WO1993DE00546 19930622 US19930077803 19930621 US19930058502 19930505

Family:

Publication number	Publication date	Application number	Application date
<u>AR248346 A1</u>	19950818	AR19930325266	19930625
<u>AT149813 E</u>	19970315	AT19930912613T	19930622
<u>AU199343074 A1</u>	19940124	AU19930043074	19930622
<u>AU659022 B2</u>	19950504	AU19930043074	19930622
<u>CA2099240 AA</u>	19931227	CA19932099240	19930625
<u>CA2099240 C</u>	19960716	CA19932099240	19930625
<u>DE4220936 C1</u>	19930916	DE19924220936	19920626
<u>DE59305741 D1</u>	19970417	DE19935005741	19930622
<u>DE9320834 U1</u>	19950316	DE19930020834U	19930622
<u>DE9320849 U1</u>	19950420	DE19930020849U	19930622
<u>DK0601152 T3</u>	19970901	DK19930912613T	19930622
<u>EP0601152 A1</u>	19940615	EP19930912613	19930622
<u>EP0601152 B1</u>	19970312	EP19930912613	19930622
<u>ES2099443 T3</u>	19970516	ES19930912613T	19930622
<u>GR3023313 T3</u>	19970829	GR19970400970T	19970502
<u>JP3306064 B2</u>	20020724	JP19940501945T	19930622
<u>JP6509970 T2</u>	19941110	JP19940501945T	19930622
<u>MX9303763 A1</u>	19940131	MX19930003763	19930623
<u>NO310055 B1</u>	20010514	NO19940000651	19940225
<u>NO940651 A</u>	19940225	NO19940000651	19940225
<u>NO940651 A0</u>	19940225	NO19940000651	19940225
<u>TR26959 A</u>	19940912	TR19930000571	19930624
<u>US5304177 A</u>	19940419	US19930077803	19930621
<u>WO9400067 A1</u>	19940106	WO1993DE00546	19930622
<u>ZA9304580 A</u>	19940629	ZA19930004580	19930625

Probable Assignee: PENNIG DIETMAR DR MED PRIV DOZ 5000 KOELN DE**Assignee(s):^(std):** PENNIG DIETMAR ; DIETMAR PENNIG DR MED

Assignee(s): DR MED DIETMAR PENNIG ; DR MED PENNIG DIETMAR ; DIETMAR PENNIG ;
 PENNIG DIETMAR DR MED ; PENNIG DIETMAR DR MED PRIV DOZ ; PENNIG
 DIETMAR DR MED PRIV DOZ 5000 KOELN DE ; PENNIG DIETMAR DR MED PRIV
 DOZ 50935 KOELN DE

Inventor(s):^(std): DIETMAR PENNIG ; PENNIG DIETMAR DR MED ; PENNIG DIETMAR**Inventor(s):** PENNIG DIETMAR DR MED PRIV DOZ**Agent(s):** GRIFFITH HACK; OGILVY RENAULT LLP SENCRL SRL**Designated states:** AT AU BE CH DE DK ES FR GB GR IE IT JP LI LU MC NL NO PT SE

International class A61B17/02 A61B17/60 A61B17/64 A61B17/66 (Advanced/Invention);
^{(IPC 8-9):} A61B17/02 A61B17/60 A61B17/66 (Advanced/Non-invention);
A61B17/60 (Core/Invention);
A61B17/02 (Core/Non-invention)

International class A61B17/16 A61B17/56 A61B17/60 A61B17/64 A61F5/04 B61B
^{(IPC 1-7):}

CPC: A61B17/6416 A61B17/6466 A61B17/6475 A61B17/66 A61B2017/0256 Y10T403/32311 Y10T403/7067 Y10T403/7171

European class: A61B17/64C A61B17/64M K61B17/02J2 K61B17/64M2 K61B17/66

US class: 403/374 403/374.3 403/396 403/90 606/58 606/59

[Classification Explorer](#)

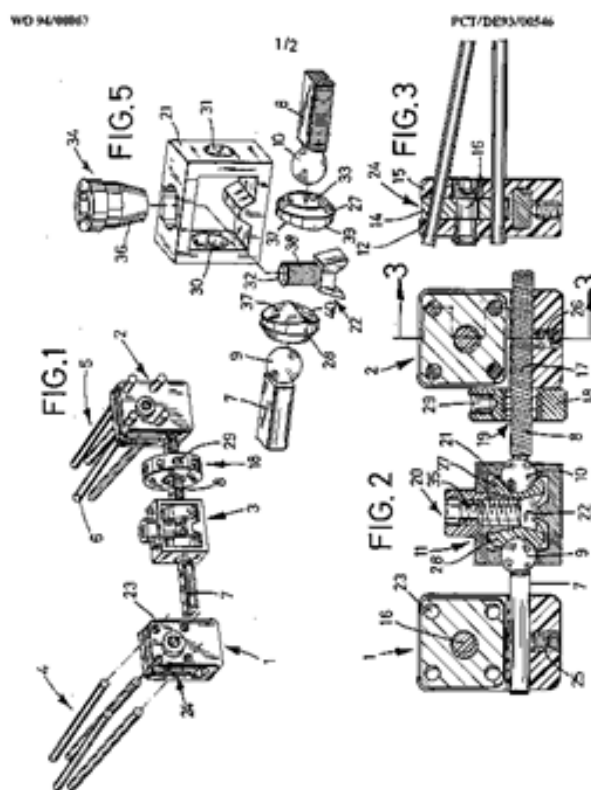
Cited documents: WO8805287 A1, USRE31809 E, US4988349 A, US4244360 A, US2391693 A, US2346346 A, SU1333327 T, GB2240043 A1, FR2628627 A1, FR2574653 A1, FR2531332 A1, EP0517939 A1, EP0490812 A1, EP0420813 A1, EP0024256 A2, EP0011258 B1, EP0011258 A1, DE3701533 C2, AU657574 B2, AU654908 B2, AU4046978 A1,

Forward Citations: WO9958072, WO9904714, WO9814130, WO9635385, WO15183226, WO12076695, WO05115260, WO03030759, WO03030759, USD720853, USD704840, USD683461, USD682426, USD663030, US9629663, US9517086, US9486247, US9402651, US9387014, US9259242, US9155562, US9050135, US8961572, US8945129, US8920470, US8920469, US8870921, US8827998, US8808289, US8758343, US8685023, US8603090, US8591550, US8585703, US8556937, US8382757, US8382755, US8372119, US8361117, US8192471, US8172840, US8123747, US8075560, US7993069, US7967845, US7887537, US7789897, US7758582, US7731738, US7717939, US7717938, US7645294, US7608074, US7588571, US7575575, US7507240, US7261713, US7147640, US7066938, US7056322, US7048735, US7004943, US6585736, US6533785, US6428540, US6413258, US6340361, US6245071, US6171309, US6171308, US6162224, US6024745, US5976134, US5976133, US5976125, US5951556, US5746741, US5743898, US5662650, US5662649, US5658283, US5624440, US5562737, US5545162, US2016022315, US2014324045, US2013110110, US2011066151, US2010191289, US2010076436, US2010076434, US2009136290, US2007270810, US2007255280, US2007162028, US2007123857, US2007123856, US2007100346, US2006271045, US2006229605, US2006229604, US2006229603, US2006229602, US2006162126, US2006064091, US2006058789, US2005245939, US2005228377, US2005119656, US2004215204, US2004181221, US2004138659, US2004049188, US2003149430, US2003149429, US2003114853, US2003069580, MY119587, KR101606292, JP2012081268, JP2008500089, ITMO20120160, EP2438869, EP1434531, EP1076527, EP1041936, EP0832613, DE29619711, AU2011226864, AU2002342011,

Abstract:

Source: US5304177A An external fixator for osteosynthesis features application to the fixation of fractures of small bones such as those of the hand or foot. A small central unit contains two ball joints which are releasably clamped via a single actuation. Bone fasteners, such as bone pins or bone screws are releasably clamped, via a single actuation at each of two clamping units, and each of the clamping units is adjustably clamped to a carrier rod within a wide range of selected positions, which extends to the smallest of offsets from the central double-ball joint unit, by reason of the fact that the ball of each ball joint is the inner end of one of the respective carrier rods.

PatBase - W09400067_A1



33) Family number: 58445605 (US2015038966A)

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Title: ANCHORING GROUP FOR EXTERNAL FIXATOR**Priority:** EP20130178833 20130731 EP20130178834 20130731 WO2014EP01893 20140710
WO2014EP01894 20140710 EP20140747826 20140710 EP20140747827 20140710

Family:	Publication number	Publication date	Application number	Application date
	AR097156 AA	20160224	AR2014P102855	20140730
	AU2014298953 AA	20150205	AU20140298953	20140710
	CA2918542 AA	20160118	CA20142918542	20140710
	CN105407821 A	20160316	CN201480042589	20140710
	CN105473084 A	20160406	CN201480042588	20140710
	CO16050875 A2	20160620	CO20160050875	20160229
	CO16051061 A2	20160620	CO20160051061	20160229
	EP2832307 A1	20150204	EP20130178833	20130731
	EP3027129 A1	20160608	EP20140747826	20140710
	EP3027130 A1	20160608	EP20140747827	20140710
	IL243800 A0	20160421	IL20140243800	20140710
	JP2016527966 T2	20160915	JP20160530369T	20140710
	JP2016527967 T2	20160915	JP20160530370T	20140710
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	WO15014440 A1	20150205	WO2014EP01893	20140710
	WO15014440 A8	20150514	WO2014EP01893	20140710
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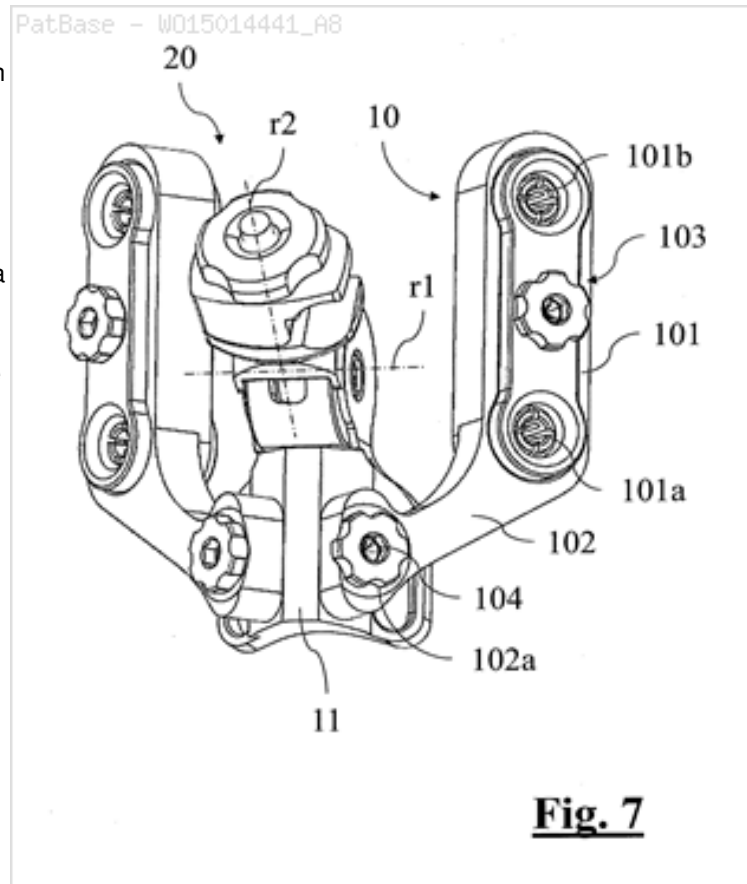
Probable Assignee: ORTHOFIX SRL**Assignee(s):^(std):** COATI MICHELE ; ORTHFIX S R I ; ORTHOFIX S R I ; ORTHOFIX SRL ; VENTURINI DANIELE ; ZANDONA ENRICO ; OTTOBONI ANDREA**Assignee(s):** ORTHOFIX SR L ; ORTHOFIX SRI ; ORTHFIX SRI**Inventor(s):^(std):** ANDREA OTTOBONI ; COATI MICHELE ; DANIELE VENTURINI ; ENRICO ZANDONA ; MICHELE COATI ; OTTOBONI ANDREA ; VENTURINI DANIELE ; ZANDONA ENRICO ; ZANDON ENRICO**Agent(s):** CHRYSILIOU IP; MBM INTELLECTUAL PROPERTY LAW LLP; JESUS MARIA MENDEZ BERMUDEZ; BOTTI MARIO; BOTTI MARIO ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [A61B A61B17/60 A61B17/64](#) (Advanced/Invention);
(IPC 8-9): [A61B](#) (Subclass/Invention)**CPC:** [A61B2017/564 A61B17/6458 A61B17/6466](#)**US class:** [606/59](#)[Classification Explorer](#)**Cited documents:** WO9510240 A1, WO14111907 A1, WO13103709 A1, US6221072 BA, US6217577 BA, US5797908 A, US5624440 A, US5003969 A, US4620533 A, US2014257288 AA,

US2014025076 AA, US2012095462 AA, US2011009865 AA, US2010318084 AA, US2010082028 AA, US2009228006 AA, US2008275552 AA, US2004260291 AA, US2003153910 AA, US2003125736 AA, JP2002306502 A2, GB2114891 A1, FR2831792 A1, EP2774560 A2,

Forward Citations: US2016022315,

Abstract:

Source: US2015038966A The present disclosure relates to an anchoring group for an external fixator, that comprises a connecting body designed to be coupled to a bar of an external fixator. A locking device is connected to the connecting body at a fastening point thereof and comprises a pin locking arm provided with two seats suitable for locking a corresponding number of uni-cortical pins. A connection base is intended to be coupled to a connecting body of the anchoring group. An additional member, also associated with the connecting body, comprises at least one auxiliary seat, not aligned with the seats of the locking device, for locking an additional uni-cortical pin. In an additional embodiment, the connection base of the locking device extends in an angled relationship with respect to the pin locking arm and away from both the seats. The connection base has a point for fastening to the connecting body which is not aligned with said seats.



0) US2002035314A – METHOD FOR HUMERUS RETRACTION

34) Family number: 30509477 (US2002035314A)

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Title: METHOD FOR HUMERUS RETRACTION

Priority: US19990157448P 19991004 US19990157488 19991004 US20000654400 20000901
 US20000096544 20000901 US20000678543 20001004 US19990157488P 19991004
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Family:

Publication number	Publication date	Application number	Application date
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US7458933 BB	20081202	US20040892816	20040716
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WO06019735 A1	20060223	WO2005US24673	20050713
WO06093844 A2	20060908	WO2006US06735	20060224
WO06093844 A3	20090416	WO2006US06735	20060224

Probable Assignee: MINNESOTA SCIENTIFIC INC

Assignee(s):^(std): BERG CHRISTOPHER LEE ; LE VAHN STEVEN M ; BALLANTINE ROBERT ; AT AND T
 IP II LP ; LEVAHN STEVEN MARK ; LLC LEVAHN INTELLECTUAL PR ; LEVAHN

STEVEN ; LEVAHN INTELLECTUAL PROPERTY H ; SHARRATT TODD WILLIAM ; SHARRATT TODD W ; SHARRATT TODD ; AT AND T CORP ; LLC THE LEVAHN INTELLECTUAL PR ; MINNESOTA SCIENT INC D B A OMN ; MINNESOTA SCIENTIFIC INC ; LU XIAOLIN

Assignee(s): T CORP ; MINNESOTA SCIENTIFIC INC D B A OMNI TRACT SURGICAL ; THE LEVAHN INTELLECTUAL PROPERTY HOLDING COMPANY LLC ; LLC THE LEVAHN INTELLECTUAL PROPERTY HOLDING COMPANY ; THE LEVAHN INTELLECTUAL PROPERTY HOLDING COMPANY L ; AT AND T INTELLECTUAL PROPERTY II LP ; LLC THE LEVAHN INTELLECTUAL PROPERTY HOLDING COMPA ; LEVAHN INTELLECTUAL PROPERTY HOLDING CO INC ; LEVAHN INTELLECTUAL PROPERTY HOLDING CO ; LEVAHN INTELLECTUAL PROPERTY HOLDING CO LLC ; LLC LEVAHN INTELLECTUAL PROPERTY HOLDING CO

Inventor(s):^(std): BALLANTINE ROBERT ; BERG CHRISTOPHER LEE ; LEVAHN STEVEN M ; LE VAHN STEVEN M ; LEVAHN STEVEN ; CHRISTOPHER LEE BERG ; SHARRATT TODD WILLIAM ; LEVAHN STEVEN MARK ; SHARRATT TODD W ; LU XIAOLIN ; SHARRATT TODD ; TODD WILLIAM SHARRATT ; STEVEN MARK LEVAHN ; TODD W SHARRATT

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; Z PETER SAWICKI WESTMAN CHAMPLIN AND KELLY; WESTMAN CHAMPLIN AND KELLY PA

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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A61B19/00 A61F2/00 A61F2/30 (Advanced/Non-invention);
A61B1/32 A61B17/02 A61B17/56 A61F2/30 A61L17/00 (Core/Invention);
A61B19/00 A61F2/00 (Core/Non-invention);
A61B (Subclass/Invention)

International class
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CPC: A61L17/00 A61B2017/0275 H04J14/029 H04J14/0293 H04J14/0294 H04Q11/0062 H04Q2011/0081 H04Q2011/0092 H04J14/0283 A61B90/50 A61B2090/571 A61F2/40 A61B17/02 A61F2/4059 A61F2/4081 A61F2002/30691 A61F2002/30892 A61F2002/4018 A61F2310/00017 A61F2310/00023 A61B17/025 A61B17/0206 A61B17/0293 A61B2017/0268 A61B2017/0287

European class: A61B17/02 A61B17/02A A61B17/02J A61B17/02R A61F2/40 H04B10/27 H04B10/2755 H04J14/02N4 H04J14/02P4D H04J14/02P6 H04J14/02P6D H04Q11/00P4 K61B17/02A K61B17/02J4 K61B17/02J6 K61B17/02P K61B19/26 K61F2/30A5H K61F2/30L2S9P K61F2/40C1 K61F2/40D K61F2/40G K61F310/00A2A K61F310/00A2E T04Q11/00P4M1 T04Q11/00P4T1

US class: 359/119 385/24 398/59 398/60 398/67 600/215 600/227 600/227P 600/228 600/228P 600/230 600/231 600/231P 600/235 600/235P 606/228 606/86 606/86.00RS 606/86R 623/19.11 623/19.110S 623/19.13 623/19.130S 623/20.14

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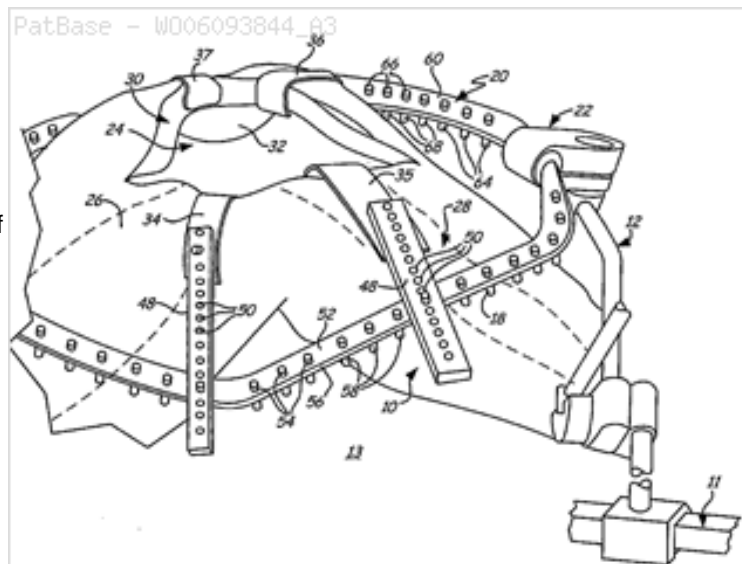
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Forward Citations:

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Abstract:

Source: US2002035314A A method for performing surgery on a shoulder joint utilizes one positionable support arm attached to a retractor support apparatus. The method includes incising a patient to expose the shoulder joint. After exposing the shoulder joint, the humeral ball is dislocated from the glenoid cavity. A retractor is mounted to one of the support arms at a proximal end. A humerus retractor blade at a distal end of the humerus retractor engages the humerus. The humerus retractor blade is positioned about the humerus and a mechanical system within the humerus retractor is manipulated to laterally displace the humeral ball from the glenoid cavity.



35) Family number: 30545142 (US2001053911A)

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Title: REPOSITIONING INSTRUMENT TO FIXATE BONE–FRACTURES**Priority:** BR1998PI16017 19980917 DE19982004268U 19980311 DE19995013861 19990216
WO1999CH00074 19990216 WO1998CH00399 19980917 EP19980942440 19980917**Family:**

Publication number	Publication date	Application number	Application date
<u>AR018571 AA</u>	20011128	AR1999P100898	19990303
<u>AR020438 AA</u>	20020515	AR1999P104598	19990914
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Probable Assignee: SYNTHES USA**Assignee(s):^(std):** ACKERET ROMAN ; AMBUEHL RUEDI ; AMBUHL RUEDI ; DELL OCA ALBERTO FERNANDEZ ; HEHLI MARCUS ; HEHLI MARKUS ; HUNGERBUEHLER RUTH ; SYNTHES USA ; SYNTHES AG ; SENN PETER ; SYNTHES AG CHUR ; SYNTHES U S A ; SYNTHES GMBH**Assignee(s):** SYNTHES AG CHUR CHUR ; SYNTHES AG CHUR CHUR GRAUBUENDEN CH ; SYNTHES AKTIENGESELLSCHAFT ; SYNTHES USA LLC ; SYNTHES ; SYNTHES (USA) ; SYNTHES CHUR CHUR AG ; SYNTHES CHUR CHUR GRAUBUENDEN CH AG ; SYNTHES CHUR AG ; SYNTHES U SA ; HUNGERBUEHLER RUTH**Inventor(s):^(std):** ACKERET ROMAN ; ALBERTO FERNANDEZ DELL OCA ; AMBUEHL RUEDI ; AMBUHL RUEDI ; DELL OCA ALBERTO FERNANDEZ ; DELL OCA FERNANDEZ ; FERNANDEZ

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HUNGERBUEHLER RUTH ; HUNGERBUHLER RUTH ; MARKUS HEHLI ; OCA
ALBERTO FERNANDEZ DELL ; RUEDI AMBUHL ; SENN PETER

Inventor(s): RUTH HUNGERBUEHLER ; PETER SENN ; ROMAN ACKERET ; RUEDI AMB HL
Agent(s): PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP
Designated states: AT AU BE BR CA CH CY DE DK ES FI FR GB GR IE IT JP LI LU MC MX NL PT SE US
International class
(IPC 8-9): A61B17/17 A61B17/56 A61B17/58 A61B17/60 A61B17/64 A61B17/88
A61B17/90 (Advanced/Invention);
A61B17/58 A61B17/60 A61B17/64 A61B17/78 (Advanced/Non-invention);
A61B17/58 A61B17/60 A61B17/88 (Core/Invention);
A61B17/60 (Core/Non-invention)
International class
(IPC 1-7): A61B A61B17/17 A61B17/28 A61B17/56 A61B17/58 A61B17/60 A61B17/68 A61B17/72
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CPC: A61B17/6466 A61B17/8866 A61B17/1725 A61B17/744
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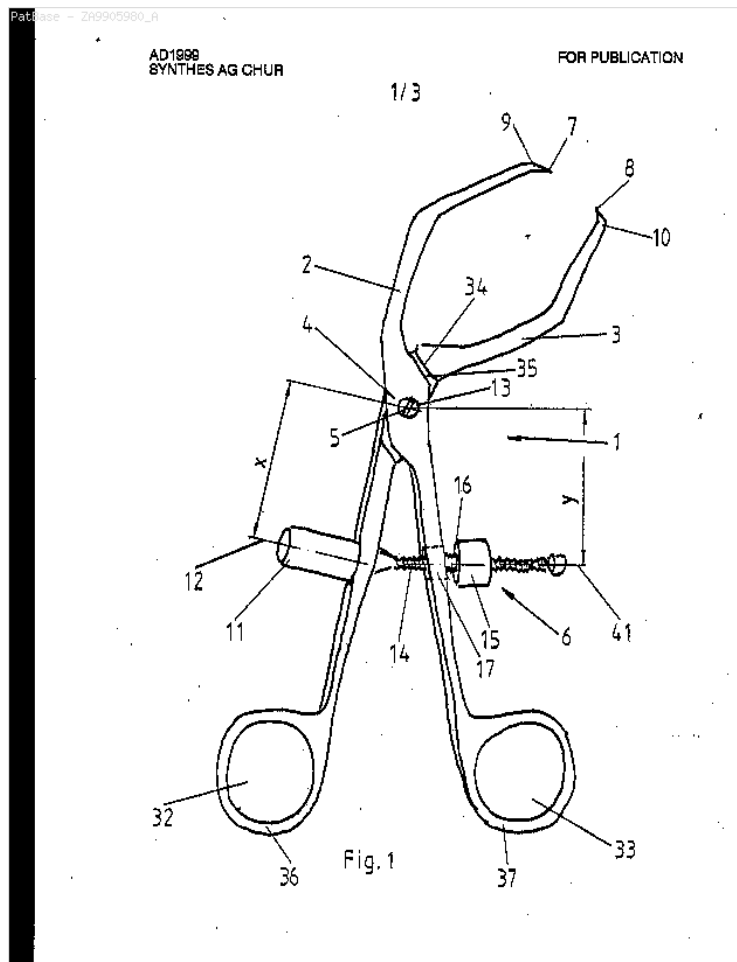
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Forward Citations: WO15068434, WO12012625, WO04026155, US9622760, US9545266, US9480509,
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EP1779798, EP1779798, CN103976773, CN103976773, CN103462676,

Abstract:

Source: US2001053911A The present invention discloses bone grasping tongs for seizing bones or bone fragments. The tongs comprise two mutually pivotable tongs levers fitted with clamping tips at the ends of the tongs levers for seizing the bone. The tongs further comprise a locking element to detachably lock the relative position of the tongs levers and a connecting member to connect with an additional component within an external fixation device. The locking element is located at a distance from the axis of rotation and the longitudinal axis of the connecting member is situated in the plane of pivoting of the tongs lever. The present invention also discloses an external fixation device for externally fixing bone fractures. The device comprises at least one bone grasping tongs, one elongated support, and at least one clamp which detachably connects the connecting member of a bone grasping tongs and an elongated support in a mutually rotatable manner.



36) Family number: 29452144 (US6171312B)

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Title: POWER-DRIVEN OSTEOTOME TOOLS FOR COMPACTION OF BONE TISSUE
Priority: US19960022148P 19960718 US19990232362 19990115 US20000634082 20000808
 WO1997US12512 19970717

Family:	Publication number	Publication date	Application number	Application date
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	<u>AU199736694 A1</u>	19980210	AU19970036694	19970717
	<u>DE69727816 D1</u>	20040401	DE19976027816	19970717
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	<u>US6899715 BA</u>	20050531	US20000634082	20000808
	<u>WO9803119 A1</u>	19980129	WO1997US12512	19970717

Probable Assignee: BIOMET INC

Assignee(s):^(std): BEATY KEITH D ; IMPLANT INNOVATIONS INC ; PALM BEACH GARDENS INC

Assignee(s): BIOMET INC ; LVB ACQUISITION INC ; BIOMET 3I LLC ; BIOMET ; BIOMET 3I INC ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURE ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURED PARTIES AS

Inventor(s):^(std): BEATY D ; BEATY KEITH D

Inventor(s): KEITH D BEATY

Agent(s): JENKENS AND GILCHRIST

Designated states: AL AM AT AU AZ BA BB BE BG BR BY CA CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SL SZ TJ TM TR TT UA UG US UZ VN YU ZW

International class A61B17/16 A61B17/88 A61B19/00 A61C1/07 A61C8/00 (Advanced/Invention);
 (IPC 8-9): A61B17/88 A61B19/00 A61C1/07 (Advanced/Non-invention)

International class A61B17/00 A61B17/16
 (IPC 1-7):

CPC: A61B90/03 A61B2090/062 A61B2090/064 A61C8/0089 A61B17/1604 A61B17/1659 A61B17/1673 A61B17/1688 A61B17/885 A61B2017/320028 A61C1/07

European class: A61B17/16C A61C8/00T K61B17/16C K61B17/16R K61B17/16S18 K61B17/16S6 K61B17/32E2R K61B17/88C K61B19/30 K61B19/46D K61B19/46H K61C1/07

US class: 606/80 606/92

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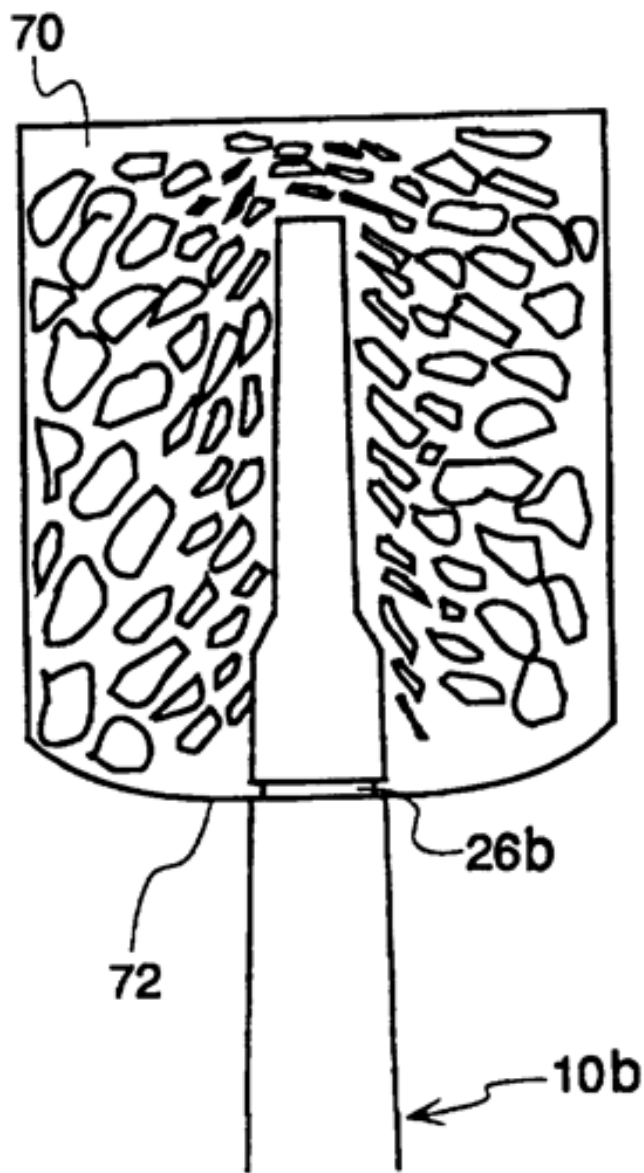
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Abstract:

Source: US6171312B The invention set forth includes a set of tools which compact bone tissue as they develop a bore in the bone tissue and a driving mechanism for providing movement to the tools. The tools have engaging surfaces which displace bone tissue radially outward with respect to a central axis of the tool to create high density bone tissue at the wall defining the bore. The driving mechanism may provide only vibrational movement to assist in inserting the tool. Alternatively, the driving mechanism may provide translational movement in the longitudinal direction with respect to the tool to insert the tool into the bone.

PatBase - W09803119_A1



37) Family number: 30663357 (US2004122305A)

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Title: SURGICAL INSTRUMENT AND METHOD OF POSITIONING SAME

Priority: CA20032452928 20031215 CA20042476672 20040804 CA20052491824 20050110
 US20060344273 20060131 US20040795830 20040308 US20020325088 20021220
 US20040795621 20040308 CA20052502802 20050330 US20040979734 20041102

Family:

Publication number	Publication date	Application number	Application date
AT376392 E	20071115	AT20050251367T	20050308
AU2003270991 AA	20040708	AU20030270991	20031219
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CA2491824 AA	20050908	CA20052491824	20050110
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Probable Assignee: ZIMMER TECHNOLOGY INC**Assignee(s):^(std):** CLAYPOOL JODY L ; GRIMM JAMES E ; HUI SUDIP ; MCGINLEY SHAWN E ; ZIMMER TECH INC ; ZIMMER TECHNOLOGY INC**Assignee(s):** PATMORE DONALD M ; HALL MALEATA Y**Inventor(s):^(std):** GRIMM JAMES E ; HALL MALEATA Y ; HUI SUDIP ; JAMES E GRIMM ; MCGINLEY SHAWN E ; PATMORE DONALD M ; SHAWN E MCGINLEY ; CLAYPOOL JODY L ; DONALD M PATMORE ; SUDIP HUI

Inventor(s): CLAYPOOL JODY ; GRIMM JAMES ; MALEATA Y HALL ; MCGINLEY SHAWN

Agent(s): PHILLIPS ORMONDE FITZPATRICK; GOWLING LAFLEUR HENDERSON LLP;
NORTON ROSE CANADA SENCRL SRL LLP; MAYN JULIE; ZIMMER TECHNOLOGY –
REEVES; ZIMMER TECHNOLOGY REEVES; JOHN F HOFFMAN ESQ BAKER AND
DANIELS LLP; BAKER AND DANIELS LLP; FAEGRE BAKER DANIELS

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO
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International class
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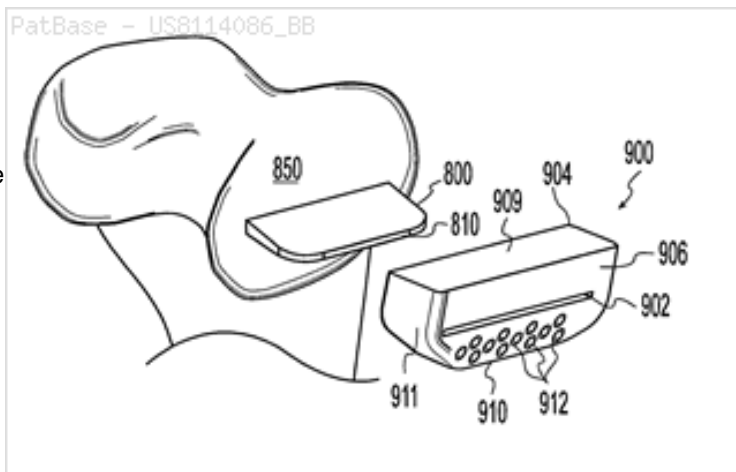
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FR2776176 A1, EP1579812, EP1574177, EP1444962 A2, EP1442712, EP1430842,
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Forward Citations:

WO15081025, WO13173700, WO13078206, WO12066304, WO11053332, WO10051490,
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EP2237729, EP2237729, EP1976446, EP1836975, EP1779799, EP1779799,
EP1430841, CN105105841, CN102727308, AU2013221945, AU2007212265,

Abstract:

Source: US2004122305A A surgical instrument having an anchoring member and an instrument body which is adjustably repositionable relative to the anchoring member. At least one reference element may be mounted on the instrument body to facilitate the registration of the instrument body in a computer implemented image guidance system. The reference element may be three non-linearly positioned elements disposed on a removably mountable member. The anchoring member may be secured to an anatomical structure using an image guidance system. The instrument body may then be selectively adjusted with respect to the anchoring member and anatomical structure after securing the anchoring member with the anatomical structure. The selective repositioning adjustment of the instrument body on the anatomical structure may also employ a computer implemented image guidance system. The instrument may be used in the resection of a femur when implanting a prosthetic knee joint.



38) Family number: 8855322 (US5951556A)

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Title: Compact external fixation device**Priority:** CN19971011548 19970514 IT1996VR00044 19960515

Family:	Publication number	Publication date	Application number	Application date
	AR013567 AA	20010110	AR1997P102040	19970515
	AT222078 E	20020815	AT19970201442T	19970513
	AU199720074 A1	19971120	AU19970020074	19970506
	AU722193 B2	20000727	AU19970020074	19970506
	CN1127325 C	20031112	CN19971011548	19970514
	CN1169279 A	19980107	CN19971011548	19970514
	DE69714645 D1	20020919	DE19976014645	19970513
	DE69714645 T2	20030424	DE19976014645T	19970513
	DK0807419 T3	20021007	DK19970201442T	19970513
	EP0807419 A2	19971119	EP19970201442	19970513
	EP0807419 A3	19980408	EP19970201442	19970513
	EP0807419 B1	20020814	EP19970201442	19970513
	ES2180000 T3	20030201	ES19970201442T	19970513
	IT1289103 B1	19980925	IT1996VR00044	19960515
	ITVR960044 A0	19960515	IT1996VR00044	19960515
	ITVR960044 A1	19971117	IT1996VR00044	19960515
	JP10043204 A2	19980217	JP19970122724	19970514
	MX9703557 A1	19980628	MX19970003557	19970514
	PT807419 T	20021129	PT19970201442T	19970513
	US5951556 A	19990914	US19970825909	19970402
	ZA9704144 A	19971209	ZA19970004144	19970514

Probable Assignee: ORTHOFIX SRL**Assignee(s):^(std):** ORTHOFIX SRL**Assignee(s):** ORTHOFIX SRL VIA DELLE NAZIONI ; ORTHOFIX S R L ; VENTURINI DANIELE ; ORTHOFIX S R L BUSSOLENGO ; FACCIOLO GIOVANNI ; ORTHOFIX INT ; ORTHOFIX INT BV ; ORTHOFIX INTERNATIONAL B V**Inventor(s):^(std):** DEBUITSUDO NERUSON ; FACCIOLO GIOVANNI ; NELSON DAVID ; VENTURINI DANIELE**Inventor(s):** GIOVANNI FACCIOLO ; DANIELE VENTURINI ; DAVID NELSON**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD**Designated states:** AT CH DE DK ES FR GB GR IT LI NL PT SE

International class
^{(IPC 8-9):} [A61B17/60](#) [A61B17/64](#) [A61B17/66](#) [A61F2/00](#) [A61F5/05](#) (Advanced/Invention);
[A61B17/60](#) [A61F2/00](#) (Advanced/Non-invention);
[A61B17/60](#) [A61F5/04](#) (Core/Invention);
[A61F2/00](#) (Core/Non-invention)

International class
^{(IPC 1-7):} [A61B17/60](#) [A61B17/64](#) [A61B5/042](#) [A61F2/00](#) [A61F5/05](#)

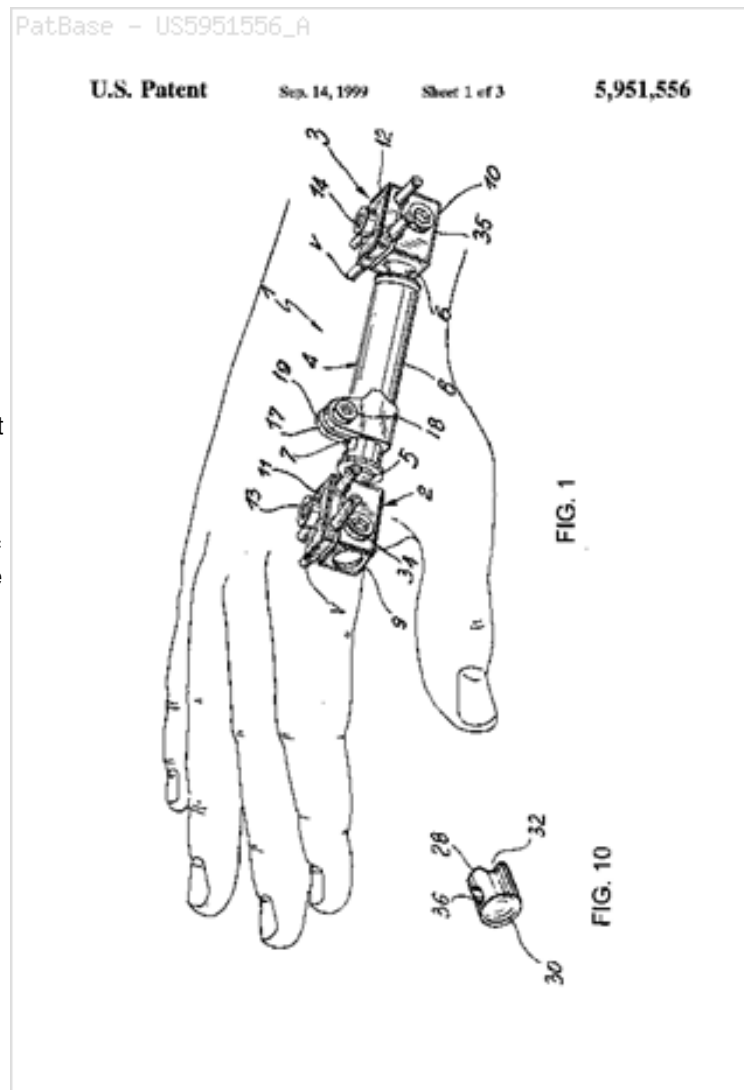
CPC: [A61B17/6458](#) [A61B17/66](#) [A61F2002/3008](#) [A61F2250/0098](#)**European class:** [A61B17/64K](#) [A61B17/66](#) [K61F2/30A1W9](#) [K61F250/00W99C](#)**US class:** [606/64](#) [606/65](#)[Classification Explorer](#)

Cited documents: WO9423662 A2, WO9406364 A1, WO9111151 A1, WO9111150 A1, WO9007305 A1, WO8909031 A1, US5591164 A, US5454810 A, US5342360 A, US5320622 A, US5304177 A, US5292322 A, US5019077 A, US4988349 A, US4643177 A, US4621627 A, US4554915 A, US4312336 A, US31809 A, US2391537 A, NL8802463 A, GB2255284 A1, EP0481664 A1, EP0011258 B1, DE9319433 U, DE3722595 A1,

Forward Citations: WO15183226, WO14039205, WO09152633, WO08147179, WO07139031, WO07138659, WO04030558, WO02094112, USRE45888, US9642649, US9517093, US9492199, US9468479, US9433439, US9408649, US9301782, US9259250, US9155574, US9084632, US9060820, US9039706, US8961518, US8961516, US8906022, US8864763, US8801712, US8758343, US8721566, US8685022, US8585702, US8518039, US8439917, US8419732, US8388619, US8382757, US8366710, US8313515, US8287541, US8287539, US8287538, US8262656, US8182483, US8147491, US8057473, US7981116, US7942875, US7918876, US7914533, US7909825, US7846162, US7828801, US7731738, US7645279, US7588571, US7575575, US7544208, US7507240, US7282052, US7261713, US7147639, US6840939, US6709433, US6500177, US6409729, US2016022315, US2012123301, US2011218570, US2011172718, US2011103676, US2011060365, US2010222778, US2010063550, US2009187189, US2008294173, US2007282338, US2006064087, US2004097922, US2004059331, US2003139744, US2003125736, US2003069580, RU2485905, NL1034698, NL1033925, KR101377734, KR101178662, JP4351821, JP4312984, JP4269067, JP2011524214, JP2007532209, JP2003534092, JP2003534091, JP2002534150, EP2030583, EP1238636, EA019443, CN104837422, CN104619276, CN104619276, CN104523349, CN102083378,

Abstract:

Source: US5951556 A A compact external fixation device for the treatment of bone fractures of reduced dimensions and of children comprises a pair of clamps (2, 3) for bone screws (V) connected by respective spherical joints (5, 6) and a central body (4) formed by at least one male element (7) and one female element (8) which are telescopically coupled. In a preferred embodiment, one element (7) is made of a material of high radiotransparency and the other element (8) is made of a substantially radiopaque rigid material with walls of such minimum thickness as to be at least partially radiotransparent. Antirotation means are provided between the male telescopic element (7) and the female telescopic element (8); transverse eccentric pins (34, 35) contained in each clamp act on respective slides (28, 29) for locking the ball (24, 25) of each joint. The fixation device permits complete radioscopy of the fracture even through the central body; the device is light in weight and of small dimensions, due to the provision of the means for locking the joints within the clamps.



39) Family number: 59226406 (US2015134016A)

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Title: BONE ANCHOR AND BONE ANCHORING ASSEMBLY COMPRISING THE SAME
Priority: EP20140153526 20140131 US20130904399P 20131114 US20140542476 20141114
Family:

Publication number	Publication date	Application number	Application date
CN104622555 A	20150520	CN201410642119	20141111
DE602014004015 D1	20161110	DE201460004015T	20140131
EP2873384 A1	20150520	EP20140153526	20140131
EP2873384 B1	20161005	EP20140153526	20140131
JP2015093199 A2	20150518	JP20140228706	20141111
JP6126063 B2	20170510	JP20140228706	20141111
KR20150056067 A	20150522	KR20140158302	20141113
TW201517863 A	20150516	TW20140138972	20141111
US2015134016 AA	20150514	US20140542476	20141114

Probable Assignee: BIEDERMANN TECHNOLOGIES GMBH AND CO KG

Assignee(s):^(std): BIEDERMANN LUTZ ; BIEDERMANN MARKKU ; BIEDERMANN TECHNOLOGIES GMBH ; BIEDERMANN TECHNOLOGIES GMBH AND CO KG ; SANTIAGO ANADON JOSE

Assignee(s): MIAMI DEVICE SOLUTIONS LLC

Inventor(s):^(std): JOSE SANTIAGO ANADON ; LUTZ BIEDERMANN ; MARKKU BIEDERMANN ; SANTIAGO ANADON JOSE ; BIEDERMANN LUTZ ; BIEDERMANN MARKKU

Inventor(s): BIEDERMANN MARKKU MIAMI ; SANTIAGO ANADON JOSE MIAMI

Agent(s): PRUEFER AND PARTNER MBB PATENTANWALTE RECHTSANWALT; PRUEFER AND PARTNER GBR EUROPEAN PATENT ATTORNEYS; PRUEFER AND PARTNER MBB PATENTANWALTE RECHTSANWALTE; FUKAMI PATENT OFFICE PC

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

International class [A61B17/68](#) [A61B17/80](#) [A61B17/82](#) [A61B17/84](#) [A61B17/86](#) ^(Advanced/Invention)
(IPC 8-9):

CPC: [A61B17/846](#) [A61B17/685](#) [A61B17/686](#) [A61B17/7266](#) [A61B17/8042](#) [A61B17/848](#)
[A61B17/8615](#) [A61B17/8625](#) [A61B17/8635](#) [A61B17/864](#) [A61B17/8685](#) [A61B2017/8655](#)
[A61B17/844](#) [A61B17/8057](#)

US class: [606/323](#)

[Classification Explorer](#)

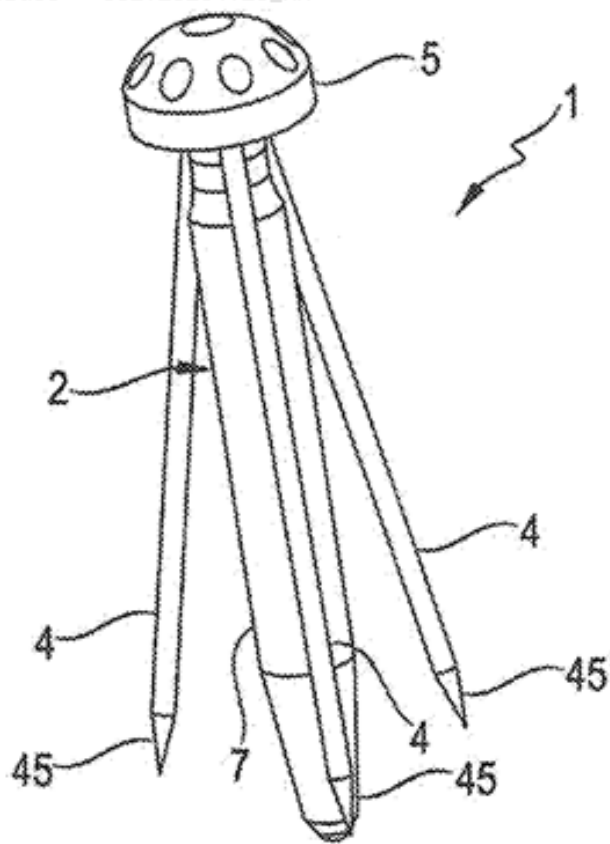
Cited documents: WO13033584 A2, WO05092219 A1, WO05092219, US9060808 BB, US8333591 BB, US5984681 A, US4754749 A, US4754749, US3955280 A, US3579831 A, US3579831, US2013053891 AA, US2013030478 AA, US2013030478, US2011098747 AA, US2006111720 AA, US2006111720, US2004193157 AA, US2002022843 AA, US2002022843, JP2012510875 T2, JP2012510875, JP2009527277 T2, JP2009527277, JP2001252283 A2, JP2001252283, EP2151213 A1, EP1658816 A1,

Forward Citations: US2015073413, TWI578976,

Abstract:

Source: US2015134016A A bone anchor includes: a main body defining a longitudinal axis and including a head; at least one insertion hole which extends from a first opening formed in the head to a second opening formed in the main body, the at least one insertion hole having an axis which is arranged to be inclined with respect to the longitudinal axis of the main body at an angle, and the insertion hole being configured to receive and guide therethrough a pin-shaped element to be anchored within a bone or bone fragment; and a locking device configured to lock the position of the pin-shaped element inserted within the at least one insertion hole in an axial direction.

PatBase - US2015134016_AA



0) US2014046378A – CLAMPING ELEMENT FOR SETTING A BONE FRACTURE AS...

40) Family number: 51885023 (US2014046378A)

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Title: CLAMPING ELEMENT FOR SETTING A BONE FRACTURE AS WELL AS MODULAR
FIXATION DEVICE COMPRISING SAME AND METHOD FOR PRODUCING SAME

Priority: DE201110001016 20110302 EP20120701067 20120125 WO2012EP00329 20120125

Family:	Publication number	Publication date	Application number	Application date
	DE102011001016 A1	20120906	DE201110001016	20110302
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	DK2680769 T3	20160725	DK20120701067T	20120125
	EP2680769 A1	20140108	EP20120701067	20120125
	EP2680769 B1	20160427	EP20120701067	20120125
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	HU027790 T2	20161028	HU20120701067T	20120125
	PL2680769 T3	20161130	PL20120701067T	20120125
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	US2014046378 AA	20140213	US20120002240	20120125
	US9480513 BB	20161101	US20120002240	20120125
	WO12116772 A1	20120907	WO2012EP00329	20120125

Probable Assignee: HIPPE MEDICAL AG

Assignee(s):^(std): HIPPE MEDICAL AG ; WAIZENEGGER MARKUS

Inventor(s):^(std): MARKUS WAIZENEGGER ; WAIZENEGGER MARKUS

Agent(s): KUHNNEN AND WACKER PATENT U RECHTSANWALTSBUERO; KUHNNEN AND
WACKER; ZUAZO ALEXANDER; ABEL LAW GROUP LLP; KOPP STEPHAN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
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International class
^(IPC 8-9): [A61B17/04](#) [A61B17/58](#) [A61B17/68](#) [A61B17/82](#) [A61B17/86](#) [A61F2/08](#) (Advanced/Invention);
[A61B17/80](#) (Advanced/Non-invention)

CPC: [A61B17/82](#) [A61B17/68](#) [A61B17/8004](#) [A61B17/8085](#) [A61B2017/681](#) [Y10T29/49995](#)
[Y10T83/0524](#)

European class: [A61B17/68](#) [K61B17/68B](#) [K61B17/80A](#) [K61B17/80P](#)

US class: [29/557](#) [606/302](#) [606/322](#) [83/39](#)

[Classification Explorer](#)

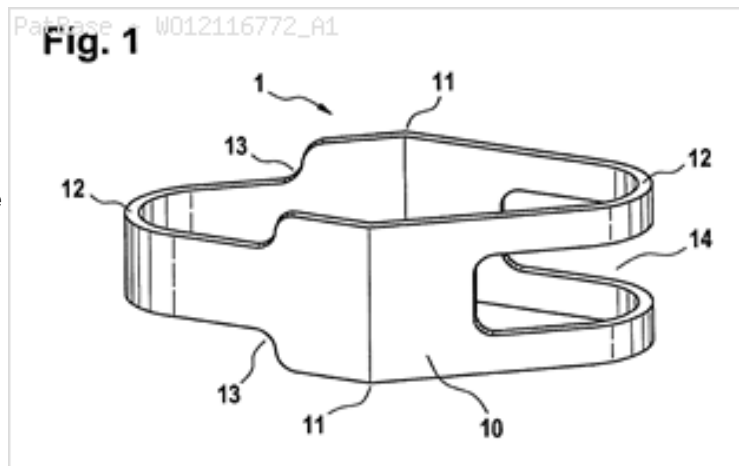
Cited documents: WO09039430 A1, WO08005740 A1, WO07127628 A2, WO06031692 A2, WO05086708
A2, WO04034916 A1, US8221478 BB, US7799055 BB, US7763056 BB, US7335200 BB,
US2580821 A, US2010145386 AA, US2010036430 AA, US2009163954 AA,
US2009036930 AA, US2008021458 AA, US2007270820 AA, US2006081553 AA,
US2006058796 AA, US2005209593 AA, US2005043732 AA, US2004073215 AA,
DE20001879 U1,

Forward Citations: WO15181057, DE102014215529, DE102014107497, DE102014019730,

Abstract:

Source: US2014046378A Disclosed is a clamping element for setting a bone fracture. The element comprises a closed contoured body which has a substantially hollow cross-section and is enclosed by a peripheral wall. The contoured body has two opposite receiving portions at the end faces thereof, the receiving portions being intended to receive fixing elements which can be pushed through the body, and has two lateral flanks having angled portions. The peripheral wall of the contoured body is resiliently deformable at least in sections, in particular in the region of the receiving portions on the end faces of same and in the region of the lateral angled portions. A defined resilient behaviour of the clamping element can be impressed via the angled portions in such a way that a

predetermined tension can be generated between the receiving portions. Also disclosed are a method for producing the clamping element and a setting device for using said clamping element.



41) Family number: 34253985 (US2007049930A)

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Title: EXTERNAL FIXATION SYSTEM AND METHOD OF USE**Priority:** US20050213030 20050825 US20050741833P 20051202 US20060802864P 20060522
WO2006US32850 20060822

Family:	Publication number	Publication date	Application number	Application date
	<u>AT450217 E</u>	20091215	AT20060802129T	20060822
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	<u>BRPI0615060 A2</u>	20110503	BR2006PI15060	20060822
	<u>CA2620061 AA</u>	20080221	CA20062620061	20060822
	<u>CA2620061 C</u>	20140128	CA20062620061	20060822
	<u>CN101296664 A</u>	20081029	CN200680039607	20060822
	<u>CN101296664 B</u>	20110907	CN200680039607	20060822
	<u>CO6210795 A2</u>	20101020	CO20080037899	20080415
	<u>DE602006010882 D1</u>	20100114	DE200660010882T	20060822
	<u>EP1916952 A2</u>	20080507	EP20060802129	20060822
	<u>EP1916952 B1</u>	20091202	EP20060802129	20060822
	<u>ES2334062 T3</u>	20100304	ES20060802129T	20060822
	<u>IN01540DN2008 A</u>	20080620	IN2008DN01540	20080222
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	<u>JP4828606 B2</u>	20111130	JP20080528088	20060822
	<u>KR101277758 B1</u>	20130624	KR20087004423	20060822
	<u>KR20080047365 A</u>	20080528	KR20087004423	20060822
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	<u>TW200722032 A</u>	20070616	TW20060131432	20060825
	<u>TWI377932 B</u>	20121201	TW20060131432	20060825
	<u>US2007049930 AA</u>	20070301	US20050213030	20050825
	<u>US8029505 BB</u>	20111004	US20050213030	20050825
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	<u>WO07024904 A3</u>	20070518	WO2006US32850	20060822
	<u>ZA200801738 A</u>	20091125	ZA20080001738	20060822

Probable Assignee: SYNTHES USA LLC**Assignee(s):^(std):** HEARN JIM ; HFSC CO ; HORAN TIMOTHY J ; MAUGHAN THOMAS J ; WAHL
MICHAEL J ; SYNTHES GMBH ; SYNTHES USA ; SYNTHES USA LLC ; SYNTHES GMBH
CH CO LTD ; SYNTHES HOLDING AG**Assignee(s):** SYNTHES GMBH ; SYNTHES GMNH ; SYNTHES ; SYNTHES (USA) ; SYNTHES U S A ;
HFSC COMPANY**Inventor(s):^(std):** HEARN JIM ; HORAN TIMOTHY ; HORAN TIMOTHY J ; HORAN TOMOTHY J ; JIM
HEARN ; MAUGHAN THOMAS ; MAUGHAN THOMAS J ; WAHL MICHAEL ; WAHL
MICHAEL J**Inventor(s):** MICHAEL J WAHL ; THOMAS J MAUGHAN ; TIMOTHY J HORAN ; TOMOTHY J
HORAN**Agent(s):** SHELSTON IP; SHELSTON IP PTY LTD; BCF LLP; GERMAN CASTILLO GRAU;
LUSUARDI WERTHER; JONES DAY; FAY KAPLUN AND MARCIN LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
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International class (IPC 8-9): A61B17/64 A61B17/00 A61B17/56 A61B17/58 A61B17/60 A61B17/62 (Advanced/Invention);
A61B17/56 A61B17/58 A61B17/64 (Advanced/Non-invention);
A61B17/00 A61B17/56 A61B17/58 A61B17/60 (Core/Invention);
A61B (Subclass/Invention)

International class (IPC 1-7): A61B17/62

CPC: A61B17/62 A61B17/66

European class: A61B17/62 A61B17/66

US class: 606/277 606/56 606/56P 606/59

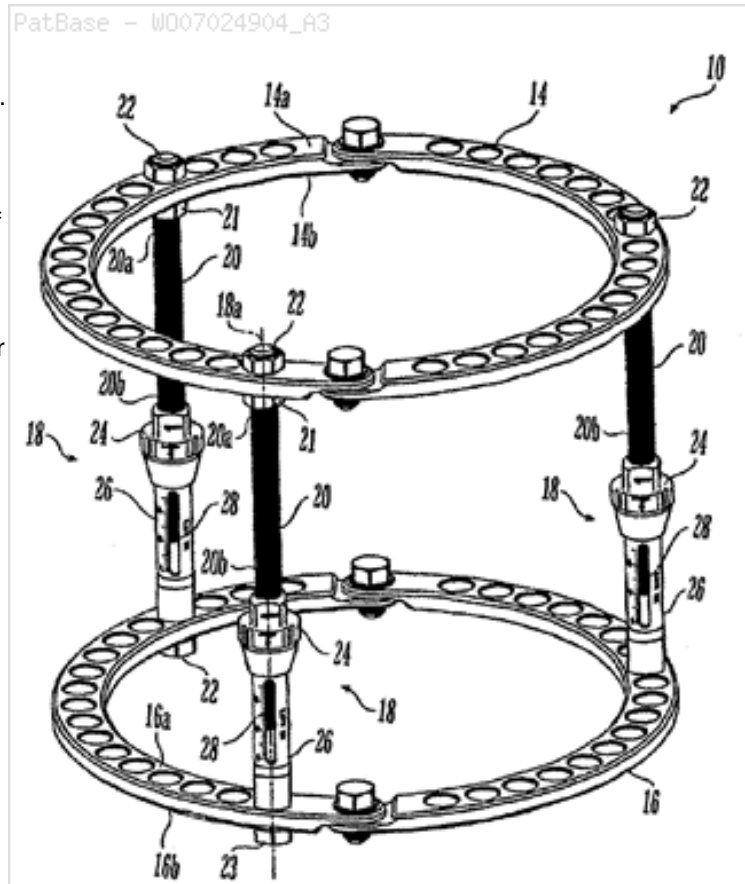
[Classification Explorer](#)

Cited documents: US7241074 BB, US6702814 BB, US6652523 BA, US6277119 BA, US6113599 A, US6030386 A, US6022348 A, US5928230 A, US5810814 A, US5752954 A, US5681309 A, US5624440 A, US5540686 A, US5087258 A, US5062844 A, US4483334 A, US2011087226 AA, US2010298827 AA, US2009036891 AA, US2007038217 AA, US2006177263 AA, US2004073212 AA, US2003187432 AA, US2003181911 AA, US2003149429, US2003144609 AA, US2002042613 AA, EP0194187 A1,

Forward Citations: WO14159824, WO14159824, WO11063184, WO10036440, WO09100459, US9642649, US9539029, US9526540, US9456849, US9443302, US9381042, US9351763, US9295493, US9220533, US9155559, US9101398, US9078700, US9066757, US9039706, US9011438, US8951252, US8945128, US8906020, US8864763, US8864750, US8858555, US8834467, US8808289, US8574232, US8454604, US8439914, US8187274, US8172840, US8002773, US2016256194, US2015305777, US2015257788, US2015216564, US2014350557, US2011066151, US2011004199, US2010312243, US2010305568, US2010191239, US2009264883, EP3092961,

Abstract:

Source: US2007049930A An external fixation system for connecting one or more bone segments together to facilitate healing of bone. The system may include one or more rings and/or ring segments. One or more linear distractors and/or angular distractors may connect the rings to each other so as to allow for distraction and/or reduction/compression of a bone. Linear distractors may enable an operator to move the rings towards and away from each other, while angular distractors may enable an operator to angle the rings relative to each other. In an embodiment using angular distractors, one or more angular separation assemblies may be positioned between the rings. These separation assemblies may have joints which may two portions which may be angled relative to each other and connected directly or indirectly to the rings. Various fasteners (e.g., nuts) and/or tightening members may be configured for quick movement along and selective tightening to various components. Moreover, clamps may be attached to the rings and may engage pins, wire, rods, which may be inserted into bone to hold bone segments to each other. The components of the external fixation system may be provided in sets or kits so that the a surgeon may select various combinations of components to create an external fixation system which is configured specifically for the particular needs of a patient and the bone fracture/deformity.



42) Family number: 8469769 (WO9423662A2)

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Title: DISPOSABLE EXTERNAL FIXATOR**Priority:** CA19942121085 19940412 GB19930007616 19930413 WO1994GB00778 19940413
US19940225893 19940412 US19940225893 19940411

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199465079 A1</u>	19941108	AU19940065079	19940413
	<u>CA2121085 AA</u>	19941014	CA19942121085	19940412
	GB9307616 A0	19930602	GB19930007616	19930413
	<u>WO9423662 A2</u>	19941027	WO1994GB00778	19940413
	<u>WO9423662 A3</u>	19941208	WO1994GB00778	19940413

Probable Assignee: OLIVER ALBERT EDWARD**Assignee(s):**^(std) ALBERT EDWARD OLIVER ; MICHAEL SALEH ; OLIVER ALBERT E ; OLIVER ALBERT EDWARD ; SALEH MICHAEL**Inventor(s):**^(std) OLIVER ALBERT E ; OLIVER ALBERT EDWARD ; SALEH MICHAEL**Inventor(s):** ALBERT EDWARD OLIVER ; MICHAEL SALEH**Agent(s):** SMART AND BIGGAR**Designated states:** AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR KZ LK LU LV MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA US UZ VN

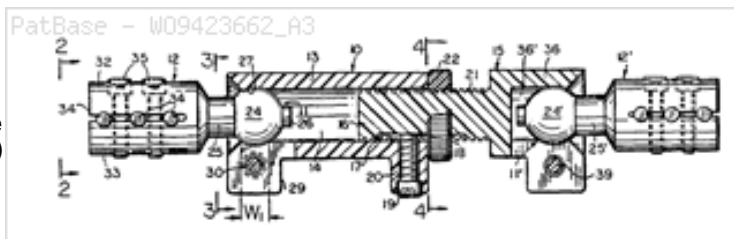
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 (IPC 8-9): A61B17/66 A61B19/00 (Advanced/Non-invention);
A61B17/60 (Core/Invention);
A61B19/00 (Core/Non-invention)

International class A61B17/60 A61B19/00
 (IPC 1-7):

CPC: A61B17/6458 A61B17/66 A61B2017/00902**European class:** A61B17/64K[Classification Explorer](#)**Cited documents:** WO9111150 A1, FR2557933 A1, EP0424292 A2,**Forward Citations:** WO06120482, WO06013670, WO03030759, WO03030759, WO02094112, WO0061020, USD720853, US9320638, US9050135, US8945129, US8758343, US8382757, US7841998, US7731738, US7588571, US7575575, US7507240, US7261713, US6024745, US5951556, EP1434531, EP0807419, CN102551853, CN102551853, CN102283700, AU722193,**Abstract:**

A disposable, single-use external-fixator construction features maximum utilization of plastics material or materials. An elongate outer-body member (13) has a cylindrical bore (14), and an elongate inner-body member (15) has a cylindrical body (16). Selectively operable clamping means (19) is provided for securing the body members to each other to retain an adjusted overall body length between axially projecting ends of the body members.

A separate bone-screw clamp (12, 12') is connected to each of the respective axially projecting ends of the body members. The connection of at least one of the bone-screw clamps to its body-member end includes a ball-joint (24, 24') with provision (30, 39) for releasably securing an adjusted orientation of the ball-joint connected bone-screw clamp with respect to its body member end. Provision (21, 22) is also made for selective distraction adjustments to be made in the adjusted overall body length between the respective bone-screw clamps. And all or substantially all of the indicated components are preferably of plastics material, for such low-cost purposes as to enable economic disposal of the fixator after a single use.



43) Family number: 11657656 (US5339533A)

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Title: SYSTEM FOR MEASURING STIFFNESS OF A FRACTURED BONE**Priority:** US19930086147 19930701 US19930163426 19931208

Family:	Publication number	Publication date	Application number	Application date
	<u>US5339533 A</u>	19940823	US19930163426	19931208

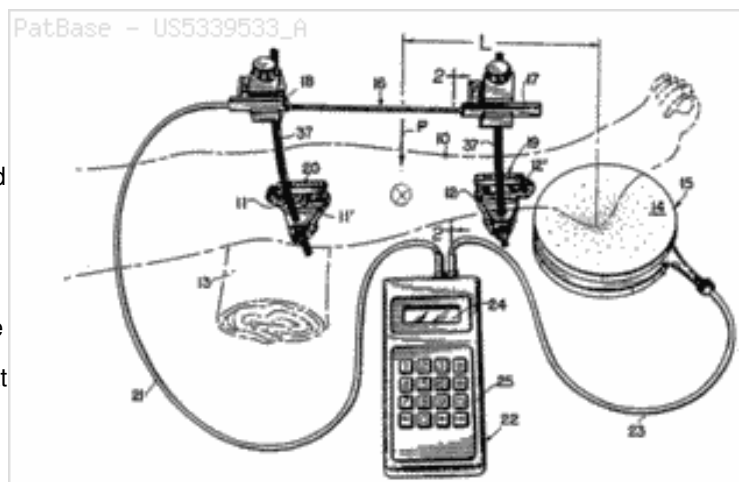
Probable Assignee: RICHARDSON JAMES B**Assignee(s):^(std):** RICHARDSON JAMES B**Inventor(s):^(std):** RICHARDSON JAMES B

International class A61B19/00 A61B5/103 (Advanced/Invention);
 (IPC 8-9): A61B17/60 (Advanced/Non-invention);
A61B19/00 A61B5/103 (Core/Invention);
A61B17/60 (Core/Non-invention)

International class A61B5/103
 (IPC 1-7):

CPC: A61B5/4504 A61B17/60 A61B90/06**European class:** A61B19/46 A61B5/45B K61B17/60**US class:** 128/782 33/512 600/595[Classification Explorer](#)**Cited documents:** WO8601588 A1, US5171248 A, US5163228 A, US5121753 A, US5082003 A, US4033043 A, US3229372 A, US2333033 A, EP0324279 A1,**Forward Citations:** WO9535062, WO9535062, WO9535061, WO9535061, WO06119322, WO06119322, WO06038822, US7661309, US5697165, US5493788, US2009216126, US2008186793, US2005251066, US2005056075, JP2008539879, GB2290616, GB2290616,**Abstract:**

Source: US5339533A A bone-stiffness measuring instrument comprises a set or kit of readily assembled and adjusted components, namely a goniometer, a light-weight load cell, and a small computer package, adapted to continuously respond to the outputs of the load cell and goniometer and to display and/or record (i.e., store) measured stiffness data; plus hardware in duplicate, namely, a bone-screw clamp and bracket for fixed reference to bone-screws that are externally exposed on each of the respective sides of the fracture (following removal of an external fixator), a stiff arcuate arm member of radius at least twice the diameter of the fractured bone, and a goniometer-end mount. The arcuate arm member is adjustably fixed to the bracket for bone-screw reference, and the goniometer-end mount is also adjustably fixed to the arcuate arm member, with a releasably lockable ball-joint connection for adjusted orientation of an end mounting to the goniometer.



0) US2001025181A – SPLIT-NUT PRECISION FASTENERS

44) Family number: 28184954 (US2001025181A)

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Title: SPLIT-NUT PRECISION FASTENERS

Priority: US19930034269 19930323 US19940184121 19940121 US19960601177 19960214
US20000174386P 20000103 US20000193000P 20000328 WO2000US27526 20001007
US20020169062 20020702 US20010917521 20010730 US20000753128 20001230
US20000740577 20001218 WO2000IB00364 20000328 WO2000US35682 20001230

Family:

Publication number	Publication date	Application number	Application date
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AU200078622 A5	20010716	AU20000078622D	20001007
AU200127454 A5	20010716	AU20010027454D	20001230
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US2001025181 AA	20010927	US20000753128	20001230
US2001053913 AA	20011220	US20000740577	20001218
US2002044851 AA	20020418	US20010917521	20010730
US6162234 A	20001219	US19960601177	19960214
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Probable Assignee: JUSTEC INC

Assignee(s):^(std): FREEDLAND Y ; FREEDLAND YOSEF ; JUSTEC INC

Assignee(s): Y FREEDLAND ; YOSEF FREEDLAND ; GANAJA SCOT ; FREEDLAN YOSEF

Inventor(s):^(std): FREEDLAN YOSEF ; FREEDLAND Y ; FREEDLAND YOSEF ; GANAJA SCOT

Inventor(s): Y FREEDLAND ; YOSEF FREEDLAND

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR
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TR TT TZ UA UG US UZ VN YU ZA ZW

International class
(IPC 8-9): [A61B17/00](#) [A61B17/04](#) [A61B17/72](#) [A61F2/00](#) [A61F2/08](#) [A61F2/30](#) (Advanced/Invention);
[A61B17/00](#) (Advanced/Non-invention);
[A61B17/04](#) [A61B17/68](#) [A61F2/00](#) [A61F2/08](#) [A61F2/30](#) (Core/Invention);
[A61B17/00](#) (Core/Non-invention)

International class
(IPC 1-7): [A61B17/00](#) [A61B17/04](#) [A61B17/56](#) [A61B17/58](#) [A61F2/00](#) [A61F2/08](#) [A61F2/34](#) [F16B23/00](#)
[F16B35/00](#)

CPC: [A61F2250/0012](#) [A61B17/7233](#) [A61B2017/0496](#) [Y10S606/916](#) [Y10S411/947](#) [A61B17/7216](#)
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[A61B2017/0427](#) [A61B2017/0433](#) [A61B2017/0437](#) [A61B2017/044](#) [A61F2/0805](#)
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European class: [A61B17/04A](#) [A61B17/72C](#) [A61B17/72C2](#) [A61F2/08D](#) [A61F2/08F](#) [K61B17/00A](#)
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US class:

411/337 411/337S 411/344 411/352 411/353 411/366.1 411/392 411/392P 411/400
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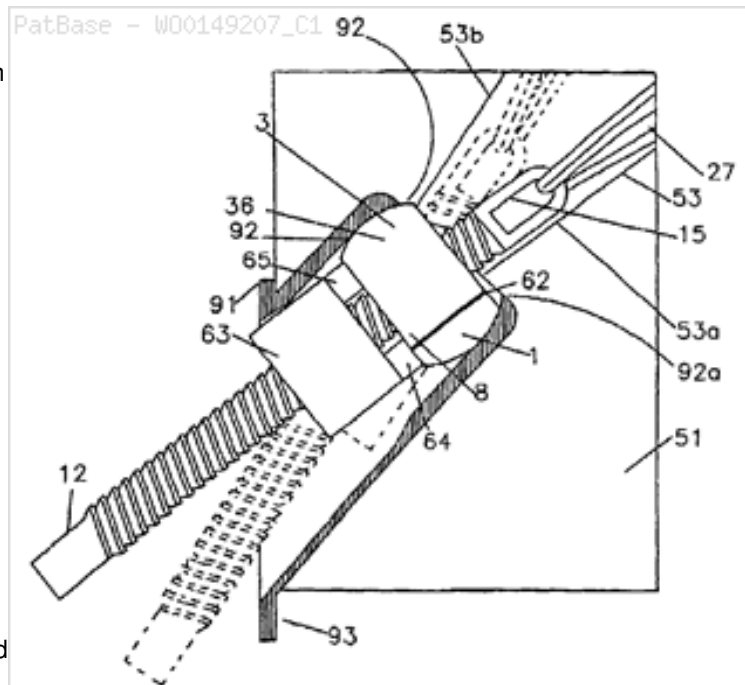
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US7771483, US7763049, US7748376, US7731736, US7713293, US7695503, US7686838, US7682362, US7678138, US7670279, US7658582, US7655009, US7654784, US7635379, US7618440, US7615068, US7604659, US7591850, US7581909, US7578824, US7462199, US7410488, US7335201, US7334961, US7322978, US7309346, US7255700, US7235100, US7235079, US7201754, US7175625, US7172595, US7172594, US7118303, US7118303, US7105029, US7090674, US7070601, US7043878, US7037324, US6743231, US6599049, US6585737, US6558389, US2016166292, US2015094763, US2014236246, US2014172095, US2014046384, US2014031864, US2013325064, US2013211405, US2013204367, US2013158597, US2013090731, US2012203226, US2012143249, US2012101526, US2012065731, US2011251597, US2011214227, US2011152950, US2011125189, US2011118838, US2011118837, US2011112577, US2011112559, US2011071579, US2011071558, US2011009885, US2011000522, US2010331862, US2010324558, US2010268273, US2010256677, US2010234850, US2010185238, US2010121448, US2010012068, US2009287225, US2009281568, US2009198236, US2009198235, US2009198234, US2009157181, US2009157124, US2009149883, US2009125071, US2009107484, US2009105771, US2009076545, US2009054913, US2009018592, US2009012564, US2009003970, US2008288069, US2008281364, US2008281360, US2008262515, US2008184469, US2008051892, US2008033559, US2007286703, US2007270857, US2007233241, US2007225719, US2007213747, US2007179335, US2007177957, US2007162017, US2007083199, US2007025813, US2007021751, US2006235516, US2006235410, US2006179979, US2006142790, US2006116719, US2006100630, US2006100629, US2006074473, US2006074421, US2006009855, US2006009853, US2006009774, US2006004461, US2005285604, US2005283158, US2005277927, US2005277924, US2005216042, US2005182409, US2005182401, US2005177166, US2005149044, US2005143831, US2005143745, US2005143731, US2005137593, US2005129459, US2005096653, US2005070906, US2005070899, US2005065533, US2005053423, US2005025916, US2005015153, US2005008448, US2004260298, US2004260296, US2004193167, US2004183582, US2004181222, US2004158244, US2004153153, US2004106925, US2004093030, US2004073306, US2004073221, US2003216780, US2003153921, US2003149487, US2003109900, US2003066243, US2003040795, RU2582427, EP2906132, EP1813225, EP1550419, EP1444967, DE102011018215, CN104434291, CN104427947, AU2008310855, AU2008310855, AU2008310855, AU2007226948, AU2005295808,

Abstract:

Source: US2001025181A The present invention provides orthopedic devices useful in applying tension or compression to biological tissues, and facilitating surgical procedures. Various aspects of the invention include a split-nut fastener, a tension bolt, a suture nut, a pivot wing bolt and a transverse impaction screw. Each of these devices reduces surgery time, improves the reliability of the tissue position and simplifies surgical procedures as compared to known devices. The split-nut is used in combination with many implantable fasteners used in orthopedic devices. The split-nut, which has two halves, slides down a threaded rod until a ring surrounding the two halves forces them together. The split-nut is then readily threaded tightly onto the threaded rod. The pivot wing bolt assembly is used to secure one end of a threaded rod into the hollow or marrow of a fractured bone. Together with the split-nut or any other nut, the pivot wing bolt is used to fixate the fractured bone. The suture nut is used to minimize surgery time by avoiding the need to make hand-made knots in a suture being used during the surgery. Together with a suture, the suture nut is particularly useful for closing incisions in tissues. The suture nut grasps the suture where desired, thereby avoiding slippage of the suture after closure of the incision and avoiding the need to make a knot in the suture. The transverse impaction screw is used to increase the contact area between a ligament graft and the surrounding bone when fixating the ligament to a bone. Once the ligament is draped over the screw, the screw is turned in a first direction to impact the ligament onto a surface of a bone to which the ligament will attach during healing.



45) Family number: 8994874 (US4920959A)

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Title: External fixture for osteosynthetic

Priority: CA19870537183 19870514 DE19863611319 19860404 WO1987DE00146 19870406
EP19870105092 19870406 EP19870105092 19870406 DE19873775958 19870406

Family:	Publication number	Publication date	Application number	Application date
	<u>AT71502 E</u>	19920215	AT19870105092T	19870406
	<u>CA1318820 A1</u>	19930608	CA19870537183	19870514
	<u>DE3611319 A1</u>	19871015	DE19863611319	19860404
	<u>DE3611319 C2</u>	19880211	DE19863611319	19860404
	<u>DE3775958 D1</u>	19920227	DE19873775958	19870406
	<u>DE3775958 T</u>	19920227	DE19873775958T	19870406
	<u>EP0240034 A1</u>	19871007	EP19870105092	19870406
	<u>EP0240034 B1</u>	19920115	EP19870105092	19870406
	<u>ES2030008 T3</u>	19921016	ES19870105092T	19870406
	<u>GR3003590 T3</u>	19930316	GR19920400031T	19920116
	<u>US4920959 A</u>	19900501	US19870138381	19871120
	<u>WO9312729 A1</u>	19930708	WO1987DE00146	19870406

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Assignee(s):^(std): WITZEL ULRICH ; MUELLER KARL H ; MUELLER KARL HEINZ

Assignee(s): MULLER KARL H ; WITZEL ULRICH WITTENER STR 73D ; WITZEL ULRICH DR ING ; WITZEL ULRICH DR ING 5600 WUPPERTAL DE ; WITZEL ULRICH A CORP OF GERMANY

Inventor(s):^(std): MUELLER KARL H ; MUELLER KARL H PROF DR MED ; MUELLER KARL HEINZ ; MUELLER KARL HEINZ DR MED ; MUELLER H PROF DR MED ; MULLER KARL H PROF DR MED ; WITZEL ULRICH ; WITZEL ULRICH DR ING

Inventor(s): WITZEL ULRICH DR ING 5600 WUPPERTAL DE ; HEINZ DR MED MUELLER KARL ; WITZEL DR ING ; WITZEL DR ING ULRICH W 5600 WUPPERTAL 2 DE ; MUELLER H PROF DR MED KARL W 4630 BOCHUM DE ; MUELLER H PROFDRMED ; MUELLER KARL HEINZ DR MED 4630 BOCHUM DE ; MULLER KARL H

Agent(s): BORDEN LADNER GERVAIS LLP

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE US

International class A61B17/60 A61B17/64 F16B43/02 F16B7/04 (Advanced/Invention);
(IPC 8-9): A61B17/17 (Advanced/Non-invention);
A61B17/60 F16B43/00 F16B7/04 (Core/Invention);
A61B17/16 (Core/Non-invention)

International class A61B17/60
(IPC 1-7):

CPC: A61B17/171 A61B17/645 A61B17/6466 F16B7/04 F16B7/0493 F16B43/02

European class: A61B17/64H A61B17/64M F16B43/02 F16B7/04 F16B7/04D4L K61B17/17E

US class: 606/53 606/96

[Classification Explorer](#)

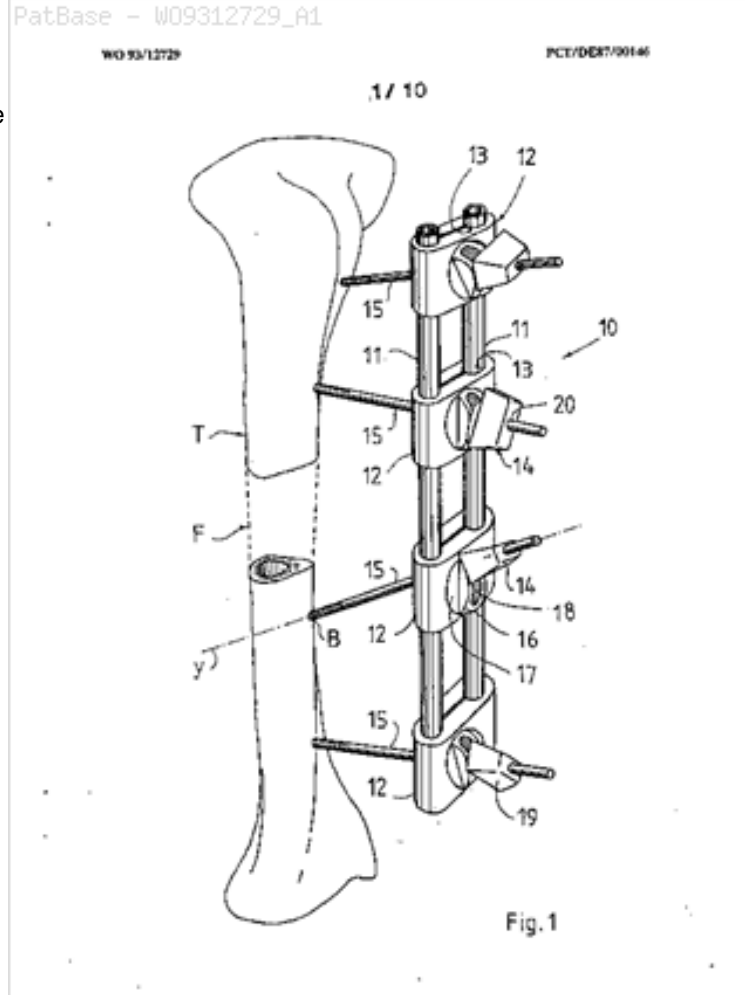
Cited documents: US4693240 A, US4620533 A, US4483334 A, US4475546 A, US2393694 A, US2391693 A, SU984468 T, GB2157179 A1, GB2031731 A1, FR782462 A, FR2531332 A1, FR2499400 A1, EP0140786 A2, DE8521997 U, DE2929455 A1, DD140329 Z, DD140329 A1,

Forward Citations: WO9322984, WO9318717, WO9012547, WO16138220, WO15117207, WO08109725, WO06076815, WO05099788, WO05092220, WO05085658, WO05009261, WO05002450, WO05002450, WO0135842, USRE39325, US9622781, US9622780, US9492207, US9408635, US9351764, US9247997, US9155561, US9089368, US9050142,

US8808291, US8758343, US8657856, US8486069, US8419733, US8323292, US8277448, US8235994, US8147490, US8114080, US7803174, US7731738, US7722645, US7713289, US7588571, US7575575, US7572277, US7507240, US6827721, US6602254, US6471704, US6413258, US6254603, US6248104, US6149653, US6102911, US6066140, US5810814, US5785709, US5562661, US5498262, US5496319, US5474553, US5417698, US5356412, US5355913, US5330489, US5318575, US5306275, US5219349, US5084048, US5080661, US5047029, US5021054, US2015272625, US2015164555, US2014276819, US2014257418, US2013085342, US2012271354, US2011054535, US2010318084, US2010152745, US2010100096, US2008247818, US2008208257, US2008077133, US2007293860, US2007162028, US2007123860, US2006229605, US2006229604, US2006229603, US2006229602, US2006173455, US2006155276, US2005154388, US2003060823, JP6105852, JP3382643, GB2293550, GB2293550, FR2725613, FR2701833, FR2697742, FR2688685, EP2774560, EP2774560, EP1838230, EP1723343, EP1648318, EP0955928, EP0858780, EP0707832, EP0596788, EP0517939, EP0408489, DE8805407, DE3807335, CN104274231, CH678803, AU755182, AU2004316649, AU2003205937,

Abstract:

Source: US4920959A PCT No. PCT/DE87/00146 Sec. 371 Date Nov. 20, 1987 Sec. 102(e) Date Nov. 20, 1987 PCT Filed Apr. 6, 1987. Any external fixture for bone synthesis is provided with at least one bridge member, a plurality of holders are orientable and screw clampable on this bridge member by clamping surfaces. The holders have cylindrical holder openings which are closable by an operating screw and thereby serve as clamp holders, each for one bone nail and/or one bone screw. The cylindrical holder openings are bounded by a one piece connected wall surface and are closable individual or jointly with adjacent holder clamp jaw surfaces on the clamp side, on tightening the operating screw. Thus the cylindrical holder openings are each elastically or plastically deformable by a drill and/or screw guide receiving a bone drill with play, from a layer width – down to a smaller width for clamping. The external fixture affords a simple structure, easy to manufacture and at the same time simple handling during operation.



Title: BONE FIXATION DEVICE**Priority:** GB20110022013 201111220 WO2012EP76486 20121220

Family:	Publication number	Publication date	Application number	Application date
	CN104080414 A	20141001	CN201280062946	20121220
	EP2793719 A1	20141029	EP20120809273	20121220
	GB201122013 A0	20120201	GB20110022013	201111220
	GB2497782 A1	20130626	GB20110022013	201111220
	IN05950DN2014 A	20150626	IN2014DN05950	20140716
	US2014371801 AA	20141218	US20120367274	20121220
	US9539028 BB	20170110	US20120367274	20121220
	WO13092913 A1	20130627	WO2012EP76486	20121220

Probable Assignee: EVOLVE ORTHOPEDICS SA**Assignee(s):^(std):** EVOLVE ORTHOPAEDICS S A ; EVOLVE ORTHOPAEDICS SA ; LEFAUCONNIER VINCENT ; VINCENT LEFAUCONNIER ; EVOLVE ORTHOPEDICS SA**Inventor(s):^(std):** BEYER MORTEN ; DALL VAGN ERIK**Inventor(s):** VAGN ERIK DALL ; MORTEN BEYER**Agent(s):** GROSFILLIER PHILIPPE; HOFFMAN WARNICK LLC; HITCHCOCK ESMOND ANTONY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A61B17/58](#) [A61B17/60](#) [A61B17/64](#) [A61B17/68](#) [A61B17/70](#) (Advanced/Invention)
(IPC 8-9).**CPC:** [A61B17/7037](#) [A61B17/7049](#) [A61B17/7053](#) [A61B17/645](#) [A61B17/6416](#) [A61B17/60](#) [A61B17/6441](#) [A61B17/6458](#) [A61B17/68](#) [A61B17/7001](#) [A61B17/705](#) [A61B17/58](#) [A61B17/6466](#)**US class:** [606/86R](#)[Classification Explorer](#)**Cited documents:** US7507240 BB, US7048735 BB, US5746741 A, US5393161 A, US2013066386 AA, US2009131985 AA, US2007231059 AA, GB2375051 A1, FR2831792 A1, EP1309281 B1, EP1309281 A2, CN2494186 Y, CN1051855 A, CN101856263 A,**Forward Citations:** US9539030, US2014303622,

Abstract:

Source: US2014371801A A bone fixation device comprises a plurality of brackets (6, 8, 42-48), each defining a surface formed with at least one recess (56, 58). Part of a ball (12-18, 52, 54) is mounted in each recess with an exposed face formed with a groove (24, 26, 52, 54) for receiving a fixation rod or bone screw. The brackets are capable of being brought together such that at least one pair of exposed ball faces are in juxtaposition with the grooves defining a sleeve for a fixation rod or bone screw, and means (10, 50) are included for urging the brackets and the exposed ball faces towards each other to clamp a fixation rod or bone screw between a pair of juxtaposed ball faces. Normally, the recesses and ball parts are arranged such that as the brackets are brought together at least two pairs of ball parts are in juxtaposition, forming two sleeves for fixation rods or bone screws.

PatBase - W013092913_A1

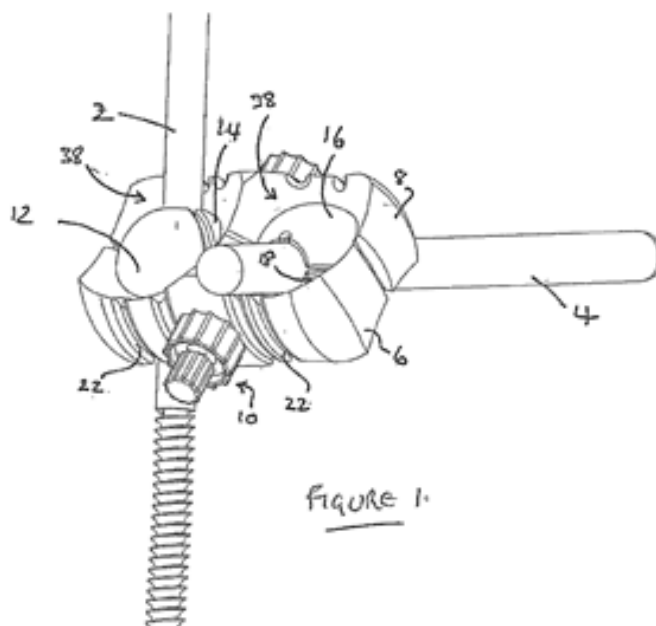


FIGURE 1.

47) Family number: 56946516 (US2016022315A)

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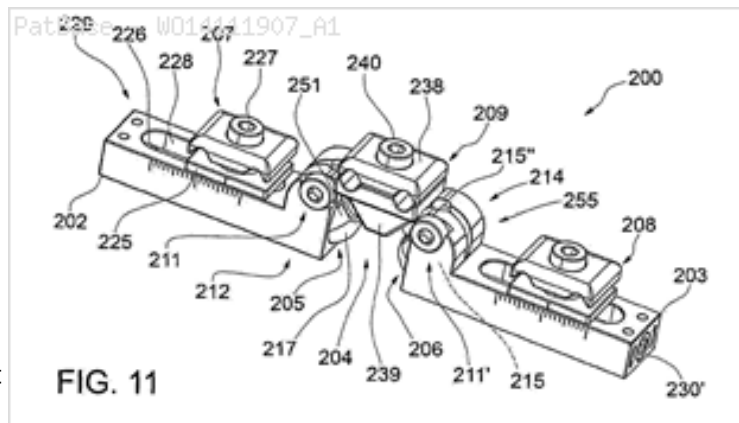
Title: EXTERNAL FIXING DEVICE, FOR TREATING BONE FRACTURES**Priority:** IT2013VR00013 20130121 WO2014IB58443 20140121**Family:**

Publication number	Publication date	Application number	Application date
AR099101 AA	20160629	AR2015P100102	20150115
AU2014206484 AA	20140724	AU20140206484	20140121
CN104837422 A	20150812	CN201480003308	20140121
EP2945553 A1	20151125	EP20140707217	20140121
IN02477CN2015 A	20160701	IN2015CN02477	20150430
ITVR20130013 A1	20140722	IT2013VR00013	20130121
JP2016503708 T2	20160208	JP20150553221T	20140121
KR20150109329 A	20151001	KR20157014347	20140121
US2016022315 AA	20160128	US20140761223	20140121
WO14111907 A1	20140724	WO2014IB58443	20140121

Probable Assignee: TECRES SPA**Assignee(s):**^(std) TECRES SPA**Inventor(s):**^(std) GIOVANNI FACCIOLI ; MAGNAN BRUNO ; RENZO SOFFIATTI ; SOFFIATTI RENZO ; SOFFIATTI RENZO ; FACCIOLI GIOVANNI**Inventor(s):** FACCIOLO GIOVANNI**Agent(s):** FB RICE; FELTRINELLI SECONDO ANDREA; FUKAMI PATENT OFFICE PC**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [A61B17/04 A61B17/60 A61B17/64 A61B17/66 A61F5/01](#) (Advanced/Invention)
(IPC 8-9).**CPC:** [A61B17/66 A61B17/60 A61B2017/603 A61B17/6416 A61B17/6425 A61B17/6458](#)**US class:** [606/54](#)[Classification Explorer](#)**Cited documents:** WO9510240 A1, USD518174 S1, US9398957 BB, US9168065 BB, US8439914 BB, US8231623 BA, US8123805 BB, US8088166 BB, US7993069 BB, US7758582 BB, US7282052 BB, US7004943 BB, US6245071 BA, US6217577 BA, US6171309 BA, US6162223 A, US6162222 A, US5951556 A, US5941877 A, US5827282 A, US5803924 A, US5788695 A, US5769851 A, US5709681 A, US5707370 A, US5688271 A, US5683389 A, US5662648 A, US5620442 A, US5429637 A, US5320622 A, US5320444 A, US5304177 A, US5292322 A, US5207676 A, US5160335 A, US5122140 A, US4988349 A, US4848368 A, US4714076 A, US4628919 A, US4621627 A, US4576158 A, US4554915 A, US4312336 A, US4273116 A, US4135505 A, US2346346 A, US2238870 A, US2016270822 AA, US2016249952 AA, US2016157892 AA, US2016151099 AA, US2016038184 AA, US2016015426 AA, US2014350558 AA, US2014303622 AA, US2014303621 AA, US2014276824 AA, US2014276815 AA, US2014135766 AA, US2014066931 AA, US2014025076 AA, US2012150186 AA, US2011245876 AA, US2010312243 AA, US2010249779 AA, US2008312656 AA, US2008275563 AA, US2008275562 AA, US2008275509 AA, US2007161984 AA, US2007123857 AA, US2007100338 AA, US2005038425 AA, US2004138659 AA, US2004097922 AA, US2003225407 AA, US2003149429 AA, US2002115998 AA, US2002013584 AA, US2001051806 AA, EP0628289 A1, CN1494397 A, CN1169279 A,**Forward Citations:** WO15014440,

Abstract:

Source: US2016022315A An external fixing device for the treatment of bone fractures includes a first member, a second member, a central body arranged between the first member and the second member, a first ball joint for the articulated connection of the first member with the central body, a second ball joint for the articulated connection of the second member with the central body, locking means operatively associated to the first ball joint and with the second ball joint, respectively, the locking means being suitable for allowing/preventing the articulation of the first member and second member with respect to the central body, wherein the first member includes a first clamp, the second member includes a second clamp and the central body includes a third clamp for connection of the external fixing device to respective fractured bone portions to be treated.



48) Family number: 12019541 (US5405388A)

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Title: Bone biopsy implant

Priority: US19900575001 19900829 US19920924420 19920730 US19940357072 19941215
 US19940194812 19940211 US19930062735 19930510 US19930016908 19930212
 US19970939983 19970930 US19950383829 19950206 US19950413603 19950330
 WO1995US01624 19950206 WO1996US04350 19960329

Family:

Publication number	Publication date	Application number	Application date
<u>AU199519135 A1</u>	19960827	AU19950019135	19950206
<u>AU199653794 A1</u>	19961016	AU19960053794	19960329
<u>CA2216614 AA</u>	19970926	CA19962216614	19960329
<u>EP0957830 A1</u>	19991124	EP19960910661	19960329
<u>EP0957830 A4</u>	20000112	EP19960910661	19960329
<u>JP11502750 T2</u>	19990309	JP19960529689T	19960329
<u>US5405388 A</u>	19950411	US19930016908	19930212
<u>US5990382 A</u>	19991123	US19950413603	19950330
<u>US6018094 A</u>	20000125	US19970939983	19970930
<u>WO9624309 A1</u>	19960815	WO1995US01624	19950206
<u>WO9629953 A1</u>	19961003	WO1996US04350	19960329

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International class A61B10/00 A61B17/17 A61B17/34 A61B17/56 A61F2/28 A61M1/00
^{(IPC 8-9):} A61M39/02 (Advanced/Invention);
A61B10/02 A61B17/00 A61B17/88 A61M1/00 (Advanced/Non-invention);
A61B17/56 A61F2/28 A61M39/02 (Core/Invention)

International class A61B17/56 A61E2/28 A61F2/02 A61F2/28 A61M39/02
^{(IPC 1-7):}

CPC: A61B2217/007 A61B2090/103 A61M39/0247 A61B10/00 A61B10/025 A61B17/00234
A61B17/17 A61B17/3472 A61B17/3498 A61B2010/0258 A61B2017/3445 A61B2217/005
A61M2039/025 A61M2039/027 A61M2039/0273 A61M2039/0279 A61M2039/0291

European class: A61B10/00 A61B17/17 A61B17/34L A61M39/02T K61B10/02P4 K61B10/02P4M
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K61M39/02T21

US class: 606/191 623/11 623/16 623/16.11[Classification Explorer](#)

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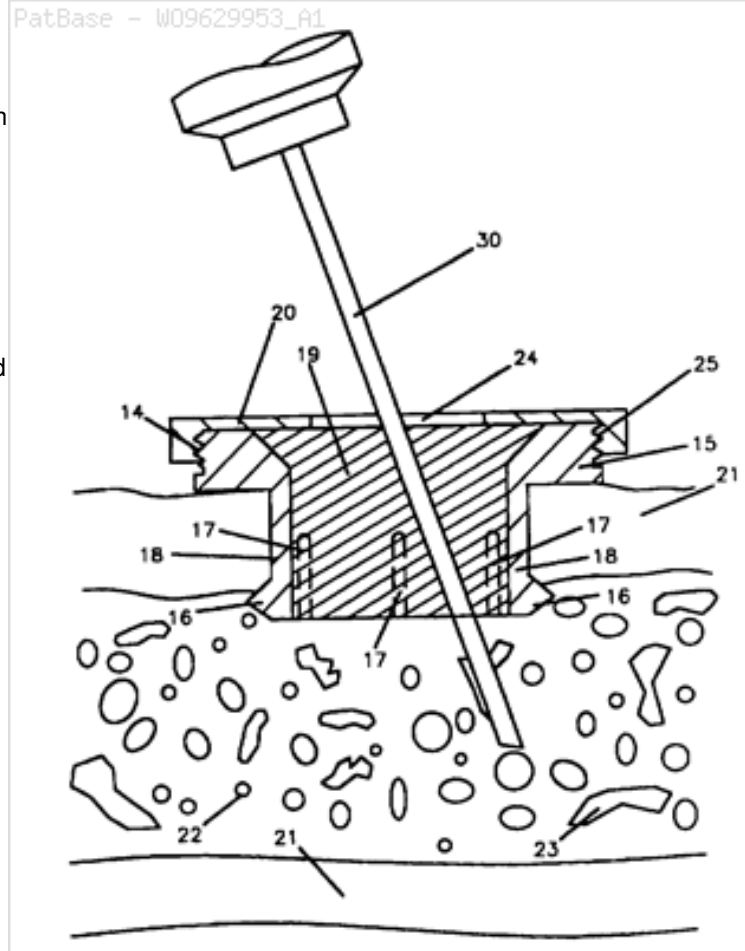
Forward Citations:

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Abstract:

Source: US5405388A A bone biopsy implant having a short cylindrical collar (15) with a removable tapered inner sleeve (40) which together act to facilitate bone sample collection and endoscopic access to the medullary compartment of bone. The collar (15) is provided with a biocompatible outer surface that secures with flutes (17) to resist rotation and circumferential beads (16) to resist pull-out forces. The collar walls on the fluted end strains towards the centerline to facilitate insertion or removal in a hole. The collar (15) is further provided with a flange on one face that has a ramp (18) shaped surface on its end that act together with a similar ramp (20) on the tapered sleeve (40) to cause longitudinal translation of the sleeve when rotated. This sleeve is comprised of three components consisting of a short cylindrical cap (11) that is contoured on the end and has flat regions on the surface suitable for use with a socket wrench, a fluted cylindrical basket (12) that cuts and contains the bone and marrow sample and a cylindrical end-cap (13) having a plurality of threads. The implant includes provision for its insertion and explantation, repeated sampling of bone tissue and fixation and introduction of endoscopic instrument in bone.



49) Family number: 5714513 (EP0140786A2)

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Title: Orthopedic fixation apparatus for bone fractures.**Priority:** FR19830017361 19831027

Family:	Publication number	Publication date	Application number	Application date
	<u>DE3472753 D1</u>	19880825	DE19843472753	19841022
	<u>EP0140786 A2</u>	19850508	EP19840402115	19841022
	<u>EP0140786 A3</u>	19850626	EP19840402115	19841022
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	<u>ES8608846 A1</u>	19861216	ES19840537148	19841026
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	<u>FR2553994 B1</u>	19870904	FR19830017361	19831027

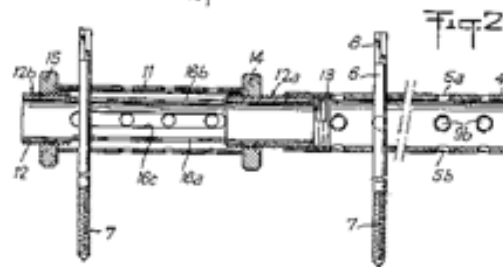
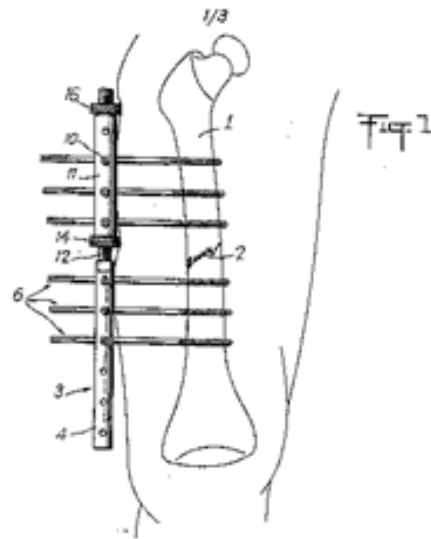
Probable Assignee: SOREM SOC REALISA ELECT MEC**Assignee(s):^(std):** SOREM SOC REALISA ELECT MEC**Assignee(s):** SOCIETE DE REALISATIONS ELECTROMECANIKES ; SOCIETE DE REALISATIONS ELECTROMECANIKES S O R E M ; DE REALISATIONS ELECTROMECANIKES S O R E SOC ; DE REALISATIONS ELECTROMECANIKES SOC ; DE REALISATIONS ELECTROMECANIKES SOREM SOC ; REALISATIONS ELECTROMECANIKES**Inventor(s):^(std):** INGRASSIA VINCENT ; MEYRUEIS JEAN PAUL ; MINE JEAN**Inventor(s):** VINCENT INGRASSIA JEAN MINE ET JEAN PAUL MEYRUEIS**Designated states:** BE CH DE FR GB IT LI NL**International class**
(IPC 8-9): [A61B17/60 A61B17/64](#) (Advanced/Invention);
[A61B17/60](#) (Core/Invention)**International class**
(IPC 1-7): [A61B17/58 A61B17/60](#)**CPC:** [A61B17/60 A61B17/6425](#)**European class:** [A61B17/60 A61B17/64D](#)[Classification Explorer](#)**Cited documents:** US1997466 A, FR2457676 A1, FR2442044 A1, FR2312226 A1, FR2174377 A5, CH638390 A3, CH638390,**Forward Citations:** WO9904714, WO9716128, WO9318717, WO9312729, WO9215258, WO9212683, WO9106254, WO9011727, WO8602821, WO8051064, WO0038585, US9492199, US9084632, US8585702, US6652523, US5556398, US5196013, US4942872, US4920959, US2012029575, FR2787697, FR2688685, FR2669525, FR2645428, FR2572929, EP0328883, EP0240034,

Abstract:

1. Orthopedic apparatus for immobilizing a fractured bone (1) of the type comprising at least one rigid external fixing means (3) formed by a perforated tube which is placed on the outside of and in contact with the limb having a fractured bone and self-tapping pins (6) which are screwed into the fractured bone on each side of the fracture and which are engaged in the perforations of said tube and locked therein by locking screws (1), characterized in that said external fixing means comprises two separated perforated tubes (4, 11) disposed along the same axis in the extension of each other and connected together by a connecting tube (12), and in that one of said perforated tubes (4) is secured to said connecting tube (12) so as to be fixed, whereas the other perforated tube (11) may be moved axially along the connecting tube (12), with respect to the fixed perforated tube (4), in that the connecting tube (12) has an external threaded portion at least at its two opposite ends (12a, 12b), and in that two nuts (14, 15) are provided respectively on the threaded ends (12a, 12b) of the connecting tube (12), in the vicinity of the corresponding ends of the mobile perforated tube (11), so as to allow the mobile tube (11) to move along the tube (12) and to lock said mobile tube (11) in the desired position, by screwing said nuts (14, 15) on said threaded ends of the tube (12).

PatBase - FR2553994_A1

2553994



50) Family number: 29585966 (US6248105B)

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Title: Device for connecting a longitudinal support with a pedicle screw

Priority: DE19971020782 19970517 DE19975010520 19970616 KR19997010676 19991115
WO1997CH00236 19970616

Family:	Publication number	Publication date	Application number	Application date
	<u>AT245947 E</u>	20030815	AT19970924848T	19970616
	<u>AU199730223 A1</u>	19981211	AU19970030223	19970616
	<u>AU723894 B2</u>	20000907	AU19970030223	19970616
	<u>CA2289629 AA</u>	19991109	CA19972289629	19970616
	<u>CA2289629 C</u>	20051115	CA19972289629	19970616
	<u>CN1146365 C</u>	20040421	CN19971082195	19970616
	<u>CN1254266 A</u>	20000524	CN19971082195	19970616
	<u>DE19720782 A1</u>	19981119	DE19971020782	19970517
	<u>DE19720782 B4</u>	20041209	DE19971020782	19970517
	<u>DE59710520 D1</u>	20030904	DE19975010520	19970616
	<u>DK0984730 T3</u>	20031110	DK19970924848T	19970616
	<u>EP0984730 A1</u>	20000315	EP19970924848	19970616
	<u>EP0984730 B1</u>	20030730	EP19970924848	19970616
	<u>ES2203807 T3</u>	20040416	ES19970924848T	19970616
	<u>HK1023710 A1</u>	20031031	HK20000102399	20000420
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	<u>US6248105 BA</u>	20010619	US19990423891	19991116
	<u>WO9852482 A1</u>	19981126	WO1997CH00236	19970616
	<u>ZA9804064 A</u>	19981124	ZA19980004064	19980514

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PFER FRIDOLIN ; SCHLAEPFER FRIDOLIN ; SCHLAPFER FRIDOLIN ; SCHLAPUFER
F ; SCHLAPUFER FRIDOLIN

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PFER FRIDOLIN ; Schl Auml Pfer ; Martin ; HESS MARTIN HOELSTEIN CH ; Fridolin ;
Hess

Agent(s): PHILLIPS ORMONDE FITZPATRICK; MARKS AND CLERK

Designated states: AT AU BE CA CH CN DE DK ES FI FR GB GR IE IT JP KR LI LU MC MX NL PT SE US

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^{(IPC 8-9):} A61B17/58 A61B17/70 (Advanced/Non-invention);
A61B17/58 A61B17/70 (Core/Invention)

International class A61B17/56 A61B17/58 A61B17/70 A61F2/44 A61F5/04 A61L27/00
(IPC 1-7).

CPC: A61B17/7032 A61B17/7034 A61B17/7037 A61B17/7041

European class: A61B17/70B2 A61B17/70B2L A61B17/70B5B A61B17/70B6 K61B17/70B2L

US class: 606/266 606/272 606/61

[Classification Explorer](#)

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US2006276789, US2006271047, US2006241595, US2006217716, US2006173456,
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US2005101956, US2005101953, US2005085813, US2005055026, US2005010215,
US2004260283, US2004254577, US2004236330, US2004220571, US2004172020,
US2004158251, US2004158246, US2004116929, US2004111091, US2002120273,
JP4318421, JP2015513351, JP2013542774, JP2011518030, JP2003508109,
FR2821131, ES2153331, EP3092963, EP3031415, EP2939623, EP2624775,
EP2624775, EP2586392, EP2222238, EP2222238, EP2095782, EP2007323,
EP2007323, EP1855624, EP1743584, EP1718228, EP1718228, EP1576931,
EP1444958, EP1361827, EP1214006, EP1174092, CN105455927, CN103083078,
CN102525620, CN102525620, AU773530, AU2005265056,

Abstract:

Source: US6248105B The invention relates to a device for connecting a longitudinal rod with a bone anchoring element, such as a pedicle screw, thereby forming a system for fixation of the spine. The device includes a connecting member having upper and lower ends, a bore hole which is open at least towards the lower end and has a central axis, and a through hole positioned perpendicular to the central axis. The device also has a tensioning member insertable in the upper end of the connecting member for securing the bone anchoring element to the connector at a surgeon selected angle. A radially compressible spring chuck is arranged within the connecting member and has a cavity for receiving the head of the bone anchoring element. An insert slides into the bore hole of the connecting member and has a recess with a shape complementary to the outer surface of the spring chuck. The spring chuck is axially supported in the bore hole in such a fashion that radial movement of the spring chuck is not affected.

PatBase - ZA9804064_A

PUBLICATION FIGURE

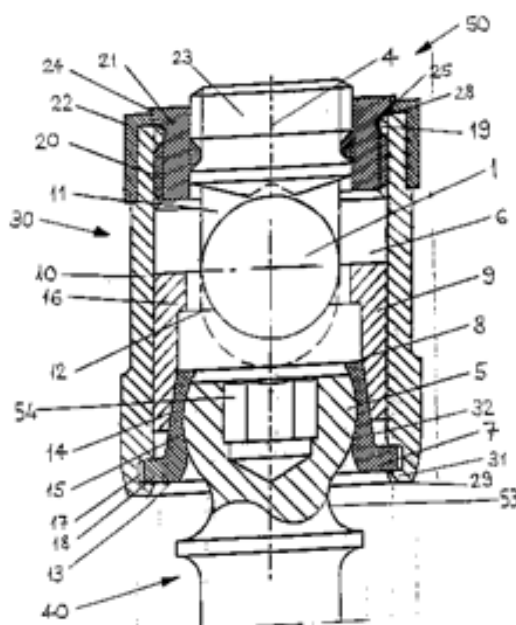


Fig. 1

51) Family number: 17919480 (US4717300A)

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Title: Pin for a fastener, and method of making same**Priority:** CA19870529326 19870209 GB19860003299 19860211

Family:	Publication number	Publication date	Application number	Application date
	<u>AU198768628 A1</u>	19870813	AU19870068628	19870210
	<u>AU591402 B2</u>	19891130	AU19870068628	19870210
	<u>BRPI8700622 A</u>	19871215	BR1987PI00622	19870211
	<u>CA1287758 A1</u>	19910820	CA19870529326	19870209
	<u>DE3702634 A1</u>	19870820	DE19873702634	19870129
	<u>DE3702634 C2</u>	19961128	DE19873702634	19870129
	<u>DE8701403 U1</u>	19870611	DE19870001403U	19870129
	<u>FR2594142 A1</u>	19870814	FR19870001685	19870211
	<u>FR2594142 B1</u>	19930528	FR19870001685	19870211
	<u>GB2186290 A1</u>	19870812	GB19860003299	19860211
	<u>GB2186290 B2</u>	19891122	GB19860003299	19860211
	GB8603299 A0	19860319	GB19860003299	19860211
	<u>IT1205967 A</u>	19890405	IT19870047607	19870204
	<u>IT8747607 A0</u>	19870204	IT19870047607	19870204
	<u>JP62192531 A2</u>	19870824	JP19870027451	19870210
	<u>US4717300 A</u>	19880105	US19870007506	19870128

Probable Assignee: AVDEL SYSTEMS LTD**Assignee(s):^(std):** AVDEL SYSTEMS LIMITED ; AVDEL SYSTEMS LTD ; AVDEL LTD

Assignee(s): AVDEL LTD WELWYN GARDEN CITY HERTFORDSHIRE GB ; AVDEL SYSTEMS LTD WELWYN GARDEN CITY HERTFORDSHIRE ; ACUMENT FASTENING SYSTEMS LLC ; ACUMENT GLOBAL TECHNOLOGIES INC ; ACUMENT INTELLECTUAL PROPERTIES LLC ; ALVI ZIA RAHEEM ; AVDEL CHERRY LLC ; AVDEL LIMITED ; CAMCAR INTELLECTUAL PROPERTIES LLC ; CHERRY AEROSPACE LLC ; BURKLAND TEXTRON INC ; CAMCAR LLC ; AVDEL USA LLC ; AVDEL MUNDELLS LTD ; AVDEL SYSTEMS LTD WELWYN GARDEN CITY HERTFORDSHIRE GB ; US BANK NATIONAL ASSOCIATION AS COLLATERAL AGENT ; WELLS FARGO FOOTHILL INC ; KING HOLDING CORP ; KING HOLDING US CORP ; FLEXALLOY INC ; WOLVERINE METAL SPECIALTIES INC ; ELCO FASTENING SYSTEMS LLC ; TFS FASTENING SYSTEMS LLC ; RING SCREW LLC ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS COLLATERAL ; SATURN FASTENERS INC ; CREDIT SUISSE CAYMAN ISLANDS BRANCH COLLATERAL AGE ; US BANK NATIONAL ASSOCIATION COLLATERAL AGENT AS ; WELLS FARGO FOOTHILL INC COLLATERAL AGENT AS ; HIBLEN CHRISTOPHER ROBIN

Inventor(s):^(std): KURISUTOFUAA ROBIN HIBUREN ; RAHEEM ALVI ZIA ; ROBIN HIBLEN CHRISTOPHER ; ZIA RAHEEM ALVI ; ZUIA RAHIIMU ARUBUI ; ZUIA RAHIIMU ARUI ; ZIA RAHEEM ALVI ET CHRISTOPHER ROBIN HIBLEN ; ALVI ZIA R ; ALVI ZIA RAHEEM ; CHRISTOPHER ROBIN HIBLEN ; HIBLEN CHRISTOPHER R ; HIBLEN CHRISTOPHER ROBIN

Inventor(s): ALVI ZIA RAHEEM HATFIELD HERTFORDSHIRE GB ; HIBLEN CHRISTOPHER ROBIN WELWYN GARDEN CITY HERTFORDSHIRE GB ; HIBLEN CHRISTOPHER ROBIN WELWYN GARDEN CITY HERTFO

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; RIDOUT AND MAYBEE LLP

International class
^{(IPC 8-9):} B21J15/00 B21J15/16 C21D8/06 C21D9/00 F16B19/05 F16B19/08 (Advanced/Invention) ;
B21J15/00 (Advanced/Non-Invention) ;
B21J15/00 C21D8/06 F16B19/04 (Core/Invention)

International class
^{(IPC 1-7):} B21J15/00 C21D8/00 C21D8/06 C21D9/00 C21D9/26 C22C38/00 F16B19/02 F16B19/05 F16B19/08 F16B19/10 F16B5/04 F16C

CPC: F16B19/05

European class: F16B19/05

US class: 148/12.1 148/12.4 148/12B 148/226 148/233 411/361

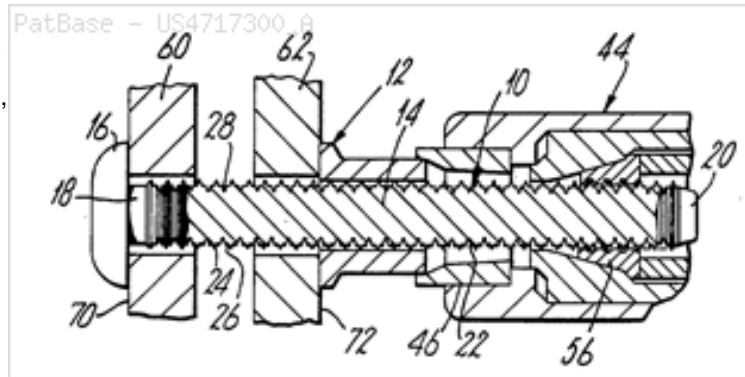
[Classification Explorer](#)

Cited documents: US4653969 A, US4584032 A, US4540447 A, US4531871 A, US4519736 A, US3532560 A, US3344817 A, JP60008518 A2, GB2160944 A1, GB2141197 A1, GB2064593 A1, GB1492720 A, GB1446892 A, GB1402144 A, EP0155029 A1, DE8517640 U, DE3521653 A1, DE3425829 A1, DE3213605 A1, DE2941480 A1,

Forward Citations: US8118527, US7468107, US5460875, US5340412, US4984947, US2004091331, DE102009014175, DE10158197, CN104100622, CN102840205,

Abstract:

Source: US4717300A A headed steel pin for a multi-grip fastener of the pin and swageable collar type has a homogeneous microstructure, and consists substantially entirely of sorbitic tempered martensite. Suitable coarse-grained medium carbon steel is shaped to form a headed pin having a plurality of identical, regularly spaced, annular, combination grooves each able to function alternatively as a locking groove, a pulling groove, or a breaker groove. The shaped pin is heat treated, the steel rendered homogeneously martensitic and then tempered at a temperature approaching as closely as practicable to the lower critical temperature of the steel, to convert the martensitic steel entirely to sorbite. The finished pin has a suitable balance of brittleness, toughness, ductility and impact strength, and tends to break cleanly and reliably at a selected one of the combination grooves when the fastener is installed in a workpiece.



52) Family number: 8495178 (US5803924A)

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Title: External fixator**Priority:** GB19930016263 19930805 WO1994GB01725 19940805

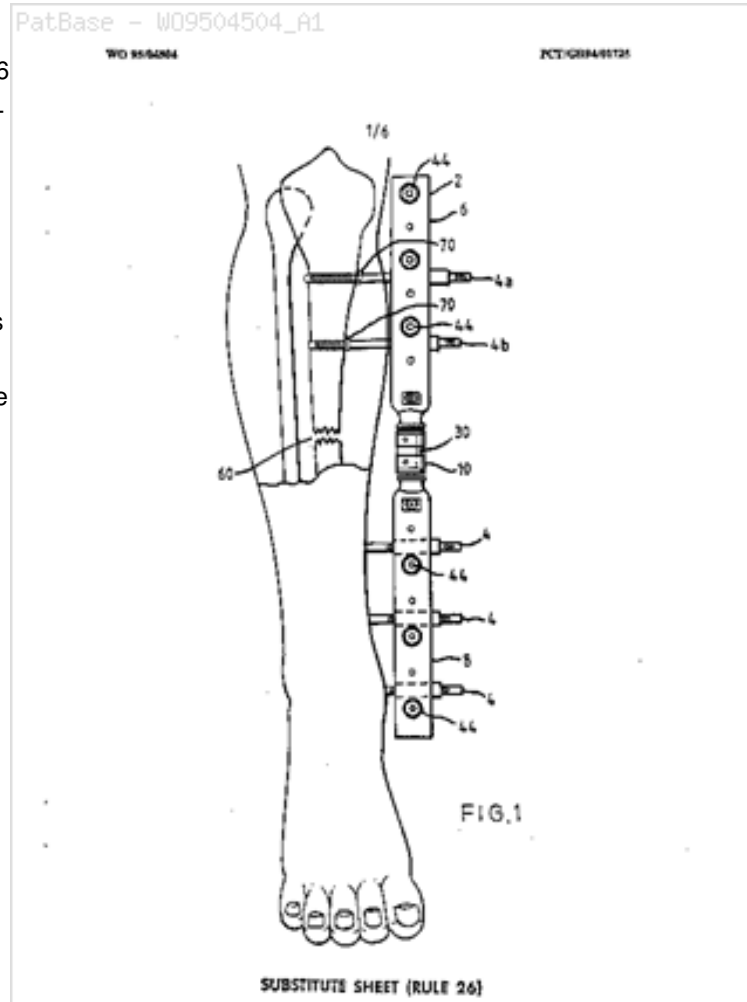
Family:	Publication number	Publication date	Application number	Application date
	AU199472725 A1	19950228	AU19940072725	19940805
	EP0712296 A1	19960522	EP19940923016	19940805
	GB2280608 A1	19950208	GB19930016263	19930805
	GB9316263 A0	19930922	GB19930016263	19930805
	US5803924 A	19980908	US19960592367	19960412
	WO9504504 A1	19950216	WO1994GB01725	19940805

Probable Assignee: HI SHEAR FASTNERS EUROPE LTD**Assignee(s):^(std):** BATCHELOR JOHN STEPHEN ; GALE RICHARD MARK ; HI SHEAR FASTENERS EUROPE LTD ; HI SHEAR FASTNERS EUROPE LIMITE ; HI SHEARS FASTENERS EUROPE LIMITE ; ONI OLUSOLA O A ; OLUSOLA OLUMIDE AKINDELE ONI ; ONI OLUSOLA OLUMIDE AKINDELE**Assignee(s):** HI SHEAR FASTENERS EUROPE LTD ; HI SHEAR FASTNERS EUROPE LTD ; HI SHEAR FASTNERS EUROPE LIMITED ; HI SHEARS FASTENERS EUROPE LIMITED ; HI SHEAR FASTENERS EUROPE LIMITED**Inventor(s):^(std):** BATCHELOR JOHN STEPHEN ; GALE RICHARD MARK ; ONI OLUSOLA OLUMIDE AKINDELE**Inventor(s):** RICHARD MARK GALE ; JOHN STEPHEN BATCHELOR ; OLUSOLA OLUMIDE AKINDELE ONI**Designated states:** AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA GB GE GN GR HU IE IT JP KE KG KP KR KZ LK LT LU LV MC MD MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SI SK SN TD TG TJ TT UA US UZ VN**International class**
(IPC 8-9): [A61B17/64](#) [A61B17/86](#) (Advanced/Invention);
[A61B17/60](#) [A61B17/68](#) (Core/Invention)**International class**
(IPC 1-7): [A61B17/56](#) [A61B17/60](#) [A61B17/64](#)**CPC:** [A61B17/6416](#) [A61B17/6491](#) [A61B17/8605](#) [A61B17/8685](#) [A61B17/8695](#)**European class:** [A61B17/64C](#) [A61B17/64P](#) [A61B17/86A](#) [A61B17/86P](#) [K61B17/86W](#)**US class:** [606/54](#) [606/57](#) [606/59](#)[Classification Explorer](#)**Cited documents:** WO9402078 A1, WO9116860 A1, US5320622 A, US4448482 A, US2398915 A, GB2258155 A1, GB2154144 A1, GB2154143 A1, GB2146533 A1, FR2499400 A1, EP0424734 A1, EP0298400 A1, EP0298100 B1, EP0099289 A1, EP0011258 B1, DE3822740 A1, AU2450392 A1, AU20024503,**Forward Citations:** WO15096861, WO14140879, WO12004798, WO11151009, WO02078554, WO0009025, WO0009025, US9655648, US9610103, US9468466, US9463045, US9414861, US9398957, US9393045, US9278004, US9273715, US9168065, US9125746, US9114016, US9066757, US9060867, US9044270, US9034049, US9005298, US8894714, US8845724, US8801795, US8758343, US8709090, US8679178, US8597362, US8523948, US8419732, US8409281, US8388619, US8382757, US8282636, US8123805, US8100967, US8088166, US7763020, US7731738, US7722609, US7678147, US7655041, US7611540, US7588571, US7575575, US7507240, US7282052, US7261713, US6854173, US6678562, US6423061, US6409729, US6176860, US6162223, US6053915, US5941879, US5738684, US2016199098, US2016022315, US2014276816, US2013110110, US2011202138, US2011137415, US2011103676, US2011093080, US2010145449, US2010145336, US2010137996, US2010114322, US2010106248, US2009276052, US2009248026, US2008275567, US2008275565, US2008275561, US2008275560, US2008275559, US2008275557, US2008275556, US2008275555, US2008200952, US2008195208,

US2007282338, US2007055233, US2006241590, US2005261680, US2004097922, US2004059331, US2004003491, US2003069580, JP6103773, JP2014512855, GB2289416, EP2392276, EP1844721, EP1372500, CN104837422, CN103099658, AU2002234756,

Abstract:

Source: US5803924A PCT No. PCT/GB94/01725 Sec. 371 Date Apr. 12, 1996 Sec. 102(e) Date Apr. 12, 1996 PCT Filed Aug. 5, 1994 PCT Pub. No. WO95/04504 PCT Pub. Date Feb. 16, 1995 An external fixator comprises transfixing pins having a flange which abuts against the bone surface to distribute stress along the length of the threaded portion extending into the bone. The pins are mounted in elastomeric bushes in an outrigger to allow limited movement at the outrigger. The outrigger comprises two clamps which are connected through an elastomeric bush allowing a small degree of axial bending and rotational movement of the clamps relative to one another. The arrangement reduces loosening of the pins in the bone and allows beneficial relative movement of the fractured bone portions near the fracture site.



53) Family number: 2628903 (US4714076A)

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Title: Device for the setting of bone segments**Priority:** CH19840000230 19840119 EP19840810116 19840308

Family:	Publication number	Publication date	Application number	Application date
	AT32174 E	19880215	AT19840810116T	19840308
	CH663347 A	19871215	CH19840000230	19840119
	DE3468975 D1	19880303	DE19843468975	19840308
	EP0153546 A1	19850904	EP19840810116	19840308
	EP0153546 B1	19880127	EP19840810116	19840308
	US4714076 A	19871222	US19840680664	19841212

Probable Assignee: SYNTHES USA**Assignee(s):^(std):** STRAUMANN INST AG ; SYNTHES AG**Assignee(s):** SYNTHES LTD ; SYNTHES LTD (USA) A CORP OF PA ; SYNTHES LTD USA A CORP OF PA ; SYNTHES USA ; SYNTHES ; SYNTHES (USA) ; INSTITUT STRAUMANN AG ; STRAUMANN AG INST**Inventor(s):^(std):** BURRI CAIUS ; BURRI CAIUS PROF DR MED ; CLAES LUTZ ; CLAES LUTZ DR ; COMTE PIERRE ANDRE ; COMTE PIERRE ANDRE DR ; GERNGROSS HEINZ ; GERNGROSS HEINZ DR MED ; LUTZ CLAES DR ; MEIER REMI ; MEIER REMY**Designated states:** AT DE FR GB SE

International class
^{(IPC 8-9):} [A61B17/60](#) [A61B17/64](#) (Advanced/Invention);
[A61B17/66](#) [A61B17/86](#) (Advanced/Non-invention);
[A61B17/60](#) (Core/Invention);
[A61B17/68](#) (Core/Non-invention)

International class
^{(IPC 1-7):} [A61B17/60](#) [A61F5/04](#)

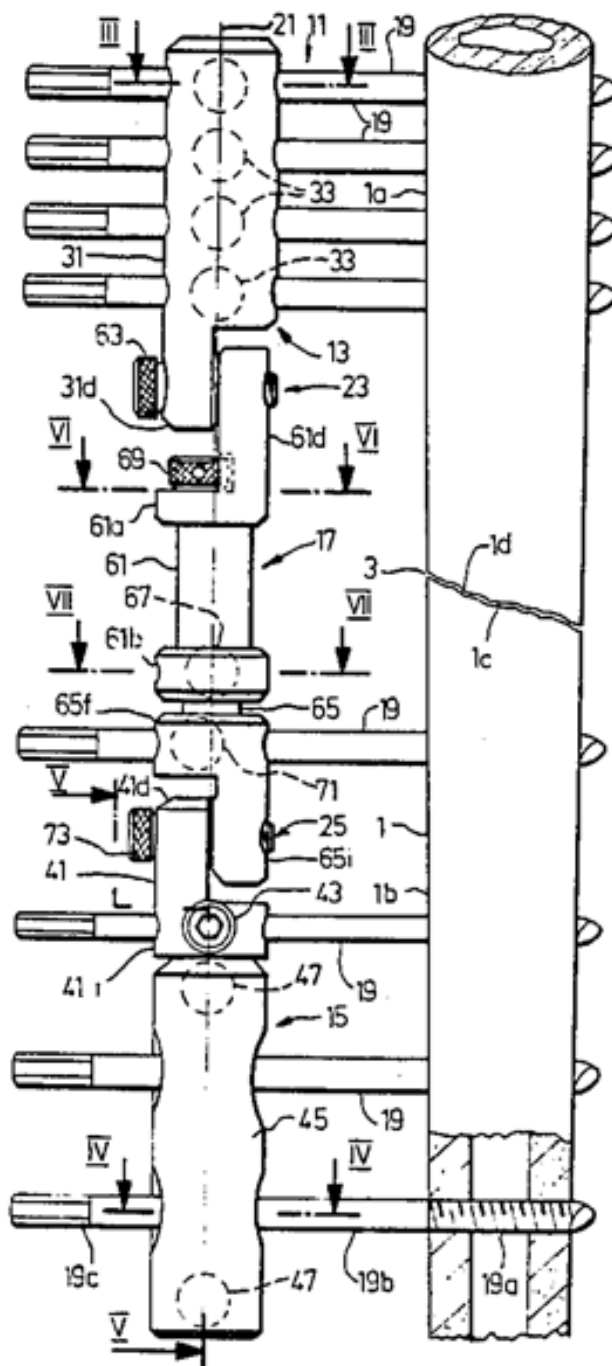
CPC: [A61B17/6458](#) [A61B17/66](#) [A61B17/8695](#)**European class:** [A61B17/64K](#) [K61B17/66](#) [K61B17/86W](#)**US class:** [128/92ZW](#) [606/57](#)[Classification Explorer](#)**Cited documents:** US4541422 A, US4502473 A, US4312336 A, US2435850 A, US2393694 A, GB2110094 A1, FR2439002 A1, CH633174, CH608712,

Forward Citations: WO9202185, WO9010421, WO9007305, WO0061019, USRE34985, US9622781, US9549793, US9463045, US9393045, US9301782, US9155561, US8636511, US8382757, US7699848, US7484959, US7338286, US7261713, US7147640, US7060068, US7041103, US6669698, US6585736, US6565564, US6562046, US6537275, US6409729, US6287313, US6197027, US6176860, US6171309, US6171308, US6162224, US6123704, US6059785, US5976136, US5976125, US5944719, US5827282, US5743898, US5738684, US5662650, US5578038, US5451226, US5429637, US5405347, US5376090, US5203783, US5152280, US5026372, US5019077, US5006120, US4988349, US4944743, US2016022315, US2014276816, US2014257288, US2010050564, US2009125068, US2007055233, US2006155276, US2004230202, US2003191468, JP5504879, GB2283178, GB2283178, FR2644340, ES2043487, EP0386308, DE3936192, CN104837422, AT394941,

Abstract:

Source: US4714076A Bone-setting device comprises two elongated holders which are joined by an elongated connecting link. Pins which can be screwed into bone elements are held in each holder in such a manner that they can be rotated around their axis, moved along that axis, and clamped. At least one holder comprises spherical guiding bodies, each of which holds a pin in such a manner that the pin can be pivoted in space. The connecting link comprises a sleeve and a stud which is held in the sleeve in such a manner that it can be shifted in the axial direction and pivoted, and which, in order to generate a force which presses the bone elements against each other, can, by means of a tensioning screw inserted in it, be pulled against one end of sleeve and clamped in various pivoting and sliding positions by means of a clamping screw. The device offers many adjusting possibilities for setting the bone elements but is, nevertheless, very rigid in the clamped state and also relatively small and easy to handle.

PatBase - US4714076_A



54) Family number: 3778557 (US5041112A)

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Title: External splint for the treatment of fractures of the long bones of limbs**Priority:** CA19902031089 19901129 IT19890003738 19891130

Family:	Publication number	Publication date	Application number	Application date
	AT134858 E	19960315	AT19900122598T	19901127
	CA2031089 AA	19910531	CA19902031089	19901129
	CA2031089 C	20030128	CA19902031089	19901129
	DE69025715 D1	19960411	DE19906025715	19901127
	DE69025715 T2	19960829	DE19906025715T	19901127
	EP0431441 A1	19910612	EP19900122598	19901127
	EP0431441 B1	19960306	EP19900122598	19901127
	ES2086354 T3	19960701	ES19900122598T	19901127
	IT1236172 A	19930111	IT19890003738	19891130
	IT8903738 A0	19891130	IT19890003738	19891130
	US5041112 A	19910820	US19900618864	19901128

Probable Assignee: CITIEFFE SRL**Assignee(s):**^(std): CITIEFFE SRL ; CITIEFFE S R L**Assignee(s):** CITIEFFE S R L LIPPO DI CALDERARA DI RENO BOLOGNA ; CITIEFFE S R L LIPPO DI CALDERARA DI RENO BOLOGNA IT ; MANDRIOLI MARCO ; MINGOZZI FRANCO**Inventor(s):**^(std): MANDRIOLI MARCO ; MINGOZZI FRANCO**Inventor(s):** MINGOZZI FRANCO I 40012 LIPPO DI CALDERARA DI RENO ; MINGOZZI FRANCO I 40012 LIPPO DI CALDERARA DI RENO IT ; MANDRIOLI MARCO I 40100 BOLOGNA IT**Agent(s):** OGILVY RENAULT LLP SENCRL SRL**Designated states:** AT BE CH DE ES FR GB LI NL SE**International class**
^(IPC 8-9): [A61B17/64](#) [A61F5/04](#) ^(Advanced/Invention);
[A61B17/60](#) ^(Core/Invention)**International class**
^(IPC 1-7): [A61B17/60](#) [A61F](#) [A61F5/04](#)**CPC:** [A61B17/6416](#)**European class:** [A61B17/64C](#)**US class:** [606/54](#) [606/59](#)[Classification Explorer](#)**Cited documents:** WO9007305 A1, WO8602822 A1, US4944743 A, US4662365 A, US4576158 A, US4570625 A, US4502473 A, US4312336 A, US2238870 A, FR2616059 A1,**Forward Citations:** WO9535061, WO9535061, WO9524161, US9655648, US9610103, US9468466, US9398957, US9278004, US9125746, US9114016, US9060867, US9044270, US9034049, US9005298, US8894714, US8845724, US8801795, US8709090, US8679178, US8597362, US8523948, US8409281, US8123805, US8100967, US8088166, US7763020, US7678147, US7655041, US7611540, US6428540, US6010501, US5885285, US5643263, US5405347, US5358504, US5209750, US2011202138, US2011137415, US2011093080, US2010145449, US2010145336, US2010137996, US2010114322, US2010106248, US2010106247, US2010094306, US2009248026, US2008275567, US2008275565, US2008275561, US2008275560, US2008275559, US2008275558, US2008275557, US2008275556, US2008275555, US2005261680, FR2725613, FR2697994, EP0740927, EP0707832, EP0611007, AU683628,

Abstract:

Source: US5041112A The external splint for the treatment of fractures of the long bones of limbs is composed of a tubular body which encloses a cylindrical cavity and has one end prismatically engaged in a seat of a box-like element, which is elongated transversely to the axis of the tubular body. The box-like element is coupled to the tubular body by means of a screw which is rotatably supported in the box-like element and is screwed in a threaded hole defined in the end along the axis of the seat. The screw is cannulated to allow the accommodation of a strain-gauge for monitoring the behavior of the splint. A support for supporting the nail-holder clamps are applied to the box-like element and to the tubular body so that it is possible to adjust them according to a total of three degrees of freedom.

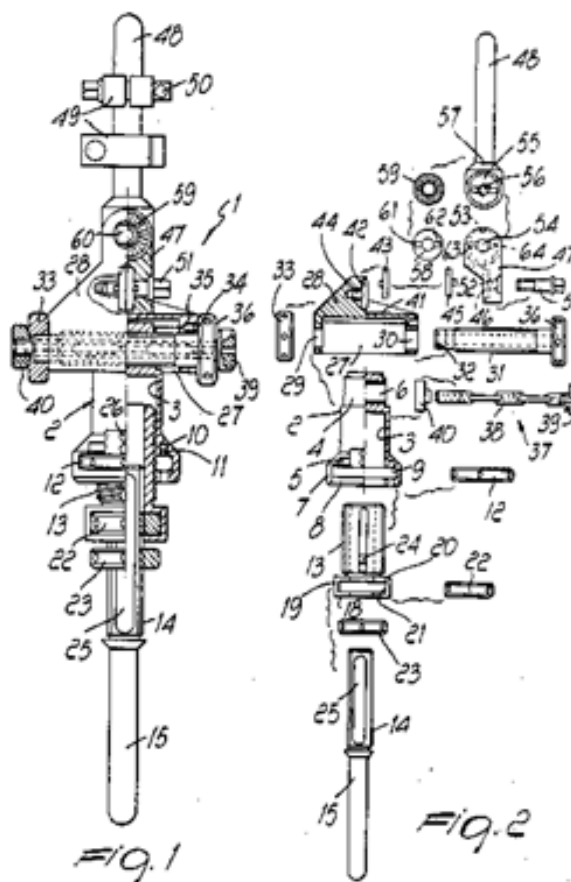
PatBase - US5041112_A

U.S. Patent

Aug. 28, 1991

Sheet 1 of 4

5,041,112



55) Family number: 30157796 (US5707370A)

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Title: Accessory device for an orthopedic fixator
Priority: IT1995VR00076 19950919 US19950566063 19951201 US19980003618 19980107
Family:

Publication number	Publication date	Application number	Application date
IT1278856 B1	19971128	IT1995VR00076	19950919
ITVR950076 A0	19950919	IT1995VR00076	19950919
ITVR950076 A1	19970319	IT1995VR00076	19950919
US5707370 A	19980113	US19950566063	19951201
US5902302 A	19990511	US19980003618	19980107

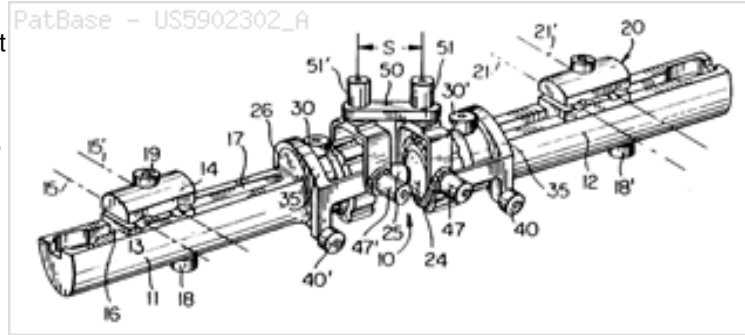
Probable Assignee: ORTHOFIX INT BV**Assignee(s):**^(std): ORTHOFIX SRL**Assignee(s):** ORTHOFIX SRL VIA DELLE NAZIONI ; ORTHOFIX INT ; ORTHOFIX INT BV ; ORTHOFIX S R L**Inventor(s):**^(std): BERKI SANDOR ; FACCIOLI GIOVANNI ; SANDOR BERKI ; VENTURINI DANIELE**International class**
(IPC 8-9): [A61B17/64](#) (Advanced/Invention)**International class**
(IPC 1-7): [A61B17/64 A61F](#)**CPC:** [A61B17/6416 A61B17/6425](#)**European class:** [A61B17/64C A61B17/64D](#)**US class:** [606/55 606/59](#)[Classification Explorer](#)**Cited documents:** USRE34985 E, US4988349 A,

Forward Citations: WO06120482, WO0038584, US9592080, US9517086, US9463045, US9393045, US9320638, US9259250, US9155574, US9155562, US9060820, US8961516, US8951253, US8491597, US8439917, US8382757, US8382755, US8287541, US8287539, US8177788, US8109942, US7942875, US7914533, US7909825, US7887537, US7862570, US7846162, US7841998, US7794467, US7764985, US7758582, US7731738, US7608074, US7588571, US7575575, US7547307, US7507240, US7477926, US7261713, US7048735, US7004943, US6678562, US6428540, US6423061, US2016022315, US2014324045, US2011172664, US2011144645, US2011092978, US2011071531, US2011071530, US2011071528, US2010249581, US2010094347, US2008200855, US2008161805, US2008149115, US2008140078, US2008132896, US2007287910, US2007276186, US2007255280, US2007233105, US2007169782, US2007162028, US2007123912, US2007118055, US2006264952, US2006264951, US2006264950, US2006229605, US2006229604, US2006229603, US2006229602, US2006190011, US2006161051, US2006111210, US2005279368, US2005245939, US2005245808, US2005234468, US2005234466, US2005234465, US2005234332, US2005228404, US2005228266, US2005197569, US2005159759, US2005119656, US2005119639, US2005113846, US2005113659, US2005109855, US2005085822, US2005075632, US2004168322, US2004138659, US2004133199, US2003149430, US2003149429, US2003069591, US2003069580, US2002198451, US2002164905, EP1859728,

Abstract:

Source: US5707370A A preferred embodiment of the invention provides an accessory device which is removably applicable to a double ball-jointed fixator, to assume the relation of a cage that effectively surrounds both ball-joints of the fixator. One longitudinal end of the accessory cage quickly mounts to one bone-screw mounting member of the fixator and establishes first intersecting orthogonally related articulation axes of a first half of a dual Cardan joint, wherein such first intersection is coincident with the ball center of a first ball-joint of the fixator; the other longitudinal

end of the accessory cage quickly mounts to the other bone-screw mounting member of the fixator and establishes second intersecting orthogonally related articulation axes of a second half of the dual Cardan joint, with such second intersection coincident with the ball center of the second ball-joint of the fixator. A bridle or bridge connector having spaced end connections to corresponding elements of the respective halves of the dual Cardan joint establishes a fixed spacing between the orthogonal-axis intersection points of the respective halves of the dual Cardan joint, and this fixed spacing is identical to the fixed spacing between ball centers of the double ball-jointed fixator. The releasable mounting of each half of the cage structure to its bone-screw mounting member of the fixator is a releasably clampable rotatable mount, wherein rotatability is about a longitudinal axis of the bone-screw mount of the fixator, and wherein the same longitudinal axis is aligned with the associated ball center. Individual clamp action is thus provided for independent adjustment of accessory-cage components about each of three articulation axes, for each of the halves of the dual Cardan joint.



56) Family number: 34394215 (US2007088357A)

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Title: ADJUSTABLE BONE ANCHOR ASSEMBLY**Priority:** US20050253046 20051018 US20110211993 20110817 WO2006US38312 20061003**Family:**

Publication number	Publication date	Application number	Application date
AU2006303883 AA	20070426	AU20060303883	20061003
CA2625230 AA	20080408	CA20062625230	20061003
EP1945118 A2	20080723	EP20060815945	20061003
IN01280KN2008 A	20081226	IN2008KN01280	20080328
JP2009511227 T2	20090319	JP20080536596T	20061003
KR20080072848 A	20080807	KR20087011763	20080516
US2007088357 AA	20070419	US20050253046	20051018
US2011301650 AA	20111208	US20110211993	20110817
US8075599 BB	20111213	US20050253046	20051018
US9155566 BB	20151013	US20110211993	20110817
WO07047074 A2	20070426	WO2006US38312	20061003
WO07047074 A3	20071025	WO2006US38312	20061003

Probable Assignee: WARSAW ORTHOPEDIC INC**Assignee(s):^(std):** BALLARD RODNEY R ; DIMAR JOHN R ; DIMAR JOHN R II ; JOHNSON CHRIS E ; JOHNSON CHRISTOPHER E ; LINDENMAN CHRISTINE H ; SDGI HOLDINGS INC ; WARSAW ORTHOPEDIC INC ; LINDENMAN HEATHER**Inventor(s):^(std):** BALLARD RODNEY R ; JOHNSON CHRIS E ; JOHNSON CHRISTOPHER E ; LINDENMAN CHRISTINE H ; LINDENMAN HEATHER ; DIMAR JOHN R ; DIMAR JOHN R II**Inventor(s):** JOHN R DIMAR II ; RODNEY R BALLARD ; CHRISTINE H LINDENMAN ; CHRISTOPHER E JOHNSON ; DIMAR II JOHN R**Agent(s):** FB RICE; SMART AND BIGGAR; HUGHES ANDREA MICHELLE; ONO SHINJIRO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP; SORELL LENNA AND SCHMIDT LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [A61B17/00](#) [A61B17/58](#) [A61B17/70](#) [A61B17/86](#) [A61B17/88](#) [A61F2/30](#) [A61F2/44](#) (Advanced/Invention); [A61B17/70](#) [A61B19/00](#) (Advanced/Non-invention); [A61B17/58](#) [A61B17/70](#) [A61F2/30](#) [A61F2/44](#) (Core/Invention)**International class**
(IPC 1-7): [A61B17/70](#)**CPC:** [A61B17/7032](#) [A61B17/7037](#) [A61B2090/037](#)**European class:** [A61B17/70B2](#) [A61B17/70B5B](#) [K61B17/70B2](#) [K61B19/30H](#)**US class:** [1/1](#) [606/246](#) [606/264](#) [606/266](#) [606/269](#) [606/270](#) [606/305](#) [606/305P](#) [606/61](#) [606/73](#) [606/86.00AP](#) [606/86A](#)[Classification Explorer](#)**Cited documents:** WO09106733 A2, WO06084443 A1, WO03096916 A1, WO03096915 A1, WO03096914 A1, WO0115612 A1, US7794477 BB, US7559943 BB, US6837889 BB, US6800079 BB, US6800078 BB, US6770075 BB, US6740086 BB, US6736820 BB, US6692500 BB, US6660004 BB, US6537276 BB, US6296642 BA, US6280442 BA, US6080079 A, US6030388 A, US5989254 A, US5885286 A, US5716356 A, US5672176 A, US5562661

A, US5536268 A, US5520689 A, US5499983 A, US5190543 A, US4946458 A, US2008306546 AA, US2008195159 AA, US2007191835 AA, US2007090238 AA, US2007043355 AA, US2006200131 AA, US2006161152 AA, US2006155277 AA, US2006084978 AA, US2005277925 AA, US2005261687 AA, US2005187548 AA, US2005159750 AA, US2005154391 AA, US2004236330 AA, US2004220575 AA, US2004193160 AA, US2004172022 AA, US2003199873 AA, US2003004513 AA, US2003004512 AA, US2002026193 AA, JP2004508130 T2, JP2003508109 T2, EP0626828 A1, DE4436262 C1, DE4243951 A1, DE4107480 A1, DE19829699 A1, DE19605640 A1,

Forward Citations: WO16065033, WO14111555, WO13066797, WO12075827, WO11053795, WO10065729, WO10065729, WO10062736, USD589147, US9649134, US9636151, US9629669, US9622788, US9597119, US9572599, US9566092, US9554833, US9532815, US9522021, US9504496, US9480517, US9451993, US9451989, US9439683, US9439681, US9414863, US9408716, US9393047, US9387013, US9326796, US9320546, US9320545, US9307972, US9282998, US9271759, US9216041, US9216039, US9211150, US9211143, US9198692, US9168069, US9155568, US9144444, US9101426, US9060818, US9060813, US9055978, US9050146, US9050139, US8998965, US8998960, US8998959, US8986356, US8979904, US8936623, US8926672, US8926670, US8911479, US8911478, US8894657, US8876869, US8870928, US8852239, US8845649, US8840652, US8834527, US8814913, US8814911, US8747407, US8696711, US8663298, US8663291, US8647370, US8636769, US8636655, US8628558, US8613760, US8591560, US8591515, US8568451, US8556938, US8535320, US8518085, US8475498, US8444681, US8435269, US8430917, US8430916, US8419778, US8409255, US8398682, US8394133, US8394127, US8377102, US8377067, US8372122, US8366745, US8357184, US8353932, US8337536, US8333792, US8317836, US8308782, US8298275, US8292892, US8273089, US8267979, US8257398, US8257397, US8257396, US8216281, US8211155, US8162948, US8152810, US8137386, US8114134, US8105368, US8100915, US8097024, US8092501, US8083775, US8083772, US8066739, US8057519, US8057517, US8057515, US8048125, US8048115, US8021396, US8016861, US8012181, US8007518, US8002806, US7967850, US7955363, US7905907, US7875065, US7842073, US7833252, US7722652, US2017035462, US2014350604, US2014343617, US2014257411, US2013204308, US2013110177, US2013060294, US2013023941, US2012109208, US2011251650, US2011178559, US2011178558, US2011160779, US2011130793, US2011112585, US2011106180, US2011106175, US2011106174, US2011106173, US2010198272, US2010160978, US2010145394, US2010087873, US2010036432, US2009222045, US2009222044, US2009182384, US2008147121, US2008082103, US2008015584, US2007090238, US2006149241, KR20100112572, KR101584178, JP2013544134, JP2013123645, JP2011518030, EP2964115, EP2493404, EP2229112, EP1981420, CN105188577, CN102525635, CN102525635, CN102068303, AU2009205572,

Abstract:

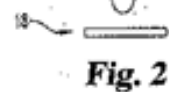
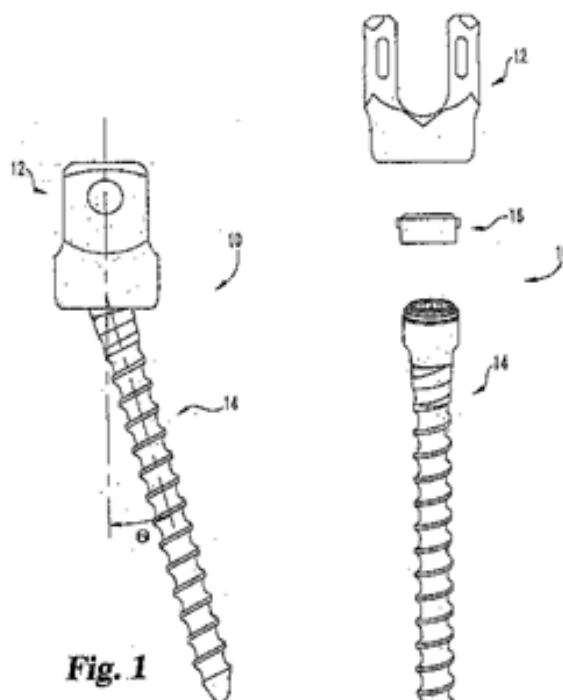
Source: US2007088357A A medical implant device has in one embodiment a receiver member for receiving an elongated member, a crown member, an anchor member and a retaining member. An embodiment of the receiver member has an axial opening, a transverse channel, a chamber including at least one substantially flat wall, and a groove. An embodiment of the crown member has at least one substantially flat side. An embodiment of the anchor member has a head with at least one substantially flat surface that may be parallel to the anchor member's longitudinal axis, and an anchoring portion. An embodiment of the retaining member is a substantially flat clip. The crown member and anchor member are inserted into the chamber, and the retaining member is inserted into the groove beneath them. The anchor member may be pivoted substantially in one plane with respect to the receiver member until locked.

PatBase - W007047074_A2

W/O 2007047074

3/13

PC/E/L/2006/006312



0) ZA200201467A – REPOSITIONING DEVICE FOR BONE FRAGMENTS.

57) Family number: 29000235 (ZA200201467A)

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Title: REPOSITIONING DEVICE FOR BONE FRAGMENTS.

Priority: DE19992016202U 19990915 DE20005008439 20000321 WO2000CH00162 20000321

Family:	Publication number	Publication date	Application number	Application date
	AT280539 E	20041115	AT20000908899T	20000321
	AU200031415 A5	20010417	AU20000031415D	20000321
	AU759901 B2	20030501	AU20000031415	20000321
	CA2423110 AA	20021007	CA20002423110	20000321
	CN1217626 C	20050907	CN20008012891	20000321
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	DE50008439 D1	20041202	DE20005008439	20000321
	EP1211991 A1	20020612	EP20000908899	20000321
	EP1211991 B1	20041027	EP20000908899	20000321
	ES2226791 T3	20050401	ES20000908899T	20000321
	JP2003509105 T2	20030311	JP20010522905T	20000321
	PT1211991 I	20050331	PT20000908899T	20000321
	WO0119265 A1	20010322	WO2000CH00162	20000321
	ZA200201467 A	20020902	ZA20020001467	20020221

Probable Assignee: SYNTHES GMBH

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Assignee(s): SYNTHES AKTIENGESELLSCHAFT ; SYNTHES GMBH ; SYNTHES U S A ; SYNTHES AG CHUR CHUR

Inventor(s):^(std): HEHLI MARKUS ; MARKUS HEHLI ; MESSMER PETER ; PETER MESSMER ; PIETRO REGAZZONI ; REGAZZONI PIETRO ; RONALD SCHUYN ; RONALD SCHWYN ; RUPP STEPHAN ; RUPP STEPHAN DR ; SCHUYN RONALD ; SCHWYN RONALD ; STEPHAN RUPP

Inventor(s): DR STEPHAN RUPP

Agent(s): PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP

Designated states: AT AU BE CA CH CN CY DE DK ES FI FR GB GR IE IT JP LI LU MC NL PT SE US ZA

International class
^(IPC 8-9): [A61B17/00](#) [A61B17/17](#) [A61B17/58](#) [A61B17/88](#) (Advanced/Invention);
[A61B17/00](#) [A61B17/17](#) [A61B17/58](#) (Advanced/Non-invention);
[A61B17/58](#) [A61B17/88](#) (Core/Invention);
[A61B17/00](#) [A61B17/16](#) (Core/Non-invention)

International class
^(IPC 1-7): [A61B17/58](#) [A61B17/60](#)

CPC: [A61B17/1739](#) [A61B17/8866](#) [A61B2017/0046](#)

European class: [A61B17/88H](#) [K61B17/00H](#) [K61B17/17S](#)

[Classification Explorer](#)

Cited documents: US5601550 A, EP0624351 A1, DE8536668 U, DE8526619 U, DE3151144 A1, DE29610638 U1, DE2901962 A1, DE19618354 A1, CH680561, CH537735 A,

Forward Citations: WO12161977, WO09030794, WO07041880, ES2327374, EP2760353, DE202005015975, CN103271758, CN103271758,

Abstract:

The invention relates to a device for reducing bone fragments, especially at the pelvic bone or the tubular bone. The inventive device comprises A) a first clamping element (6) comprising a bow (2) with a front end piece (3) for placing against a bone fragment and a rod (24) that joins the bow (2) at the outside and at the rear end piece (4) thereof; B) a second longitudinal clamping element (7) comprising a longitudinal axis (10) as well as a front end (8) for placing against an additional bone fragment; C) a connecting element (14) for connecting the second clamping element (7) to the first clamping element (6) in such a way that the second clamping element (7) can be displaced in parallel in relation to the longitudinal axis (10) and relative to the first clamping element (6); a handle (5) and D) clamping means (35) by means of which the second clamping element (7) can be detachably fixed in relation to the first clamping element (6), whereby E) the front end piece (3) of the bow (2) and the second clamping element (7) are provided with bores (12; 13) parallel in relation to the longitudinal axis (10), whereby said bores can receive a guide wire and a Kirschner wire (23) respectively or a trocar.

PatBase - ZA200201467_R

PATENTVEREIN (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(39) Weitergeleitetes für geistiges Eigentum
Internationale Büro

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22. März 2002 (22.03.2002)

(43) Internationaler Veröffentlichungsnummer
PCT/CH00/00402

(44) Internationaler Anmeldedatum
21. März 2000 (21.03.2000)

(45) Internationale Patentklassifikation
A61B 17/58

(46) Internationale Klassifikation
PCT/CH00/00402

(47) Internationale Anmeldedatum
21. März 2000 (21.03.2000)

(48) Erfindungsgegenstand
Deutsch

(49) Veröffentlichungsgegenstand
Deutsch

(50) Angewandte Vorrichtung
279 14 325.8 15. September 1999 (15.09.1999)

(51) Anmelder
LUSTIG, Werner, Dr. Edward, AG, Knochentransport, CH-8008 Zürich (CH)

(52) Anmelder
LUSTIG, Werner, Dr. Edward, AG, Knochentransport, CH-8008 Zürich (CH)

(53) Anmelder
LUSTIG, Werner, Dr. Edward, AG, Knochentransport, CH-8008 Zürich (CH)

(54) Titel
APPARATUS DEVICE FOR BONE FRAGMENTS

(55) Beschreibung
APPARATUS DEVICE FOR BONE FRAGMENTS

(56) Zeichnung
APPARATUS DEVICE FOR BONE FRAGMENTS

(57) Abstract
The invention relates to a device for reducing bone fragments, especially at the pelvic bone or the tubular bone. The inventive device comprises A) a first clamping element (6) comprising a bow (2) with a front end piece (3) for placing against a bone fragment and a rod (24) that joins the bow (2) at the outside and at the rear end piece (4) thereof; B) a second longitudinal clamping element (7) comprising a longitudinal axis (10) as well as a front end (8) for placing against an additional bone fragment; C) a connecting element (14) for connecting the second clamping element (7) to the first clamping element (6) in such a way that the second clamping element (7) can be displaced in parallel in relation to the longitudinal axis (10) and relative to the first clamping element (6); a handle (5) and D) clamping means (35) by means of which the second clamping element (7) can be detachably fixed in relation to the first clamping element (6), whereby E) the front end piece (3) of the bow (2) and the second clamping element (7) are provided with bores (12; 13) parallel in relation to the longitudinal axis (10), whereby said bores can receive a guide wire and a Kirschner wire (23) respectively or a trocar.

(58) Zeichnung
APPARATUS DEVICE FOR BONE FRAGMENTS

(59) Abstract
The invention relates to a device for reducing bone fragments, especially at the pelvic bone or the tubular bone. The inventive device comprises A) a first clamping element (6) comprising a bow (2) with a front end piece (3) for placing against a bone fragment and a rod (24) that joins the bow (2) at the outside and at the rear end piece (4) thereof; B) a second longitudinal clamping element (7) comprising a longitudinal axis (10) as well as a front end (8) for placing against an additional bone fragment; C) a connecting element (14) for connecting the second clamping element (7) to the first clamping element (6) in such a way that the second clamping element (7) can be displaced in parallel in relation to the longitudinal axis (10) and relative to the first clamping element (6); a handle (5) and D) clamping means (35) by means of which the second clamping element (7) can be detachably fixed in relation to the first clamping element (6), whereby E) the front end piece (3) of the bow (2) and the second clamping element (7) are provided with bores (12; 13) parallel in relation to the longitudinal axis (10), whereby said bores can receive a guide wire and a Kirschner wire (23) respectively or a trocar.

WO 01/19265 A1

58) Family number: 28532106 (US2004267261A)

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Title: ORTHOPEDIC IMPLANT CONSISTING OF A SUPPORT STRUCTURE PROVIDED WITH AT LEAST AN ORIFICE FOR PASSING THROUGH A FIXING SCREW ASSOCIATED WITH A NUT

Priority: FR20010015116 20011122 WO2002FR04020 20021122

Family:	Publication number	Publication date	Application number	Application date
	AT293926 E	20050515	AT20020801074T	20021122
	AU2002364793 AA	20030610	AU20020364793	20021122
	CA2467887 AA	20040517	CA20022467887	20021122
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	WO03043513 A1	20030530	WO2002FR04020	20021122
	WO03043513 C1	20031016	WO2002FR04020	20021122

Probable Assignee: BIO QUEST

Assignee(s):^(std): D L P SARL ; DEROUET GUILLAUME ; DLP ; DLP ATLANPOLE ; D L P ; D L P ATLANPOLE

Assignee(s): D L P SAINT HERBLAIN ; BIO QUEST

Inventor(s):^(std): DEROUET GUILLAUME ; GUILLAUME DEROUET

Agent(s): GOWLING LAFLEUR HENDERSON LLP; YOUNG AND THOMPSON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [A61B17/58](#) [A61B17/80](#) (Advanced/Invention);
[A61B17/86](#) (Advanced/Non-invention);
[A61B17/58](#) [A61B17/68](#) (Core/Invention)

International class
(IPC 1-7): [A61B17/56](#) [A61B17/58](#) [A61B17/80](#) [A61F2/30](#)

CPC: [A61B17/8047](#) [A61B17/8605](#) [A61B17/8665](#) [A61B17/8695](#)

European class: [A61B17/80D6](#) [K61B17/86A](#) [K61B17/86N](#) [K61B17/86W](#)

US class: [606/287](#) [606/290](#) [606/308](#) [606/60](#) [606/69](#) [606/70](#)

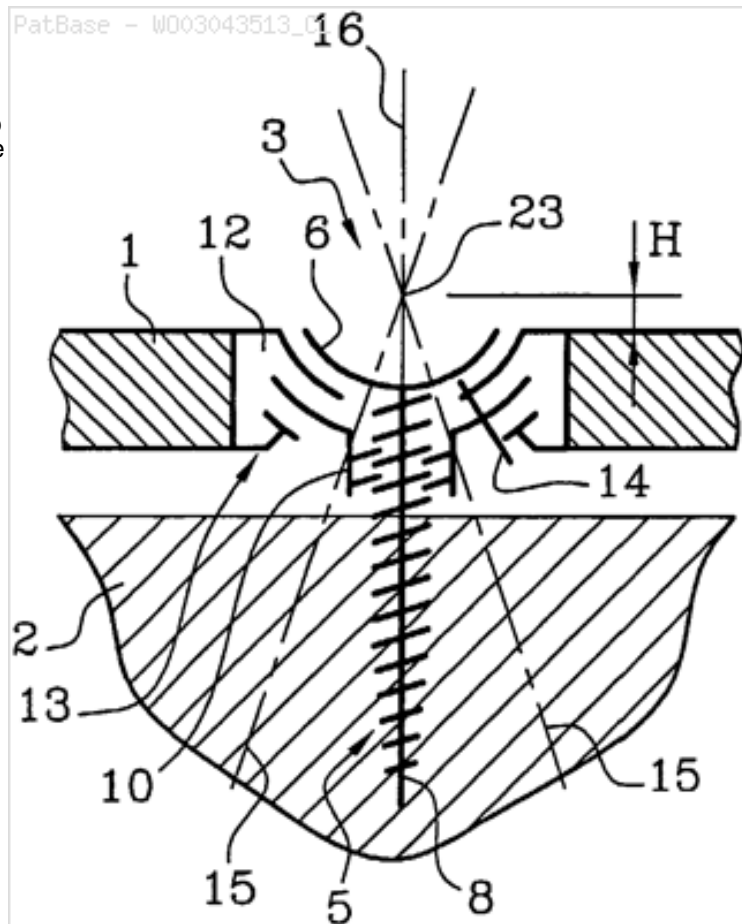
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Forward Citations: WO12012029, WO08145902, WO08145902, WO08128663, USD536453, US9655665, US9629673, US9603641, US9510880, US9451992, US9414871, US9381046, US9308033, US9254153, US9101423, US9005206, US8734494, US8728129, US8623019, US8585743, US8512339, US8486116, US8398636, US8388666, US8361126, US8172885, US8114140, US7931681, US7905909, US7867260, US7794482, US7780664, US7765974, US2013304132, US2012177462, US2011172666, US2011022049, US2010179599, US2010174324, US2009228047, US2009088807, US2007266980, US2007123886, US2007118126, US2006235399, US2006195089, JP2010524536, JP2009545373, JP2008536563, FR2915081, CN103025256, CN103025256,

Abstract:

Source: US2004267261A An orthopedic device having a support structure provided with at least an orifice for a fixing screw associated with a nut; the head of the screw to be pressed on one side of the support, and the nut adapted to be pressed on the other side of the support, in a housing enabling its being integrated at least partly, so as to enable the support structure to be clamped between the screw head and the nut when the screw body has been completely screwed in the receiving bone material. The implantable device includes elements for maintaining the nut in its housing opposite the orifice, and elements for locking the nut in rotation. The contours of the housing and of the nut are dimensioned to provide at least one degree of freedom to the nut in the housing enabling self-centering of the screw and nut.



59) Family number: 10653007 (US5769851A)

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Title: External fixator

Priority: DE19944431525 19940903 DE19951028839 19950805 US19970839278 19970417
US19950519586 19950825

Family:	Publication number	Publication date	Application number	Application date
	DE19528839 A1	19960314	DE19951028839	19950805
	DE59509714 D1	20011122	DE19955009714	19950817
	EP0699419 A2	19960306	EP19950112932	19950817
	EP0699419 A3	19960911	EP19950112932	19950817
	EP0699419 B1	20011017	EP19950112932	19950817
	JP8173448 A2	19960709	JP19950225581	19950901
	US5769851 A	19980623	US19970839278	19970417

Probable Assignee: VEITH WOLFGANG DR

Assignee(s):^(std): VEITH WOLFGANG ; VEITH WOLFGANG DR

Assignee(s): VEITH WOLFGANG DR 69124 HEIDELBERG DE ; BORUFUGANGU FUAITO

Inventor(s):^(std): BORUFUGANGU FUAITO ; VEITH DR ; VEITH WOLFGANG ; VEITH WOLFGANG DR

Inventor(s): VEITH WOLFGANG DR 69124 HEIDELBERG DE

Designated states: CH DE FR GB IT LI NL

International class [A61B17/60 A61F5/01](#) ^(Advanced/Invention)
^{(IPC 8-9):}

International class [A61B17/56 A61B17/58 A61B17/60 A61B17/64 A61F5/01](#)
^{(IPC 1-7):}

CPC: [A61B17/6475 A61B17/66](#)

European class: [A61B17/64M2 A61B17/66](#)

US class: [606/54 606/57](#)

[Classification Explorer](#)

Cited documents: US5342360 A, US4923458 A, US4620533 A, US2250417 A, US2238870 A, FR2665353 A1, FR2457676 A1, EP0424292 A2, EP0227594 A1, DE2745504 A1, DE2718515 A1,

Forward Citations: WO09100459, WO07098631, WO07098631, WO0168011, US9463045, US9393045, US9301782, US8758343, US8657856, US8439914, US8382757, US8382755, US7731738, US7608074, US7588571, US7575575, US7507240, US7291148, US7261713, US6921404, US6605088, US6482206, US6409729, US6235029, US6221072, US6171308, US6171307, US6024745, US2016022315, US2014276816, US2011054535, US2010312243, US2008200952, US2007255280, US2007162028, US2006229605, US2006229604, US2006229603, US2006229602, US2004249375, US2004138659, US2004102787, US2003069580, JP3033903, JP2000014677, ES2138917, EP0913128, EP0858781, DE102006038130,

Source: US5769851A An external fixator or splint with a carrier which carries at least two fastening devices arranged to receive bone screws. The fastening devices are adjustable relative to the carrier and can be locked in various positions by clamping parts. The splint is made up of two ball-and-socket joints which are supported on the carrier so as to be axially adjustable and of two fastening elements that secure the ball-and-sockets joints.

60) Family number: 28836682 (US6024745A)

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Title: External minisplint device**Priority:** IT1997VR00042 19970521

Family:	Publication number	Publication date	Application number	Application date
	AR009177 AA	20000308	AR1998P102372	19980521
	CN1202353 A	19981223	CN19981008856	19980520
	CN1216577 C	20050831	CN19981008856	19980520
	EP0880942 A2	19981202	EP19980109079	19980519
	EP0880942 A3	20000510	EP19980109079	19980519
	IN196955 B	00000000	IN1998DE01271	19980514
	IT1298413 B1	20000105	IT1997VR00042	19970521
	ITVR970042 A0	19970521	IT1997VR00042	19970521
	ITVR970042 A1	19981123	IT1997VR00042	19970521
	JP11056872 A2	19990302	JP19980134117	19980518
	US6024745 A	20000215	US19980082225	19980520
	ZA9804252 A	19981126	ZA19980004252	19980520

Probable Assignee: ORTHOFIX SRL**Assignee(s):^(std):** ORTHOFIX SRL**Assignee(s):** ORTHOFIX SRL VIA DELLE NAZIONI ; ORTHOFIX INT ; ORTHOFIX INT BV ; ORTHOFIX INTERNATIONAL B V ; ORTHOFIX S R L**Inventor(s):^(std):** DANIELE VENTURINI ; GIOVANNI FACCIOLI ; VENTURINI DANIELE ; VENTURINE DANIELE ; FACCIOLI GIOVANNI**Inventor(s):** DANIEL VENTURINI**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

International class [A61B17/60](#) [A61B17/66](#) (Advanced/Invention) ;
 (IPC 8-9) [A61B17/64](#) (Advanced/Non-invention) ;
[A61B17/60](#) (Core/Invention)

International class [A61B17/56](#) [A61B17/60](#) [A61B17/66](#) [A61F](#) [A61F5/00](#)
 (IPC 1-7) :

CPC: [A61B17/6416](#) [A61B17/66](#)**European class:** [A61B17/66](#) [K61B17/64C](#)**US class:** [606/54](#) [606/57](#) [606/59](#)[Classification Explorer](#)

Cited documents: WO9714367 A1, WO9423662 A2, WO9111151 A1, WO9111150 A1, WO9007305 A1, WO8909031 A1, USRE31809, US5769851 A, US5728096 A, US5709681 A, US5601551 A, US5591164 A, US5454810 A, US5342360 A, US5320622 A, US5304177 A, US5292322 A, US5207676 A, US5160335 A, US5026372 A, US5019077 A, US4988349 A, US4643177 A, US4621627 A, US4554915 A, US4502473 A, US4312336 A, US31809 A, US2391537 A, NL8802463 A, GB2154144 A1, FR2557933 A1, EP0011258 B1, DE4426149 A1, DE3722595 A1,

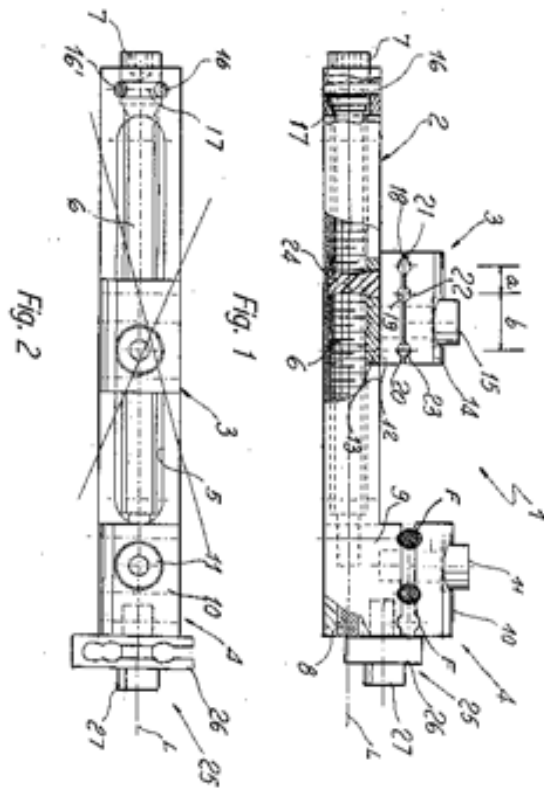
Forward Citations: USD720853, USD704840, USD683461, USD682426, USD663030, US9492199, US9402651, US9259250, US9259242, US9155574, US9084632, US9060820, US9050135, US8961516, US8945129, US8827998, US8758343, US8685023, US8585702, US8444643, US8439917, US8439914, US8382757, US8382755, US8287541, US8287539, US8075597, US8057473, US7942875, US7914533, US7909825, US7887537, US7846162, US7758582, US7731738, US7704257, US7699848, US7645279, US7608074, US7588571, US7575575, US7507240, US7261713, US7048735, US7041103, US7004943, US6565564, US6500177, US6461358, US6176860, US2011144645, US2010312243, US2009306661, US2009254187, US2009118733, US2008161805, US2008149115, US2008140078,

US2008132896, US2007255280, US2007233105, US2007162028, US2007118146, US2007072459, US2006264952, US2006264951, US2006264950, US2006229605, US2006229604, US2006229603, US2006229602, US2005245939, US2005234448, US2005119656, US2004138659, US2003191468, US2003191467, US2003149430, US2003149429, US2003069580, JP6103773, JP4920861, JP2014512855, JP2012135631, JP2008506498, JP2005523765, EP1844721, EP1136041,

Abstract:

Source: US6024745A An external minisplint device comprises an elongated body (2; 2'; 2"; 2'''; 2iv; 101, 102) supporting at least one pair of clamps (3, 4; 3'; 4'; 3"; 4"; 3'''; 4'''; 3iv, 4iv; 103, 104) each of which is capable of securing at least one pair of transverse bone bolts (F, F', F'', F''', Fiv, F1). A longitudinal guide (5; 5'; 5"; 5'''; 5iv; 105, 106) associated with the elongated body guides the longitudinal translational movement of at least one of the clamps (4; 4'; 4"; 4'''; 4iv; 103, 104). The minisplint device further comprises at least one longitudinal adjustment screw (6; 6'; 6"; 6'''; 6iv; 107, 108) which can rotate within the elongated body and which engages a corresponding threaded hole (13; 13'; 13"; 13'''; 13iv; 135, 136) formed in the clamp capable of translational motion for selectively positioning it along the longitudinal guide. The screw has a head (7; 7'; 7"; 7'''; 7iv; 111, 112) which partly projects from the end of the elongated body. The adjustment screw is axially immobilized when it is rotated. The axial immobilizer comprises at least one smooth key, and preferably a pair of smooth gauged keys (16, 16.1; 16'; 16.1'; 16"; 16.1"; 16''', 16.1'''; 16iv, 16.1iv; 109, 109.1, 110, 110.1) insert in the elongated body in tangential contact with the base of a circular groove (17; 17'; 17"; 17'''; 17iv; 124, 125) formed in the head (7; 7'; 7"; 7'''; 7iv; 111, 112) of the adjustment screw (6; 6'; 6"; 6'''; 6iv; 107, 108).

PatBase - ZA9804252_A



61) Family number: 17946456 (US5709681A)

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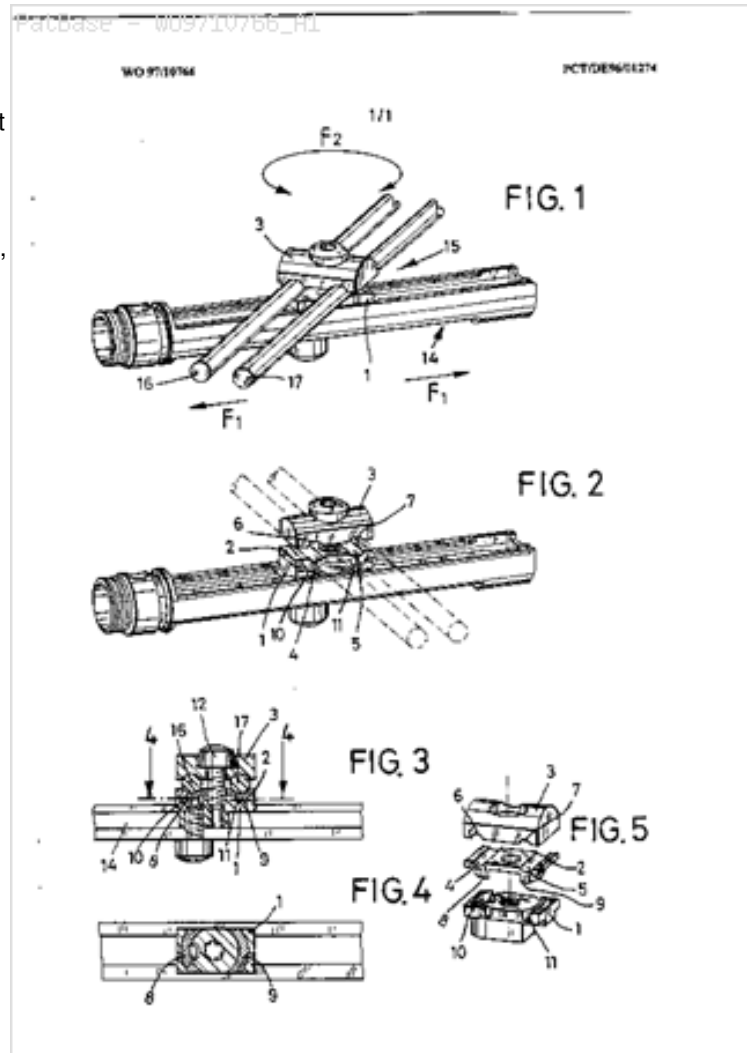
Title: Device for osteosynthesis**Priority:** CA19962178791 19960611 DE19952015007U 19950919 US19960614782 19960313
WO1996DE01274 19960710 DE19961080799 19960710

Family:	Publication number	Publication date	Application number	Application date
	<u>AR000905 A1</u>	19970806	AR19960103492	19960708
	<u>AU199664127 A1</u>	19970409	AU19960064127	19960710
	<u>CA2178791 AA</u>	19970320	CA19962178791	19960611
	<u>DE19680799 C1</u>	20010816	DE19961080799	19960710
	<u>DE19680799 D2</u>	19980122	DE19961080799	19960710
	<u>DE29515007 U1</u>	19951207	DE19952015007U	19950919
	<u>MX9801534 A1</u>	19980531	MX19980001534	19960710
	<u>US5709681 A</u>	19980120	US19960614742	19960313
	<u>WO9710766 A1</u>	19970327	WO1996DE01274	19960710

Probable Assignee: PENNIG DIETMAR DR MED 50935 KOELN DE**Assignee(s):^(std):** DIETMAR PENNIG ; PENNIG DIETMAR ; PENNINGTON LEWIS**Assignee(s):** PENNIG DIETMAR 50935 KOELN DE ; PENNIG DIETMAR DR MED 50935 KOELN DE**Inventor(s):^(std):** PENNIG DIETMAR ; DIETMAR PENNIG**Inventor(s):** PENNIG DIETMAR 50935 KOELN DE**Agent(s):** SMART AND BIGGAR**Designated states:** AL AM AT AU AZ BB BE BG BR BY CA CH CN CZ DE DK EE ES FI FR GB GE GR HU
IE IL IS IT JP KE KG KP KR KZ LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO
NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN**International class**
(IPC 8-9): A61B17/58 A61B17/60 A61B17/68 (Advanced/Invention);
A61B17/60 A61B17/68 (Core/Invention)**International class**
(IPC 1-7): A61B17/58 A61B17/60 A61B17/68**CPC:** A61B17/60**European class:** A61B17/60**US class:** 606/54 606/57 606/58 606/59[Classification Explorer](#)**Cited documents:** USRE34985 E, US5160335 A, FR2559380 A1, EP0420430 A1, EP0298100 B1,
DE3842255 A1, DE3527342 A1,**Forward Citations:** WO10123506, WO10123506, WO09042836, US9622781, US9592080, US9545266,
US9532805, US9510859, US9277937, US9220533, US9186179, US9155561,
US9149296, US9138260, US9101398, US9084631, US9084630, US9044271,
US8951253, US8945128, US8888777, US8840611, US8834467, US8758343,
US8734446, US8728078, US8523858, US8480715, US8382757, US8361073,
US8333766, US8241285, US8147519, US8057474, US8025677, US7938829,
US7766947, US7731738, US7699848, US7637952, US7588571, US7575575,
US7507240, US7261713, US7041103, US6964664, US6702814, US6682533,
US6616664, US6613050, US6613049, US6595992, US6576016, US6565564,
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US6030389, US6024745, US5989250, US5964769, US5941877, US5935133,
US5928243, US2016022315, US2013131676, US2011172664, US2011172663,
US2011098707, US2011098706, US2010234845, US2010234844, US2009198234,
US2009088751, US2008294260, US2007162028, US2006287652, US2006229605,
US2006229604, US2006229603, US2006229602, US2006111210, US2005033298,
US2004181221, US2003191468, US2003191467, US2003069580, US2002058939,

Abstract:

Source: US5709681A A clamping assembly for bone-screw or bone-pin adjustment (a) longitudinally along the guideway of an external fixator, and (b) angularly about a pivot axis at a selected longitudinal location. The clamping assembly comprises a slide block adapted for releasably locked longitudinal positioning along the guideway, an intermediate plate element, and a clamp block, in sandwiched relation, with a single central bolt to secure (i) a selected angular setting of bone-screw engagement grooves coacting between the clamp block and the upper surface of the intermediate plate, and (ii) coacting arcuate tongue-and-groove formations wherein the releasably lockable coaction is between the slide block and the lower surface of the intermediate plate, to secure a given clamped angular orientation of bone-screw orientation with respect to the longitudinal direction of the guideway.



Title: BONE FIXATION DEVICE
Priority: US20140558290 20141202
Family:

Publication number	Publication date	Application number	Application date
<u>US2016151099 AA</u>	20160602	US20140558290	20141202

Probable Assignee: APMED LLC
Assignee(s):^(std): APMED LLC
Inventor(s):^(std): BRYANT CAREY ; HORNEFF ROBERT ; OLSEN RON A

International class A61B17/80 (Advanced/Invention)
 (IPC 8-9):

CPC: A61B17/60

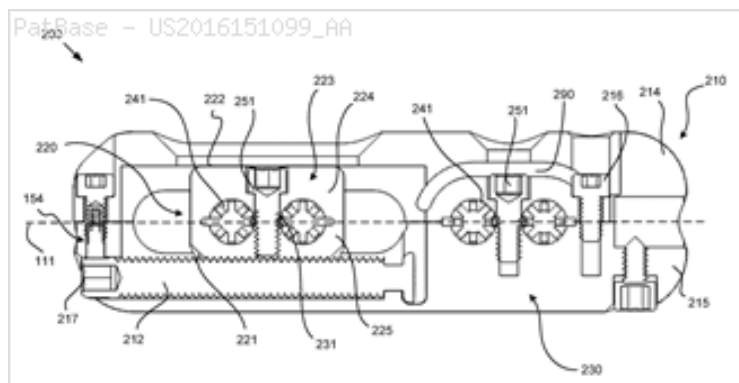
US class: 606/286 606/289

[Classification Explorer](#)

Forward Citations: US2016022315,

Abstract:

Source: US2016151099A A bone fixation device that includes a rail body housing that has a top portion, a bottom portion, a first end portion, a second end portion, and a rail channel extending along a longitudinal axis of the rail body housing. The rail channel is defined between the top portion, the bottom portion, the first end portion, and the second end portion. The movable clamp assembly is movably coupled to the rail body housing within the rail channel and the position of the movable clamp assembly within the rail channel is adjustable. The movable clamp assembly also includes at least one semi-spherical collet defining a central channel configured to receive a bone fastener and orient the bone fastener in any of a plurality of orientations with respect to the rail body housing.



63) Family number: 60054835 (WO15117207A1)

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Title: TIGHTENING JOINTS FOR VERSATILE MODULAR SYSTEMS FOR OSTEOSYNTHESIS**Priority:** WO2014BG00006 20140206

Family:	Publication number	Publication date	Application number	Application date
	WO15117207 A1	20150813	WO2014BG00006	20140206

Probable Assignee: NESTOROV STANISLAV GEORGIEV**Assignee(s):^(std):** NESTOROV STANISLAV GEORGIEV**Inventor(s):^(std):** NESTOROV STANISLAV GEORGIEV

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/64 A61B17/68 A61B17/70 A61B17/86 (Advanced/Invention)
(IPC 8-9).

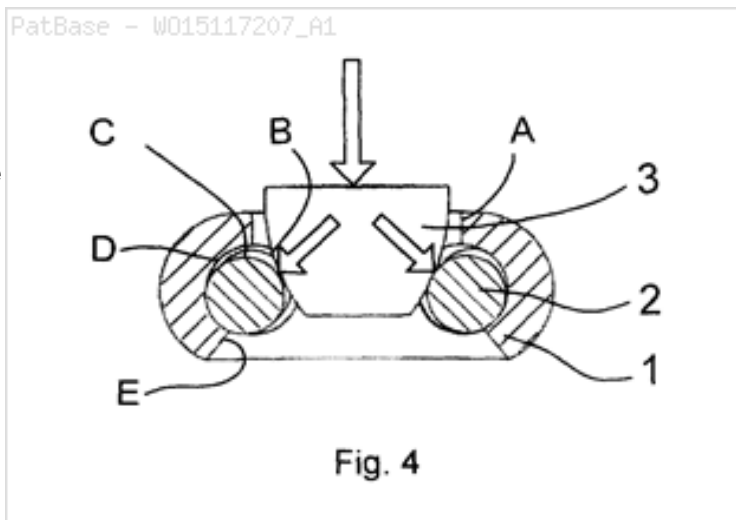
CPC: A61B17/6466 A61B2017/867 A61B17/8004 A61B17/8066 A61B17/8863 A61B2017/681 A61B17/686

[Classification Explorer](#)

Cited documents: US4920959 A, EP2401975 A1, DE3611319 C2, BG66193 B1, BG61553 B1, BG100328 A,

Abstract:

The invention provides improved tightening joints for elements of versatile modular systems for osteosynthesis designed for orthopedics and traumatology as well their application. The tightening joints of the invention are three as the second and third are embodiments of the first joint. In the first tightening joint (Fig. 4) a rotational wedge-shaped body called clamp is moved along the hole in the other body and pressed against a rod inserted in a cross hole, which intersects the first hole. In the second tightening joint, the clamp is formed as a hemispherical nut in which is screwed the threaded shank of the bone screw, previously screwed in a bone fragment (Fig. 6). In the third tightening joint, the clamp is formed as a sphere having slots (Fig. 7). The versatile modular system for internal osteosynthesis includes bone screws, rods and plates which can be mounted on the rods. The versatile modular system for external osteosynthesis includes bone screws (pins), rods, screwholders and connection modules.



64) Family number: 10945232 (US5702457A)

© PatBase

Title: Humeral prosthesis incorporating a sphere**Priority:** FR19940014052 19941118

Family:	Publication number	Publication date	Application number	Application date
	DE69512497 D1	19991104	DE19956012497	19951117
	DE69512497 T2	20000323	DE19956012497T	19951117
	EP0712617 A1	19960522	EP19950420323	19951117
	EP0712617 B1	19990929	EP19950420323	19951117
	FR2727002 A1	19960524	FR19940014052	19941118
	FR2727002 B1	19970103	FR19940014052	19941118
	JP3452435 B2	20030929	JP19950301522	19951120
	JP8206142 A2	19960813	JP19950301522	19951120
	US5702457 A	19971230	US19950557323	19951114

Probable Assignee: TORNIER SAS**Assignee(s):^(std):** TORNIER SA**Assignee(s):** TORNIER SAS ; TORUNIE SA ; TORNIER LES BARATIERESSAINT ISMIER SA ; TORNIER S A ; TORNIER S A SAINT ISMIER**Inventor(s):^(std):** BOILEAU PASCAL ; JIRU BUARUKU ; PASUKARU BOWAROO ; WALCH GILLES**Inventor(s):** PASCAL BOILEAU ; GILLES WALCH**Agent(s):** CABINET LAVOIX LYON**Designated states:** CH DE FR GB LI

International class
 (IPC 8-9): [A61F2/40](#) (Advanced/Invention);
[A61F2/00](#) [A61F2/02](#) [A61F2/30](#) (Advanced/Non-invention);
[A61F2/30](#) (Core/Invention);
[A61F2/00](#) [A61F2/02](#) (Core/Non-invention)

International class
 (IPC 1-7): [A61F2/40](#)

CPC: [A61F2/4014](#) [A61F2002/30153](#) [A61F2002/30242](#) [A61F2002/30329](#) [A61F2002/30332](#)
[A61F2002/30354](#) [A61F2002/30378](#) [A61F2002/30382](#) [A61F2002/30433](#) [A61F2002/30492](#)
[A61F2002/30507](#) [A61F2002/30538](#) [A61F2002/3054](#) [A61F2002/3055](#) [A61F2002/30574](#)
[A61F2002/30594](#) [A61F2002/30604](#) [A61F2002/30772](#) [A61F2002/30774](#) [A61F2002/30787](#)
[A61F2002/30794](#) [A61F2002/30795](#) [A61F2002/30884](#) [A61F2002/30902](#) [A61F2002/4018](#)
[A61F2002/4029](#) [A61F2002/4037](#) [A61F2002/4044](#) [A61F2002/4062](#) [A61F2220/0025](#)
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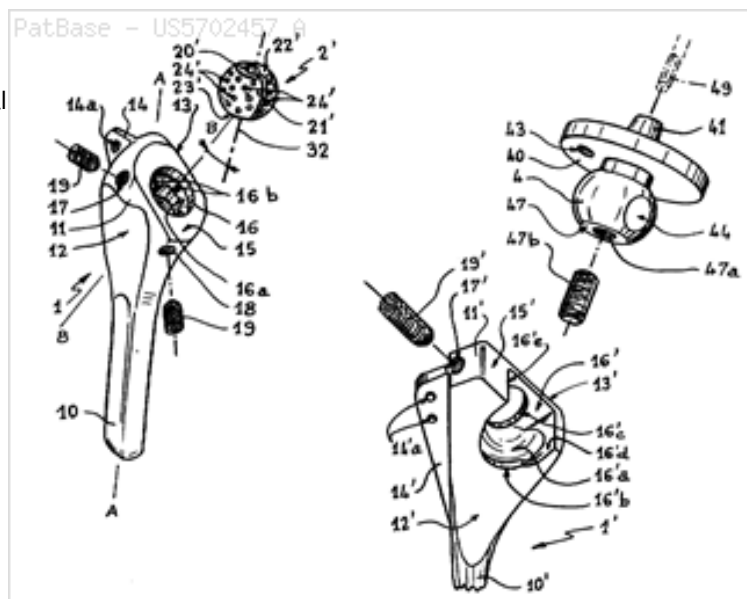
European class: [A61F2/40C](#) [K61F2/00K4R](#) [K61F2/00T](#) [K61F2/00T1C](#) [K61F2/00T1E](#) [K61F2/00T1S](#)
[K61F2/00T1T1](#) [K61F2/00T33P](#) [K61F2/00T33V](#) [K61F2/00T7](#) [K61F2/00Y4](#) [K61F2/02G1](#)
[K61F2/30A2K4R](#) [K61F2/30A2Y4](#) [K61F2/30A3T](#) [K61F2/30A3T1C](#) [K61F2/30A3T1E](#)
[K61F2/30A3T1S](#) [K61F2/30A3T1T1](#) [K61F2/30A3T33P](#) [K61F2/30A3T33V](#) [K61F2/30A3T7](#)
[K61F2/30A3W12](#) [K61F2/30A3W24](#) [K61F2/30A3W2A](#) [K61F2/30A3W2A1](#) [K61F2/30A3W2L](#)
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[K61F2/30L2B](#) [K61F2/30L2S20R](#) [K61F2/30L2S3](#) [K61F2/40C1](#) [K61F2/40C2](#) [K61F2/40C4](#)
[K61F2/40C5](#) [K61F2/40D4](#) [K61F220/00T](#) [K61F220/00T1](#) [K61F220/00T7](#) [K61F230/00K4R](#)
[K61F230/00Y4](#) [K61F250/00G1](#)

US class: [623/19](#) [623/19.13](#)[Classification Explorer](#)**Cited documents:** US5358526 A, US4908036 A, US4846840 A, US4731088 A, US4459708 A, US4179758 A, US4106128 A, US3916451 A, US3889299 A, SU749392 T, SU1417871 T, FR2697996 A1, FR2689756 A1, FR2685633 A1, CH507704 A,**Forward Citations:** WO9934756, WO9846172, WO11044586, WO06136954, WO06107303, WO04030581, WO03096939, WO03075806, WO0239933, WO0239932, WO0239931, WO0122905,

WO0015154, USRE42805, US9629673, US9603712, US9579208, US9545312, US9510951, US9510839, US9480500, US9474619, US9474618, US9474616, US9439784, US9433507, US9421106, US9421105, US9408704, US9408652, US9345580, US9333084, US9326862, US9283083, US9283075, US9248024, US9241803, US9179957, US9132012, US9089435, US8974536, US8968411, US8968327, US8945138, US8940054, US8936647, US8920509, US8906103, US8906102, US8864834, US8858641, US8821503, US8808306, US8795379, US8728129, US8715363, US8715356, US8702804, US8690951, US8679185, US8663334, US8663333, US8647387, US8608805, US8597364, US8585711, US8585706, US8562686, US8545511, US8535382, US8486116, US8460390, US8449620, US8444698, US8425615, US8419798, US8366781, US8303665, US8282685, US8277511, US8277453, US8273093, US8257363, US8236059, US8231682, US8221474, US8192497, US8187282, US8152855, US8114163, US8114091, US8110005, US8105385, US8092466, US8080063, US8075628, US8070820, US8062376, US8052758, US8002839, US8002838, US7993346, US7951204, US7942882, US7927338, US7922728, US7918892, US7887544, US7854768, US7846212, US7819923, US7794464, US7785371, US7785370, US7758650, US7740661, US7678150, US7655008, US7621961, US7615080, US7608075, US7544211, US7537618, US7476227, US7470287, US7468077, US7465319, US7462197, US7452381, US7435263, US7431736, US7396357, US7364694, US7335204, US7309360, US7303585, US7297163, US7264636, US7238207, US7189261, US7175663, US7108719, US7097663, US7033396, US7011686, US6986790, US6986547, US6953479, US6942699, US6887277, US6863690, US6818019, US6749637, US6746487, US6736851, US6719799, US6673114, US6530957, US6494913, US6290725, US6206925, US6197063, US6193758, US6168628, US6168627, US6102953, US5944758, US2016317308, US2016256288, US2016235539, US2015134066, US2014379089, US2014296986, US2014114427, US2012035733, US2011264153, US2011166662, US2011166661, US2011153024, US2011106082, US2011035015, US2011035014, US2010324610, US2010256770, US2010222886, US2010057210, US2009312838, US2009216332, US2009192621, US2009187251, US2009099662, US2009048687, US2009036991, US2008255568, US2008161823, US2008053169, US2007270718, US2007213716, US2007213715, US2007179628, US2007173947, US2007173945, US2007162025, US2007142918, US2007078519, US2007043265, US2006235538, US2006200248, US2006173457, US2006142872, US2006142871, US2006142866, US2006020344, US2006015185, US2005288791, US2005288681, US2005278031, US2005278030, US2005246026, US2005197708, US2005143829, US2005113931, US2005071014, US2005055102, US2004267370, US2004215200, US2004210317, US2004210220, US2004186580, US2004143335, US2004134821, US2004101652, US2004064190, US2004064188, US2004064142, US2004039449, US2004030400, US2004030396, US2004030394, US2003109475, US2003097183, US2003028198, US2003009171, US2003009170, US2002113701, KR101575157, JP2011115647, JP2006187623, JP2006187622, JP2005103258, FR2832922, FR2773469, FR2768330, FR2755847, ES2169647, EP2485685, EP2474290, EP2474289, EP2316386, EP1681038, EP1503705, EP1493409, EP1413265, EP1405614, EP1402856, EP1402854, EP1333781, EP1112049, EP0967941, EP0903128, DE19841611, DE10123517, CN102048599, AU2009243425, AU2008229838, AU2005247033, AU2004202543, AU2003204777,

Abstract:

Source: US5702457A A humeral prosthesis including a shank having a metaphyseal part having a housing therein with a semi-spherical portion in which housing is introduced a sphere to which is secured a bearing surface hemispherical cap adapted to be received within the glenoid cavity of a shoulder. A securing element is provided which extends through the metaphyseal part of the shank for securing the sphere within the housing at a predetermined position with respect to the shank.



65) Family number: 34216337 (US2008288087A)

© PatBase

Title: RELEASIBLE ATTACHMENT SYSTEM FOR A PROSTHETIC LIMB

Priority: EP20060786856 20060712 US20050701189P 20050720 US20060995875 20060712
US20060767440P 20060328 US20080995875 20080723 US20120589319 20120820
WO2006US26837 20060712

Family:	Publication number	Publication date	Application number	Application date
	EP1915107 A2	20080430	EP20060786856	20060712
	EP1915107 A4	20090617	EP20060786856	20060712
	EP2389898 A1	20111130	EP20110178628	20060712
	US2008288087 AA	20081120	US20060995875	20060712
	US2012316657 AA	20121213	US20120589319	20120820
	US8246693 BB	20120821	US20060995875	20060712
	WO07018904 A2	20070215	WO2006US26837	20060712
	WO07018904 A3	20070329	WO2006US26837	20060712

Probable Assignee: OF UTAH RESEARCH FOUNDATION UNIV

Assignee(s):^(std): BACHUS KENT N ; BORCHERT JEREMY D ; UNIV UTAH RES FOUND

Assignee(s): UNIVERSITY OF UTAH RESEARCH FOUNDATION ; UTAH RESEARCH FOUNDATION UNIV ; OF UTAH RESEARCH FOUNDATION UNIV ; OF UTAH UNIV

Inventor(s):^(std): BACHUS KENT N ; BORCHERT JEREMY D

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET...

Agent(s): RUSCHKE HANS EDVARD; KELLY LOWRY AND KELLEY LLP; MICHAEL BEST AND FRIEDRICH LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A61F2/28](#) [A61F2/50](#) [A61F2/60](#) [A61F2/76](#) [A61F2/78](#) (Advanced/Invention);
[A61F2/28](#) [A61F2/50](#) (Core/Invention)

CPC: [A61F2/2814](#) [A61F2/30749](#) [A61F2/30771](#) [A61F2/76](#) [A61F2/78](#) [A61F2002/2825](#)
[A61F2002/5018](#) [A61F2002/6845](#) [A61F2002/7887](#)

European class: [A61F2/28C](#) [A61F2/76](#) [A61F2/78](#) [K61F2/28F](#) [K61F2/30B10](#) [K61F2/30L2](#) [K61F2/50G1](#)
[K61F2/68K](#) [K61F2/78Y](#)

US class: [623/32](#) [623/34](#) [623/34P](#) [623/35](#) [623/36](#) [623/36S](#)

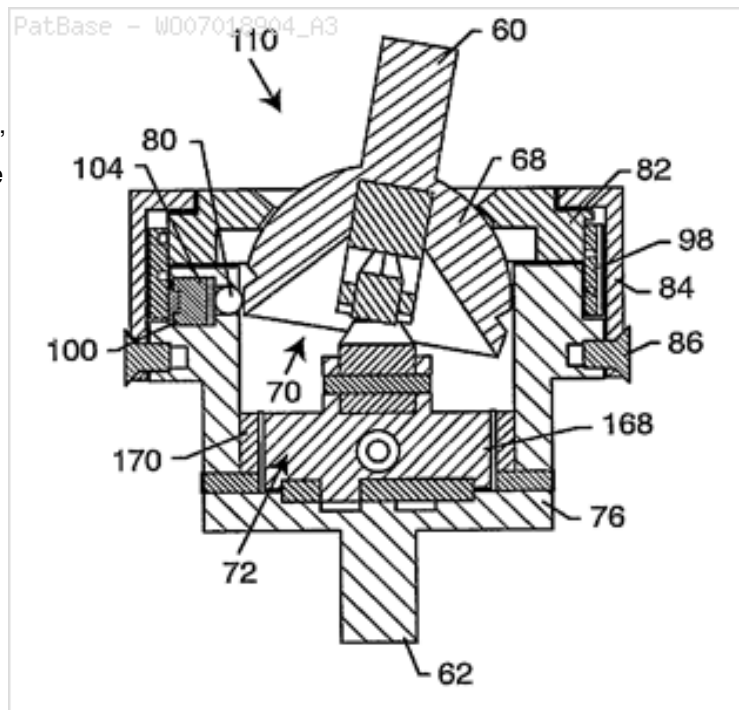
[Classification Explorer](#)

Cited documents: WO07018904 A2, WO05087145 A1, WO0213733 A2, US6797008 BA, US6106559 A, US3987498 A, US2008058957 AA, US2002103544 AA, GB2411841 A1, EP1309297 B1, EP1309297 A2,

Forward Citations: WO13141777, WO11128674, WO11128674, WO11094602, WO09121636, US9408723, US8246693, US8226731, US7256506, US2015257904, US2014081422, US2013092494, US2010152864, NL2010991, GB2492019, GB2479532, GB2468967, GB2468967, FR3027795, EP2827805, AU2013235846,

Abstract:

Source: US2008288087A A releasable attachment system is provided for use with a bone anchored post and related external prosthesis such as a prosthetic limb or the like, wherein the attachment system includes a safety release mechanism designed to release or break away when encountering an excess mechanical load. The bone anchored mounting post is implanted for direct affixation to patient bone, and carries or is connected to a fixator structure protruding through soft skin tissue and the like at the end or stump of an amputated limb for mechanical connection to the external prosthesis. The safety release mechanism accommodates substantially normal patient movement throughout a corresponding range of substantially normal mechanical loads, but releases in the presence of an excess load to prevent undesirable fracture failures.



66) Family number: 31055696 (US2007043366A)

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Title: HOUSING FOR A LOCKING ELEMENT AND LOCKING ELEMENT

Priority: CH20030000592 20030403 CH20030000592 20030404 CH20030001621 20030923
WO2004CH00188 20040326

Family:	Publication number	Publication date	Application number	Application date
	<u>AT450221 E</u>	20091215	AT20040723486T	20040326
	<u>DE502004010444 D1</u>	20100114	DE200450010444T	20040326
	<u>EP1608278 A1</u>	20051228	EP20040723486	20040326
	<u>EP1608278 B1</u>	20091202	EP20040723486	20040326
	<u>ES2336566 T3</u>	20100414	ES20040723486T	20040326
	<u>JP2006521840 T2</u>	20060928	JP20060504161T	20040326
	<u>JP4478144 B2</u>	20100609	JP20060504161T	20040326
	<u>US2007043366 AA</u>	20070222	US20040550383	20040326
	<u>US9155577 BB</u>	20151013	US20040550383	20040326
	<u>WO04086990 A1</u>	20041014	WO2004CH00188	20040326

Probable Assignee: MEDARTIS AG**Assignee(s):**^(std): MEDARTIS AG ; PFEFFERLE JOACHIM ; SCHEUBLE PETER ; ZEUNER HERMANN ; WALTER MATTHIAS ; THIEL DIRK**Assignee(s):** MEDARTIS HOLDING AG ; MEDARTIS PFEFFERLE JOACHIM SCHEUBLE PETER**Inventor(s):**^(std): PFEFFERLE JOACHIM ; SCHEUBLE PETER ; THIEL DIRK ; WALTER MATTHIAS ; ZEUNER HERMANN**Agent(s):** MUELLER CHRISTOPH EMANUEL; WELSH AND KATZ LTD; HAHN LOESER AND PARKS LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/58 A61B17/80 A61B17/84 A61F2/30 (Advanced/Invention);
A61B17/86 F16B35/06 F16B5/02 (Advanced/Non-invention);
A61B17/58 A61B17/68 A61F2/30 (Core/Invention);
F16B35/04 F16B5/02 (Core/Non-invention)

International class
(IPC 1-7): A61B17/80

CPC: A61B17/8061 A61B17/8004 A61B17/8052 A61B17/8085 A61B2017/8655 F16B5/0216 F16B35/06 A61B17/8605**European class:** A61B17/80F A61B17/80H K61B17/80A K61B17/80P K61B17/86L R16B35/06 R16B5/02B**US class:** 1/1 606/279 606/69[Classification Explorer](#)

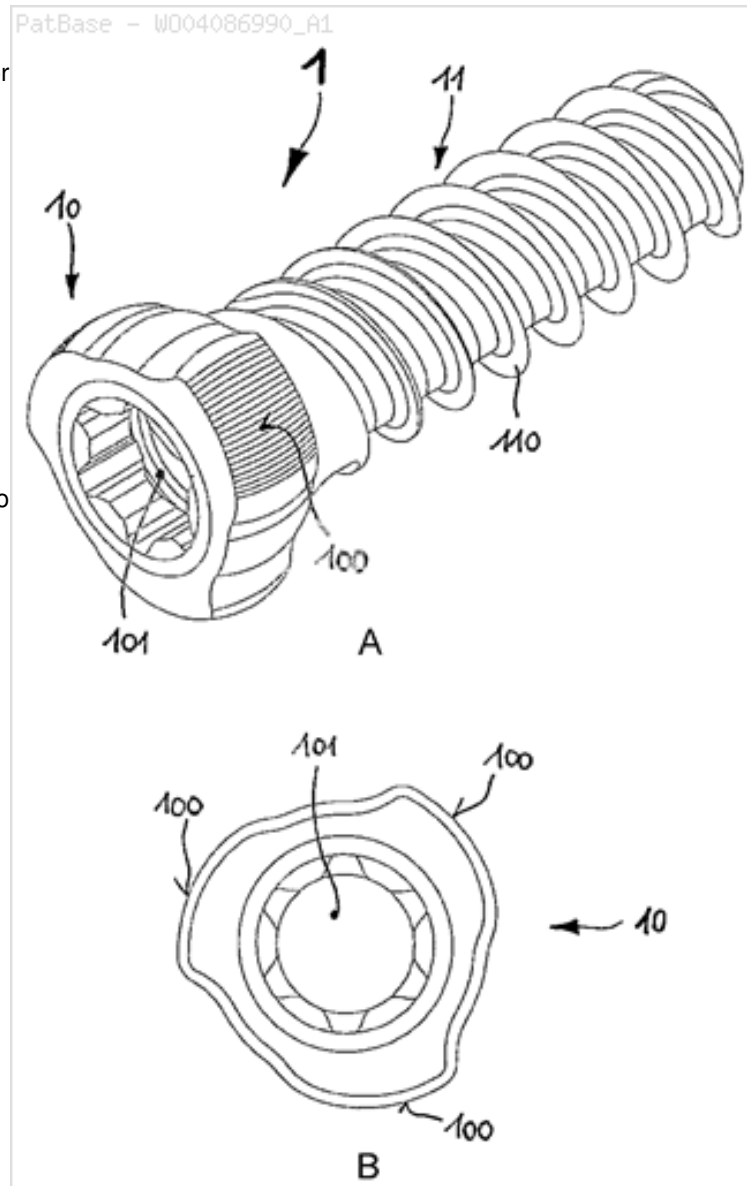
Cited documents: WO9407040 A1, WO0075737 A1, WO0066012 A1, US8753379 BA, US7527639 BB, US7513913 BB, US7229442 BB, US7077844 BB, US6730091 BA, US6572622 BA, US6343531 BB, US6322562 BA, US6206881 BA, US5993450 A, US5807396 A, US5709686 A, US5702394 A, US5674036 A, US5456719 A, US5407295 A, US5393161 A, US5290288 A, US5275601 A, US4941481 A, US4890631 A, US4858601 A, US4621627 A, US4620533 A, US4347636 A, US4135505 A, US4127119 A, US4095914 A, US388000 A, US2479698 A, US2346346 A, US2284847 A, US2136524 A, US2135637 A, US2007083207 AA, US2006195104 AA, US2006058797 AA, US2005222570 AA, US2005216003 AA, US2005165400 AA, US2005143742 AA, US2005043736 AA, US2005038521 AA, US2004127899 AA, US2004073218 AA, US2004059330 AA, US2003187439 AA, US2003171754 AA, US2003149429 AA, US2003078583 AA,

US2002128655 AA, US2002045901 AA, US2002026190 AA, US2001021851 AA, US1151861 A, JP63158308 A2, GB2031731 A1, EP1093762 A2, EP0517939 A1, EP0146872 A2,

Forward Citations: WO16134775, WO16095978, WO14111432, WO12174385, WO12174385, WO12003884, WO07014192, WO06099766, US9649141, US9554837, US9545278, US9545276, US9510880, US9445851, US9404525, US9370386, US9339315, US9295506, US9271773, US9259253, US9259252, US9259251, US9173690, US9149311, US9144443, US9103367, US9078706, US9066766, US8992581, US8940028, US8888824, US8821553, US8795370, US8795341, US8734493, US8603148, US8591554, US8556944, US8535354, US8518042, US8496692, US8419777, US8382807, US8372152, US8366751, US8337535, US8287575, US8282682, US8231663, US8118848, US8118846, US8105367, US8100954, US7771457, US7758620, US2015005821, US2014309701, US2014296924, US2014296921, US2014277176, US2012165878, US2012095466, US2011313466, US2011022097, US2011022096, US2010249851, US2009312803, US2009312759, US2009306724, US2008275510, US2008021476, JP2010535063, JP2009513899, JP2008272485, FR3010892, EP2380527, EP2308403, EP2248479, EP2204130, EP1987792, EP1931267, EP1931267, EP1884213, DE202014006372, DE202008017034, DE102009049168, AU2013202741, AU2006272646,

Abstract:

Source: US2007043366A A locking element and a corresponding housing are disclosed, for the locking of the locking element in housing. The locking element includes a locking piece, for example a head, with a peripheral outer surface, running essentially in the direction of a longitudinal axis with at least one clamping surface extending outwards from the longitudinal axis in the form of a wedge, in order to lock the locking piece on the locking element with a corresponding inner contour of the housing. The peripheral outer surface is at least approximately spherical, parabolic, elliptical or hyperbolic in embodiment, viewed in the direction of the longitudinal axis in the region of the clamping surface, which is also true for the inner contour of the housing in the region of the recess, whereby the recess cooperating with the clamping surface can also be cylindrical.



67) Family number: 48767232 (US2011093081A)

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Title: KNEE BALANCING FOR REVISION PROCEDURES

Priority: US20080107973P 20081023 US20090605259 20091023 US20100757486 20100409
WO2010US30524 20100409 US20130937749 20130709 US20140564451 20141209

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2778040 AA</u>	20110428	CA20102778040	20100409
	<u>EP2490605 A1</u>	20120829	EP20100825339	20100409
	<u>EP2490605 A4</u>	20140716	EP20100825339	20100409
	<u>US2011093081 AA</u>	20110421	US20100757486	20100409
	<u>US2013296860 AA</u>	20131107	US20130937749	20130709
	<u>US2015100059 AA</u>	20150409	US20140564451	20141209
	<u>US8506571 BB</u>	20130813	US20100757486	20100409
	<u>US9622761 BB</u>	20170418	US20140564451	20141209
	<u>WO11049637 A1</u>	20110428	WO2010US30524	20100409
	<u>WO11127477 A1</u>	20111013	WO2011US31980	20110411

Probable Assignee: SYNVASIVE TECHNOLOGY INC**Assignee(s):**^(std): CHANA BARJINDER ; FISHER MICHAEL ; SYNVASIVE TECHNOLOGY INC**Inventor(s):**^(std): CHANA BARJINDER ; CHANA BARJINDER S ; FISHER MICHAEL ; FISHER MICHAEL G**Agent(s):** NORTON ROSE CANADA SENCRL SRL LLP; MAYS JULIE; SCHWEGMAN LUNDBERG AND WOESSNER PA; LOOS BRAD J ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/15 A61B17/17 A61B17/56 A61B17/58 A61B17/72 A61F2/38
^{(IPC 8-9):} A61F2/46 (Advanced/Invention);
A61F2/38 (Advanced/Non-invention)

CPC: A61B17/1764 A61B17/72 A61B17/155 A61B17/157 A61F2/38 A61F2/4684**European class:** A61B17/15K2 A61B17/15K4 A61F2/46T K61B17/14 K61F2/38**US class:** 606/62 606/88 606/88S 606/89 623/20.14 623/20.140P[Classification Explorer](#)

Cited documents: WOWO37121, WO9104715 A1, WO06047005 A2, WO05122899 A1, WO05089681 A2, WO05089661 A2, WO05089661 A1, WO05037121 A1, US8506571 BB, US7578821 BB, US7488324 BA, US7442196 BB, US7374563 BB, US7261719 BA, US7104996 BB, US7101377 BB, US6916325 BB, US6758850 BB, US6575980 BA, US6096082 A, US6077270 A, US6056756 A, US6022377 A, US5911723 A, US5860980 A, US5800438 A, US5776137 A, US5735904 A, US5733292 A, US5720752 A, US5688282 A, US5688280 A, US5662656 A, US5656785 A, US5649929 A, US5624444 A, US5597379 A, US5562675 A, US5540696 A, US5486178 A, US5470354 A, US5360016 A, US5197488 A, US4759350 A, US4567886 A, US4501266 A, US2013296860 AA, US2010063509 AA, US2009043310 AA, US2008306413 AA, US2008177261 AA, US2007293868 AA, US2007234819 AA, US2007232959 AA, US2007219559 AA, US2007073305 AA, US2006241569 AA, US2005267485 AA, US2005240196 AA, US2005209605 AA, US2005177170 AA, US2004097951 AA, US2004064191 AA, US2004039398 AA, US2004019382 AA, US2003187452 AA, US2003045883 AA, FR9104715 A1,

Forward Citations: USD734850, US9622761, US9597090, US9592133, US9572586, US9549742, US9539116, US9492290, US9445909, US9427337, US9339226, US9182804, US9149206, US9011459, US8968412, US8945231, US8603101, US2013063349,

Abstract:

Source: US2011093081A Methods, systems and devices are provided for facilitating a surgical procedure on a knee, particularly, a revision total knee replacement procedure. Prior femoral and tibial prostheses are removed. A cut end of a distal femur is engaged with a femoral adjustment member, which will typically center itself about an intermedullary rod placed into the femur. The lateral and medial forces exerted by lateral and medial sides of the femoral adjustment member and the cut tibial plateau against each other are measured. The femoral adjustment member is adjusted to apply and/or adjust tension to the lateral collateral ligament and/or the medial collateral ligament based on the measured forces, for example, such that the measured lateral force and the measured medial force are matched. Based on the position of the adjusted femoral member, guided clean-up cuts for placement of a new femoral prostheses are made on the cut end of the distal femur.

PatBase - W011127477_A1

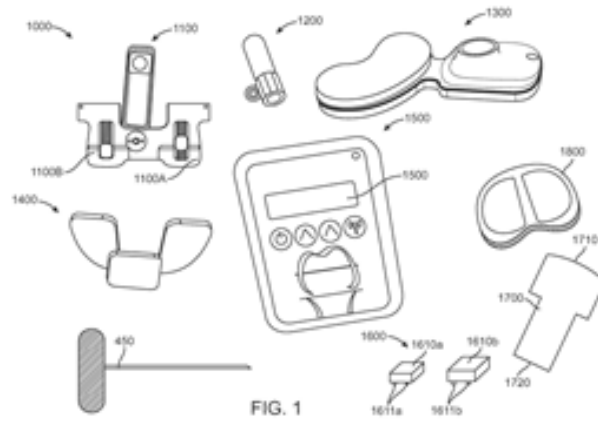


FIG. 1

0) US5702453A – ADJUSTABLE VERTEBRAL BODY REPLACEMENT

68) Family number: 11453227 (US5702453A)

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Title: Adjustable vertebral body replacement

Priority: EP19950942527 19951201 US19940343566 19941122 US19960763745 19961211
US19940353566 19941209 US19970814115 19970310 US19960647272 19960513
WO1999US09271 19990429 WO1995US15654 19951201 US19980073081 19980505

Family:	Publication number	Publication date	Application number	Application date
	<u>AT263525 E</u>	20040415	AT19990921520T	19990429
	<u>AT289786 E</u>	20050315	AT19950942527T	19951201
	<u>AT324846 E</u>	20060615	AT19950025962T	19951201
	<u>AU199643725 A1</u>	19960626	AU19960043725	19951201
	<u>AU199938711 A1</u>	19991123	AU19990038711	19990429
	<u>CA2207336 AA</u>	19970606	CA19952207336	19951201
	<u>DE69534042 D1</u>	20050407	DE19956034042	19951201
	<u>DE69534042 T2</u>	20060413	DE19956034042T	19951201
	<u>DE69534978 D1</u>	20060608	DE19956034978	19951201
	<u>DE69534978 T2</u>	20070104	DE19956034978T	19951201
	<u>DE69916261 D1</u>	20040513	DE19996016261	19990429
	<u>DE69916261 T2</u>	20050414	DE19996016261T	19990429
	<u>EP0797418 A1</u>	19971001	EP19950942527	19951201
	<u>EP0797418 A4</u>	20030122	EP19950942527	19951201
	<u>EP0797418 B1</u>	20050302	EP19950942527	19951201
	<u>EP1077659 A1</u>	20010228	EP19990921520	19990429
	<u>EP1077659 B1</u>	20040407	EP19990921520	19990429
	<u>EP1512385 A1</u>	20050309	EP20040025962	19951201
	<u>EP1512385 B1</u>	20060503	EP20040025962	19951201
	<u>ES2217752 T3</u>	20041101	ES19990921520T	19990429
	<u>ES2238684 T3</u>	20050901	ES19950942527T	19951201
	<u>ES2259169 T3</u>	20060916	ES20040025962T	19951201
	<u>JP10510181 T2</u>	19981006	JP19960517672T	19951201
	<u>JP3732228 B2</u>	20060105	JP19960517672T	19951201
	<u>PT1077659 T</u>	20040831	PT19990921520T	19990429
	<u>TW316844 B</u>	19971001	TW19960101603	19960207
	<u>US5702453 A</u>	19971230	US19960647272	19960513
	<u>US5776197 A</u>	19980707	US19960763745	19961211
	<u>US5776198 A</u>	19980707	US19970814115	19970310
	<u>US6344057 BA</u>	20020205	US19980073081	19980505
	<u>WO9617564 A1</u>	19960613	WO1995US15654	19951201
	<u>WO9956675 A1</u>	19991111	WO1999US09271	19990429
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Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZA ZW

International class (IPC 8-9): A61B17/02 A61B17/56 A61B17/70 A61B17/80 A61B17/86 A61F2/00 A61F2/28 A61F2/30 A61F2/44 (Advanced/Invention);
A61B17/02 A61B17/70 A61B17/80 A61B17/86 A61F2/00 A61F2/28 (Advanced/Non-invention);
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A61B17/02 A61B17/56 A61B17/68 A61F2/00 A61F2/28 A61F2/44 (Core/Non-invention)

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CPC: A61F2/44 A61B17/70 A61B17/7059 A61B17/8061 A61B17/86 A61B2017/0256 A61F2/30744 A61F2/4455 A61F2002/2835 A61F2002/30158 A61F2002/30166 A61F2002/3023 A61F2002/30235 A61F2002/30329 A61F2002/30382 A61F2002/30383 A61F2002/30405 A61F2002/30411 A61F2002/30438 A61F2002/30494 A61F2002/30507 A61F2002/3051 A61F2002/3055 A61F2002/30561 A61F2002/30574 A61F2002/30601 A61F2002/30604 A61F2002/30772 A61F2002/30774 A61F2002/30779 A61F2002/30785 A61F2002/30787 A61F2002/30841 A61F2002/30848 A61F2002/30892 A61F2002/3092 A61F2002/4475 A61F2220/0025 A61F2220/0033 A61F2220/0041 A61F2230/0026 A61F2230/0028 A61F2230/0069 A61F2250/0071 A61F2310/00131

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US class: 606/247 606/264 606/286 623/17 623/17.11 623/17.15 623/17.16

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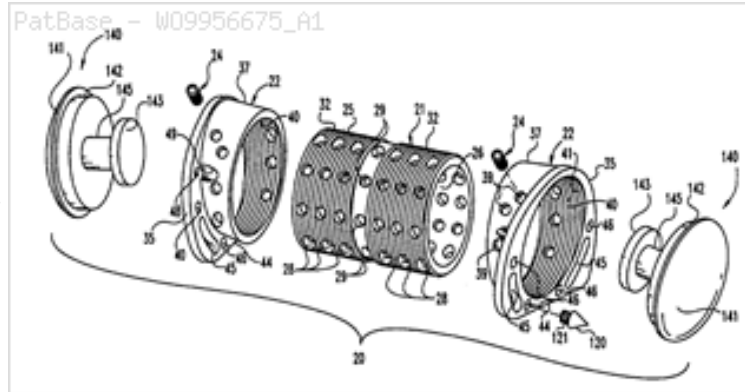
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Abstract:

Source: US5702453A An adjustable vertebral body replacement implant and assembly includes a thin-walled cylindrical body configured to span over most of the length between intact vertebrae when damaged or diseased vertebrae have been removed. The cylindrical body defines a hollow interior with a plurality of bone-ingrowth apertures communicating with the interior. The replacement assembly further includes endplates configured to contact the adjacent vertebra and to engage the cylindrical body therebetween. The cylindrical body and the endplates include mating threads to permit adjustment of the overall height of the implant.

A means for fixing the cylindrical body to the endplates is contemplated, which in one embodiment is a set screw for locking the components in place. In another embodiment, the means for fixing includes a crimping channel and notch defined in the endplates to be crimped onto the cylindrical body. A means for connecting the replacement implant to a longitudinal member is provided, which in one embodiment contemplates a clamp and screw assembly. In another embodiment, the means for connecting includes an arm projecting from the endplates with an opening to receive the longitudinal member therethrough.



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Title: DRILL GUIDE AND PLATE INSERTER

Priority: US20030409958 20030409 US20030609123 20030627 US20030664238 20030917
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Family:	Publication number	Publication date	Application number	Application date
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	<u>WO05034796 C1</u>	20060608	WO2004US24975	20040730

Probable Assignee: DEPUY SYNTHES PRODUCTS LLC**Assignee(s):^(std):** DEPUY ACROMED INC ; DEPUY SPINE INC ; PATEL TUSHAR ; KOLB ERIC D ; FANGER JONATHAN ; KOLB ERIC ; PRESBREY GLEN ARTHUR ; CHAN ERIC Y**Assignee(s):** CROCKARD ALAN ; ALBERT TODD ; DEPUY SPINE LLC ; DEPUY SYNTHES PRODUCTS LLC ; HAND INNOVATIONS LLC ; FESSLER RICHARD**Inventor(s):^(std):** ALBERT TODD ; CHAN ERIC Y ; CROCKARD ALAN ; ERIC KOLB ; FANGER JONATHAN ; FESSLER RICHARD ; KOLB ERIC ; KOLB ERIC D ; PATEL TUSHAR ; PRESBREY GLEN ARTHUR**Agent(s):** CALLINANS; FISHER ADAMS KELLY CALLINANS; OGILVY RENAULT LLP SENCRL SRL; NUTTER MCCLENNEN AND FISH LLP; NUTTER MCCLENNEN AND FISH LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class A61B1/32 A61B17/02 A61B17/17 A61B17/56 A61B17/58 A61B17/60 A61B17/70
 (IPC 8-9): A61B17/80 A61B17/90 A61F2/00 (Advanced/Invention);
A61B17/80 (Advanced/Non-Invention);
A61B17/02 A61B17/16 (Core/Invention);
A61F (Subclass/Invention)
A61B17/56 A61B17/58 A61B17/60 A61B17/80 A61F

International class
(IPC 1-7):

CPC: A61B17/7059 A61B17/8047 A61B17/02 A61B17/1728 A61B17/1757

European class: A61B17/02 A61B17/17P A61B17/17S4 A61B17/70K K61B17/80D6

US class: 600/205 600/210 606/201 606/246 606/280 606/287 606/287S 606/53 606/61 606/69 606/71 606/71P 606/86.00A 606/86.00AP 606/86.00B 606/86A 606/86B 606/86R 606/96 606/96P

[Classification Explorer](#)

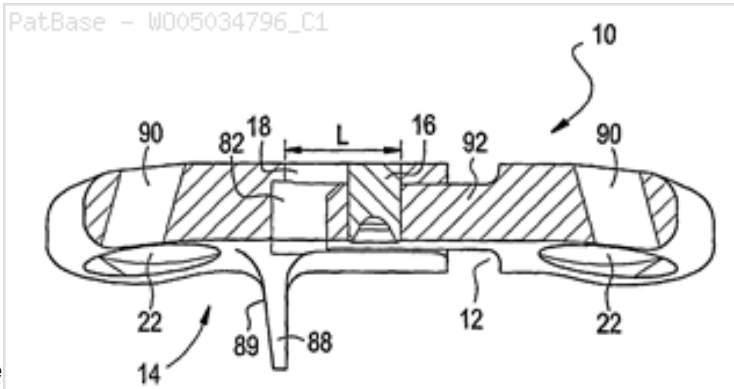
Cited documents: WO9632071, WO03063714 A2, WO03024344, WO03007826, WO02085226, WO0064359, WO0024343 A1, WO0022999 A1, USRE36020 E, USRE31628 E, USRE28841 E, USRE036020 E, USRE031628 E, USRE028841 E, USD433506 S1, US7776047 BB, US7488327 BB, US7416553 BB, US7357804 BB, US7278997 BA, US7147599 BB, US7094242 BB, US7011665 BB, US6960216 BB, US6913463 BB, US6796986 BB, US6793658 BB, US6770096 BB, US6755833 BA, US6712818 BA, US6695846 BB, US6692503 BB, US6679883 BB, US6673115 BB, US6669700 BA, US6663562 BB, US6656181 BB, US6652525 BA, US6641613 BB, US6620163 BA, US6602257 BA, US6602255 BA, US6595993 BB, US6592586 BA, US6585738 BA, US6575975 BB, US6565571 BA, US6545769 BB, US6533786 BA, US6527776 BA, US6524318 BA, US6511484 BB, US6503250 BB, US6454769 BB, US6447512 BA, US6441602 BA, US6428542 BA, US6419678 BA, US6416518 BA, US6413259 BA, US6402756 BA, US6379364 BA, US6342057 BA, US6342056 BA, US6342055 BA, US6340363 BA, US6332887 BA, US6331179 BA, US6328738 BA, US6322562 BA, US6309393 BA, US6306139 BA, US6306136 BA, US6293949 BA, US6277124 BA, US6273889 BA, US6261291 BA, US6258098 BA, US6258092 BA, US6241731 BA, US6235034 BA, US6235033 BA, US6228085 BA, US6227124 BA, US6224602 BA, US6206881 BA, US6206828 BA, US6200348 BA, US6193721 BA, US6159244 A, US6152927 A, US6143012 A, US6139550 A, US6132432 A, US6117173 A, US6113602 A, US6106527 A, US6066175 A, US6066142 A, US6063090 A, US6039740 A, US6030389 A, US6017345 A, US6006581 A, US5984926 A, US5967171 A, US5967141 A, US5964763 A, US5964762 A, US5954722 A, US5951558 A, US5931838 A, US5904683 A, US5888204 A, US5885286 A, US5876402 A, US5865848 A, US5855848 A, US5851207 A, US5846193 A, US5836950 A, US5827286 A, US5807396 A, US5788630 A, US5755721 A, US5749884 A, US5749873 A, US5745884 A, US5735853 A, US5713904 A, US5676666 A, US5672177 A, US5669915 A, US5651283 A, US5643265 A, US5616144 A, US5616142 A, US5607428 A, US5607426 A, US5603713 A, US5601553 A, US5578034 A, US5558622 A, US5549612 A, US5534027 A, US5531751 A, US5531746 A, US5520690 A, US5501684 A, US5439463 A, US5423826 A, US5415660 A, US5365921 A, US5364399 A, US5342295 A, US5336224 A, US5324295 A, US5324290 A, US5318567 A, US5306278 A, US5303694 B1, US5303694 A, US5275601 A, US5234290 A, US5180381 A, US5151103 A, US5147361 A, US5129903 A, US5129899 A, US5088472 A, US5067477 A, US5059194 A, US5053036 A, US5052373 A, US5041133 A, US5041114 A, US5041113 A, US5006120 A, US5002544 A, US4957495 A, US4936844 A, US4887596 A, US4848327 A, US4838252 A, US4800874 A, US4773402 A, US4744353 A, US4733657 A, US4686972 A, US4651724 A, US4541424 A, US4524765 A, US4513744 A, US4503848 A, US4502475 A, US4493317 A, US4454876 A, US4408601 A, US4388921 A, US4257411 A, US4224699 A, US4219015 A, US4187841 A, US4119092 A, US3900025 A, US3824995 A, US3793658 A, US3779240 A, US3716050 A, US3695259 A, US3659595 A, US3626471 A, US3596656 A, US3552389 A, US3463148 A, US3244170 A, US2756742 A, US2695688 A, US2494229 A, US2486303 A, US2466023 A, US2007244489 AA, US2005021040 AA, US2004267274 AA, US2004210232 AA, US2004204717 AA, US2004204716 AA, US2004204712 AA, US2004204710 AA, US2004133205 AA, US2004097935 AA, US2004092947 AA, US2004087951 AA, US2004034354 AA, US2004034352 AA, US2004019353 AA, US2004015174 AA, US2004015169 AA, US2003233098 AA, US2003229348 AA, US2003208204 AA, US2003187454 AA, US2003187442 AA, US2003187440 AA, US2003187436 AA, US2003181912 AA, US2003135213 AA, US2003083658 AA, US2003065251 AA, US2003060828 AA, US2003045880 AA, US2003040749 AA, US2003023242 AA, US2002198533 AA, US2002188296 AA, US2002183757 AA, US2002183754 AA, US2002156474 AA, US2002151899 AA, US2002147450 AA, US2002143336 AA, US2002082606 AA, US2002058940 AA, US2002058939 AA, US2002055741 AA, US2002049444 AA, US2002045898 AA, US2002045897 AA, US2002022847 AA, US2002022843 AA, US2001047172 AA, US2001037112 AA, US2001021851 AA, US2001009971 AA, US1920821 A, FR2827150 A1, FR2784571 A1, EP0897697 A1, DE4201043,

Forward Citations: WO17066475, WO16029008, WO15184018, WO15104507, WO12142361, WO12142361, WO09103323, WO09045912, WO09045912, WO09036367, WO09036360, WO08029032, WO08029032, WO07070196, WO07070196, WO06109132, USD754857, USD751197, USD750249, USD739014, USD734853, USD723682, USD708747, USD708329,

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 EP1811912, EP1808137, DE102015116091, DE102015116090, AU2009248472,
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Abstract:

Source: US2004204710A A drill guide for use in securing a spinal fixation plate to a spine is provided. In a preferred embodiment, the drill guide generally includes a support member having first and second arms mated thereto. Each arm includes a proximal end and a distal end having at least one barrel coupled thereto and defining a lumen for receiving a tool. One or both arms can be slidably movable along the support member to allow the distance between the arms to be adjusted. In use, the arms can be adjusted to engage a spinal fixation plate and to position the barrels on each arm in alignment with bores formed in the fixation plate. The drill guide can then be used to drill, awl, tap, and insert implants, such as spinal screws, into the vertebral bodies to attach the fixation plate thereto.



70) Family number: 54262969 (US2013172946A)

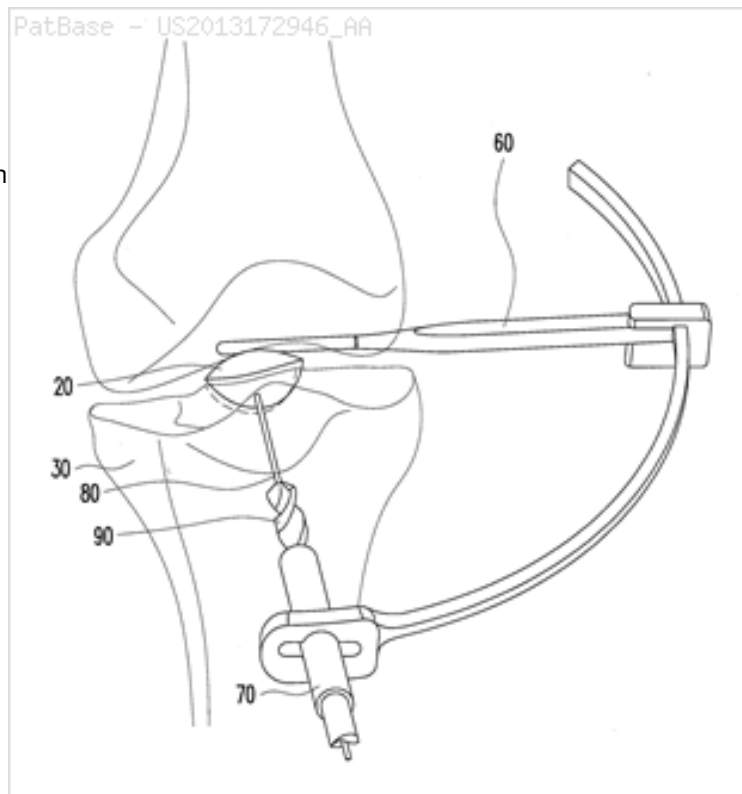
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Title: IMPLANT MODULE AND METHOD FOR REPAIRING AVULSION FRACTURE**Priority:** TW20110149291 20111228

Family:	Publication number	Publication date	Application number	Application date
	<u>TW201325542 A</u>	20130701	TW20110149291	20111228
	<u>TWI458461 B</u>	20141101	TW20110149291	20111228
	<u>US2013172946 AA</u>	20130704	US20120565822	20120803

Probable Assignee: INDUSTRIAL TECHNOLOGY RESEARCH INST**Assignee(s):^(std):** CHANG WEN HSIANG ; HAN SHIH JUI ; IND TECH RES INST ; WANG YU MING ; SHEN YING WEN ; JIANG CHING CHUAN ; LIAO CHUN JEN**Assignee(s):** INDUSTRIAL TECHNOLOGY RESEARCH INST**Inventor(s):^(std):** CHANG WEN HSIANG ; HAN SHIH JUI ; JIANG CHING CHUAN ; LIAO CHUN JEN ; SHEN YING WEN ; WANG YU MING**International class** A61B17/58 A61B17/62 A61B17/86 A61B17/88 (Advanced/Invention)
(IPC 8-9):**CPC:** A61B17/1764 A61B17/68 A61B17/683**US class:** 606/301[Classification Explorer](#)**Cited documents:** US6733506 BA, US6123711 A, US4772286, US2007168036 AA, US2007156153 AA, US2002198527 AA, TW200924701, CN101703419,**Abstract:**

Source: US2013172946A An implant module for dragging a bone fragment toward a bone is provided. The bone fragment has a first through hole, and the bone has a second through hole. The implant module includes a screw and a stud. The screw has a first section fixed to the bone fragment and a second section provided with a first external thread on its outer surface. The stud is provided with a second external thread on its outer surface for being screwed into the second through hole of the bone. An end of the stud has a screw hole for being screwed with the second section of the screw via the first external thread. A method of repairing avulsion fracture by using the implant module is further provided.



71) Family number: 21430254 (FR1231807A)

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Title: APPAREILLAGE POUR LA REDUCTION ET LA CONTENTION DES FRACTURES ET TOUT PARTICULIEREMENT DES FRACTURES DIAPHYSAIRES TRANSVERSALES OU OBLIQUES COURTES DU TIBIA APPARATUS FOR REDUCTION AND RESTRAINT OF FRACTURE AND FRACTURE DIAPHYSEAL PARTICULAR CROSS OR SHORT OBLIQUES TIBIAL (Machine translation)

Priority: FR19590792176 19590415

Family:	Publication number	Publication date	Application number	Application date
	<u>FR1231807 A</u>	19601003	FR19590792176	19590415

Inventor(s):^(std): MASMONTEIL HENRI LOUIS

International class A61B17/80 A61B17/88 (Advanced/Invention);
(IPC 8-9): A61B17/68 A61B17/88 (Core/Invention)

CPC: A61B17/80 A61B17/8061 A61B17/8866

European class: A61B17/80 A61B17/88H K61B17/80H

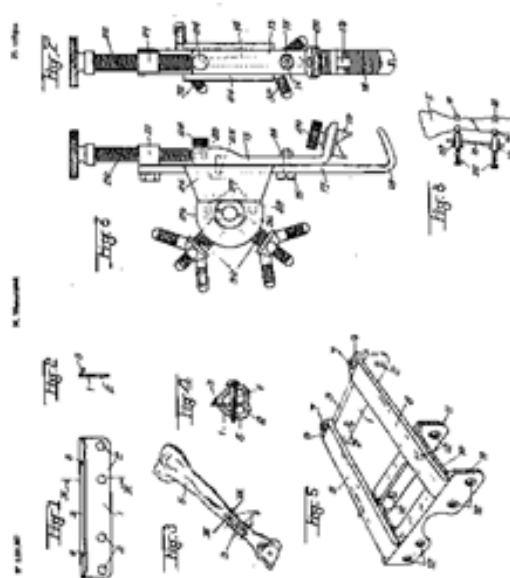
[Classification Explorer](#)

Forward Citations: FR2657246,

Abstract:

Source: FR1231807A [Source: Claim 1] 1. Chacune des pattes 9 est percee d'un trou a travers lequel on insere une des vis 7 que l'on visse dans le trou filete 4 correspondant de l'aillette 3 de l'eclisse 1. A son autre extremite, chaque longeron 8 est solidaire d'un etrier 10 comportant deux profiles en U 11, perces chacun de quatre trous 12 disposes de facon a etre coaxiaux entre eux et avec les trous 2 de la plaque ou lame d'eclisse solidaire du viseur. Les figures 6 et 7 representent un davier qui comporte un coulisseau 13, pourvu d'une fente longitudinale de guidage 14, et monte a coulissement, au moyen d'une vis 15 et d'un ecrou 16 sur une semelle 17 formant a l'une de ses extremités une machoire crantee 18 cooperant avec une machoire 19 en gradins fixee a l'aide d'une vis a tete moletee 20 a l'extremite adjacente du coulisseau 13. L'autre extremite de la semelle 17 porte une douille taraudee 21 dans laquelle est engagee une vis de manuvre 22 a tete moletee cooperant au moyen d'une crapaudine 23 avec le coulisseau 13, de maniere a permettre de deplacer celui-ci a volonte longitudinalement par rapport a la semelle 17. Une vis de verrouillage 24 a tete moletee, prevue sur le coulisseau 13, permet, en agissant sur la crapaudine 23, de verrouiller la vis de manuvre 22, et par suite le coulisseau 13, dans toutes positions voulues. Pour assurer un meilleur guidage de ce dernier, on prevoit, outre la vis 15, une seconde vis 25 disposee sur la semelle 17 et s'engageant dans la fente 14 du coulisseau. La semelle 17 porte un etrier de support 26, sur la partie transversale duquel est monte, au moyen de deux vis 27, un element 28 dans lequel est menage un logement renfermant une rotule fendue 29 en matiere elastique, destinee a recevoir dans un alogage 30, une tige 31 (fig. 8) qui peut etre serree dans la rotule au moyen de deux vis a tierce-prise 32, qui en meme temps, permettent de bloquer la rotule 29 dans toutes positions desirees. La reduction de la fracture a l'aide de l'appareillage selon l'invention, se fait de la maniere

PatBase - FR1231807_A



suivante: On fixe deux daviers du type represente et decrit ci-dessus sur l'os casse 5 (fig. 8), ce dernier etant serre de part et d'autre du foyer de fracture entre les machoires 18-19 du davier interesse, et ces dernieres etant ensuite bloquees dans leur position respective au moyen de la vis de verrouillage 24. Une tige 31 est inseree dans les alesages 30 des rotules 29. Les deux troncons de l'os 5 etant mis dans la position voulue, on bloque les rotules et la tige au moyen des vis 32. On a pratique dans l'os 5, a travers le foyer de fracture, une entaille allant jusqu'au canal medullaire, et dont la largeur est egale a l'epaisseur de la plaque ou lame 1 de l'eclisse. On fixe sur l'eclisse le viseur (comme le montre la fig. 5) et l'on insere a force, la plaque ou lame 1 de l'eclisse dans l'entaille precitee jusqu'a ce que son ailette 3 prenne contact avec l'os. Apres quoi l'on perce, dans la premiere corticale quatre trous coaxiaux aux trous 12 du viseur, et par suite aux trous 2 de l'eclisse, en se servant d'une meche guidee par le viseur. Les vis 6 (fig. 4) sont passees a travers les trous de la premiere corticale et a travers les trous 2 de l'eclisse et vissees dans la deuxieme corticale comme des chevilles solidarissant tenons et mortaises et opposant un effort de cisaillement. L'eclisse est ainsi maintenue dans l'os et maintient, par suite, les deux troncons de ce dernier en position. On enleve alors le viseur de l'eclisse, et l'on degage les daviers de l'os.

RESUME 1. Appareillage pour la reduction et la contention des fractures, caracterise essentiellement par une eclisse axiale, mediane ou para-mediane, que l'on introduit verticalement dans une entaille faite sur l'os a cheval sur le foyer de fracture, et qui presente une branche verticale et une forme generale en L renverse, a angle aigu ou obtus, ou en T, ou toute autre forme appropriee, la branche verticale de l'eclisse etant percee de trous dans lesquels on enfonce des vis de fixation agissant comme des chevilles. [Source: Claim 1] 1. Each of the tabs 9 is a hole through which is inserted a screw 7 which is screwed in the threaded hole 4 corresponding to the fin 3 of the splint 1. At its other end, each carrier 8 is integral with a caliper with two 10 profiles U-11, drilled four holes 12 each way was willing to be coaxial with each other and with the holes 2 of the plate or splint blade attached to the viewfinder. Figures 6 and 7 represent a davit which comprises a slider 13, provided with a longitudinal guide slot 14, and slideably mounted by means of a screw 15 and a nut 16 on a 17 forming sole has the one of its ends a jaw NOTCHED 18 cooperating with a jaw 19 FIXED steps with the aid of a knurled screw 20 to the adjacent extremity of the slide 13. the other end of the base 17 carries a threaded bushing 21 in which is engaged a screw maneuvering 22 a knurled head cooperating with a pivot bearing 23 with the slide 13, of a way to allow move it at will longitudinally relative to the sole 17. a locking screw 24 knurled, provided on the slide 13, allows, by acting on the step bearing 23, lock screw man piece 22, and hence the slider 13, in any desired positions. To ensure a better guidance of the latter, it is expected, in addition to the screw 15, a second screw 25 disposed on the base plate 17 and engaging in the slot 14 of the slide. The sole 17 carries a support stirrup 26 on the cross section which is mounted by means of two screws 27, an element 28 in which menage a housing containing a split patella 29 in elastic material, destiny has received in a bore 30, a rod 31 (fig. 8) which can be clamped in the ball by means of two screw-third outlet 32, which at the same time allow blocking the ball 29 in any desired positions. The reduction of the fracture using the apparatus of the invention, is done in the following manner: two daviers represents the type is fixed and described above on bone breaks 5, this (fig. 8) greenhouse latter being either side of the fracture between the jaws of the forceps 18-19 interested, and then being in last be blocked in their positions by means of the locking screw 24. a shaft 31 is inserted into the bores 30 ball joints 29. the two sections of bone 5 being put into position, it blocks the ball joints and rod with screws 32. it was practice in the bone 5, across the fracture site, a notch up to the medullary canal, and whose width is equal to the thickness of the plate or blade 1 of the splint. the viewfinder is fixed on the splint (as shown in Fig. 5) and is forcibly inserted, the plate or blade 1 of the splint in the aforementioned notch until its fin 3 make contact with the bone. After what is drilled in the first cortical four coaxial holes to 12 holes of the viewfinder, and due to the holes 2 of the splint, using a wick guided through the viewfinder. The screw 6 (Fig. 4) are passed through the holes of the first cortical and through the holes 2 of the splint and screwed into the second cortical dowels solidarissant as tenons and mortises and opposing shear stress. The splint is thus maintained in the bone and maintained, as a result, the two sections of the latter in position. We then removed the viewfinder of the splint, and it clears the bone forceps.

SUMMARY 1. Apparatus for the reduction and splinting fractures, characterizes mainly by an axial splint, median or para-median, which is vertically inserted into a cut made on the bone straddling the fracture, and presents a vertical branch and a general L-shape backward, has acute or obtuse angle, or T, or any other appropriate shape, the vertical branch of the splice being pierced with holes in which is driven fixing screw acting as ankles.

72) Family number: 32069759 (WO06120437A1)

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Title: EXTERNAL FIXATOR AND DISTRACTOR**Priority:** GB20050009491 20050510**Family:**

Publication number	Publication date	Application number	Application date
GB200509491 A0	20050615	GB20050009491	20050510
<u>GB2425958 A1</u>	20061115	GB20050009491	20050510
<u>WO06120437 A1</u>	20061116	WO2006GB01706	20060509

Probable Assignee: VETERINARY INNOVATIONS LTD**Assignee(s):^(std):** ELLOY MARTIN ; RAFFAN PETER JAMES ; VETERINARY INNOVATIONS LTD**Assignee(s):** VETERINARY INNOVATIONS LIMITED**Inventor(s):^(std):** ELLOY MARTIN ; RAFFAN PETER ; RAFFAN PETER JAMES**Inventor(s):** MARTIN ELLOY ; PETER RAFFAN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class A61B17/60 A61B17/64 A61F5/04 ^(Advanced/Invention);
^(IPC 8-9) A61B17/60 A61F5/04 ^(Core/Invention)

CPC: A61B17/6458 A61B17/6466**European class:** A61B17/64K A61B17/64M[Classification Explorer](#)**Cited documents:** WO03065911, WO0247531, US5989250, US4662365, US4483334, US2002042613, GB2031731, EP1312316,**Forward Citations:** US8287548, EP2085036,

Abstract:

A transfixion pin clamp comprises (i) a collet having jaws, a tapered portion and a threaded portion, (ii) a body having a hole therethrough sized to receive at least the threaded portion of the collet and having means for the attachment of one or more frame members, and (iii) a nut sized to index the threaded portion of the collet, wherein in use a transfixion pin may be placed within the jaws of the collet, the body placed about the collet and the nut threaded onto the collet and tightened to move the body onto the tapered portion of the collet thereby tightening the jaws about the transfixion pin.

PatBase - W006120437_A1

WI 2006/020437

IPC B1C 82/00 (20060106)

1/7

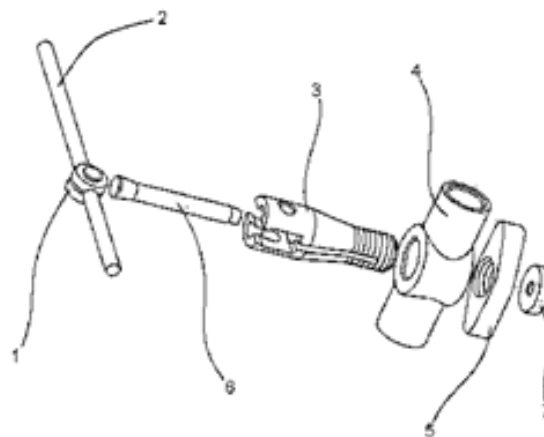


Fig 1

Title: SOFT TISSUE BONE REDUCTION FORCEPS
Priority: US20120662049P 20120620 US20130893576 20130514 WO2013US40865 20130514
Family:

Publication number	Publication date	Application number	Application date
EP2863819 A1	20150429	EP20130731182	20130514
US2013345762 AA	20131226	US20130893576	20130514
WO13191819 A1	20131227	WO2013US40865	20130514

Probable Assignee: DEPUY SYNTHES PRODUCTS INC
Assignee(s):^(std): DEPUY SYNTHES PRODUCTS LLC ; SYNTHES GMBH
Assignee(s): SYNTHES USA LLC ; DEPUY SYNTHES PRODUCTS INC
Inventor(s):^(std): DELL OCA ALBERTO A FERNANDEZ ; HATT ALEXANDER
Agent(s): KLUNKER SCHMITT NILSON HIRSCH; KAPLUN OLEG F ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A61B17/68](#) [A61B17/88](#) (Advanced/Invention);
 (IPC 8-9); [A61B17/80](#) (Advanced/Non-invention)

CPC: [A61B17/68](#) [A61B17/8061](#) [A61B17/8866](#)

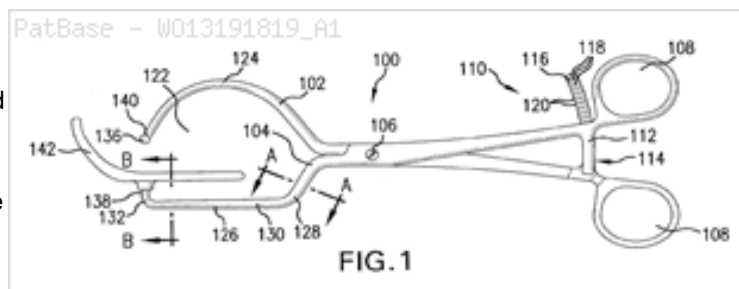
US class: [606/324](#)

[Classification Explorer](#)

Cited documents: US6589241 BA, US5562357 A, US2427128 A, US2013116733 AA, US2010152789 AA, US2005049629 AA, US1007824 A,

Abstract:

Source: US2013345762A A device for reducing a bone fracture includes (a) a first arm extending from a handle at a proximal end to a distal end having a first substantially spherical tip; (b) a second arm extending from a handle at a proximal end to a distal end having a second substantially spherical tip, the second arm is pivotally connected to the first arm; and (c) an insert removably attachable to the first or second tips. The insert includes a connection mechanism lockingly engaging the first or second spherical tips. Also, the insert includes a first face sized and shaped to be seated over a target portion of skin in an operative configuration. The first face has a first substantially planar portion and a second substantially curved portion attached thereto. The first and second portions define a contour conforming to a contour of skin's target portion.



74) Family number: 12112214 (US5443464A)

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Title: External fixator apparatus**Priority:** US19930017933 19930216

Family:	Publication number	Publication date	Application number	Application date
	<u>US5443464 A</u>	19950822	US19930017933	19930216

Probable Assignee: TRAUMAMARK LLC**Assignee(s):^(std):** MEMPHIS ORTHOPAEDIC DESIGN INC**Assignee(s):** TENNESSEE BANK AND TRUST ; TRAUMAMARK LLC ; INSOUTH BANK**Inventor(s):^(std):** LEE JR HARRY E ; RUSSELL THOMAS A

International class A61B17/64 (Advanced/Invention) ;
^{(IPC 8-9) :} A61B17/60 (Core/Invention)

International class A61B17/60
^{(IPC 1-7) :}

CPC: A61B17/6433 A61B17/6441 A61B17/6483**European class:** A61B17/64M4 K61B17/64F K61B17/64G**US class:** 606/54 606/56 606/59[Classification Explorer](#)

Cited documents: US5003969 A, US4946458 A, US4923458 A, US4895141 A, US4889111 A, US4739751 A, US4693240 A, US4662365 A, US4620533 A, US4615338 A, US4299212 A, US4273116 A, US4235428 A, US4135505 A, US3171408 A, GB490812 A, GB481697 A, GB481664 A, GB480579 A, GB2101488 A1, FR2499400 A1,

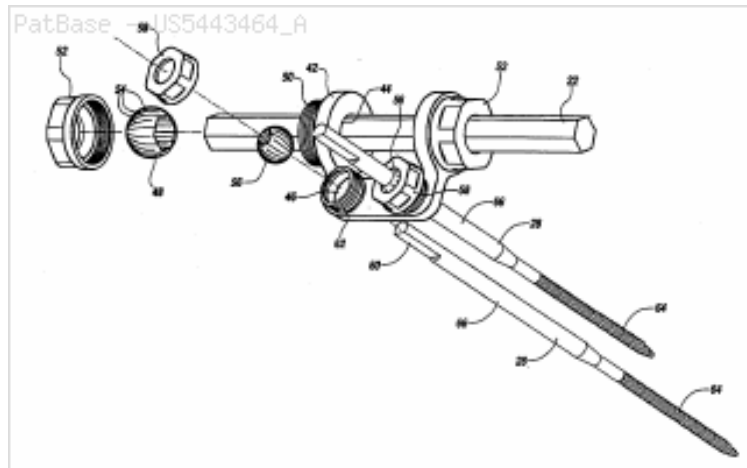
Forward Citations: WO9912488, WO15110266, WO13103709, WO12007878, WO09023751, WO05120403, WO05120403, WO0135842, WO0015132, WO0015132, USRE44834, USD680220, USD649249, USD575401, USD575395, USD567943, USD564662, USD541938, USD541418, USD535027, USD533942, USD531311, USD525361, USD499181, USD457959, USD457958, USD449886, USD425201, USD424694, US9655674, US9642649, US9603652, US9597117, US9597116, US9585716, US9579145, US9554841, US9549775, US9539053, US9492225, US9463067, US9463045, US9427259, US9421022, US9408635, US9393045, US9375271, US9375270, US9375254, US9370380, US9351764, US9345535, US9247988, US9198717, US9192391, US9149323, US9113940, US9113905, US9113903, US9113898, US9107672, US9095347, US9066804, US9028493, US9023043, US8968314, US8945127, US8945126, US8945125, US8939973, US8898888, US8894649, US8882766, US8858554, US8852228, US8795274, US8784417, US8764748, US8758343, US8740906, US8740901, US8734443, US8696667, US8679114, US8668689, US8647341, US8641713, US8636761, US8628530, US8623276, US8623017, US8603095, US8597297, US8597296, US8591506, US8568444, US8551091, US8540711, US8535312, US8523898, US8496656, US8486107, US8469958, US8469957, US8469956, US8454602, US8430932, US8425504, US8394096, US8394095, US8382754, US8377061, US8366714, US8366710, US8366709, US8361072, US8361071, US8353914, US8348948, US8333765, US8317787, US8303586, US8303582, US8298232, US8298228, US8287545, US8277447, US8267936, US8267935, US8257387, US8257352, US8251996, US8241284, US8241283, US8241282, US8236025, US8235993, US8235992, US8221416, US8211105, US8197633, US8197479, US8192433, US8162973, US8147489, US8142473, US8137347, US8128624, US8123747, US8123743, US8114083, US8088167, US8070746, US8062377, US8034052, US8021368, US8016827, US7967822, US7963965, US7955332, US7951150, US7951149, US7947041, US7935151, US7935052, US7931649, US7922953, US7922718, US7909823, US7896878, US7887567, US7887536, US7887535, US7879035, US7877853, US7877852, US7857812, US7846161, US7846158, US7837685, US7828798, US7819872, US7811283, US7799028, US7799026, US7789878, US7776037, US7776036, US7771425, US7766910, US7753909, US7744615, US7722607, US7717916, US7708735, US7686827, US7686804, US7655007, US7641653, US7628792, US7628791, US7615051, US7597693, US7594916, US7582087, US7553312, US7540872, US7513898, US7510556, US7503918,

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Abstract:

Source: US5443464A An external fixation system for stabilizing bone fractures is provided, having a hexagonal rod as the primary support mechanism with a plurality of fixation components adjustably secured thereto. The fixation components preferably include at least one pin secured to the hexagonal rod by a clamping mechanism which provides multiple degrees of adjustability for enhanced pin placement. The clamping mechanism comprises a clamp member and ball collet having a hexagonal opening formed therein, wherein the ball collet fits within a cavity in the clamp member with the rod extending therethrough, and a retaining nut used to compress the ball collet thereby grippingly engaging the rod and securing the clamp member to the rod. The

clamp member is adjustable to any desired position both longitudinally and peripherally about the rod. Each pin is secured within a clamp member through the use of similar ball collets and retaining nuts, and is angularly adjustable relative to the clamp member. In the preferred embodiment, a ring member may also be attached to the rod, with additional fixation components such as tension wires, buttress pins, and the like, adjustably secured to the ring member by similar clamping mechanisms.



75) Family number: 50927810 (US2012089170A)

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Title: INTRAGASTRIC BALLOON GEOMETRIES

Priority:

EP20110770987	20111013	EP20110770988	20111013	EP20110773972	20111018
EP20110773976	20111018	EP20110773973	20111018	EP20110773961	20111013
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: APOLLO ENDOSURGERY INC

Assignee(s):^(std): APOLLO ENDOSURGERY INC ; DOMINGUEZ ZACHARY P ; BABKES MITCHELL H ; HOOVER JASON ; D AUGUSTA JONATHAN M ; DOMINGUEZ ZACHARY ; DAUGUSTA JONATHAN ; DAUGUSTA JONATHAN ; MUDD CHRISTOPHER S ; RAVEN JOSEPH S ; SNOW SEAN ; SCHWAB JUSTIN J ; OLROYD CRAIG ; ALLERGAN INC ; SCHWAB JUSTIN

Assignee(s): ALLERGAN INC2525 DUPONT DRIVET2-7HIRVINECA92612US ; OXFORD FINANCE LLC AGENT AS ; ATHYRIUM OPPORTUNITIES II ACQUISITION LP ADMINISTRATIVE AGENT AS ; APOLLO ENDOSURGERY INC1120 SOUTH CAPITAL OF TEXAS HIGHWAYBUILDING ONE, SUITE 300AUSTINTX78746US ; APOLLO ENDOSURGERY INC AUSTIN ; APOLLO ENDOSURGERY US INC

Inventor(s):^(std): ALLERGAN INC ; BABKES MITCHELL H ; D AUGUSTA JONATHAN M ; BERTOLOTE TIAGO ; DOMINGUEZ ZACHARY ; DOMINGUEZ ZACHARY P ; HOOVER JASON ; DAUGUSTA JONATHAN ; DAUGUSTA JONATHAN ; MUDD CHRISTOPHER S ; RAVEN JOSEPH S ; SNOW SEAN ; SCHWAB JUSTIN ; SCHWAB JUSTIN J ; OLROYD CRAIG ; RAVEN JOSEPH ; MUDD CHRISTOPHER ; METZNER JASON

Inventor(s): RAVEN JOSEPH S GOLETA ; SCHWAB JUSTIN J SANTA BARBARA ; MUDD CHRISTOPHER S VENTURA ; RAVEN JOSEPH SUS ; MUDD CHRISTOPHER SUS ; DOMINGUEZ ZACHARY PUS ; DOMINGUEZ ZACHARY P SANTA BARBARA ; DOMINGUEZ ZACHARY P SANTA BARBARA ; BABKES MITCHELL HUS ; BABKES MITCHELL H SANTA CLARITA

Agent(s): GOWLING LAFLEUR HENDERSON LLP; BERESKIN AND PARR LLP SENCRL SRL; HOFFMANN EITLE PATENT U RECHTSANWAELTE PARTMBB; HOFFMANN EITLE; FUSTER GUSTAVO NICOLAS; MARTIN IRENE; GORDON AND JACOBSON PC; DONOVAN STEPHEN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM

ZW

International class
(IPC 8-9):

A61B10/00 A61B17/08 A61B17/11 A61B17/12 A61F2/04 A61F5/00 A61M29/00
A61M29/02 A61M5/00 (Advanced/Invention)

CPC:

A61F5/0086 A61F5/0076 A61B17/12036 A61B17/12099 A61B17/12172 A61F5/0089
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A61F5/0036 A61F5/0079 A61F5/003 A61F5/004

European class:

A61F5/00B6D A61F5/00B6D2 A61F5/00B6F A61F5/00B6F2 A61F5/00B6N
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US class:

1/1 128/898 24/495 24/517 24/521 604/8 604/8S 604/9 604/9P 606/120 606/142 606/153
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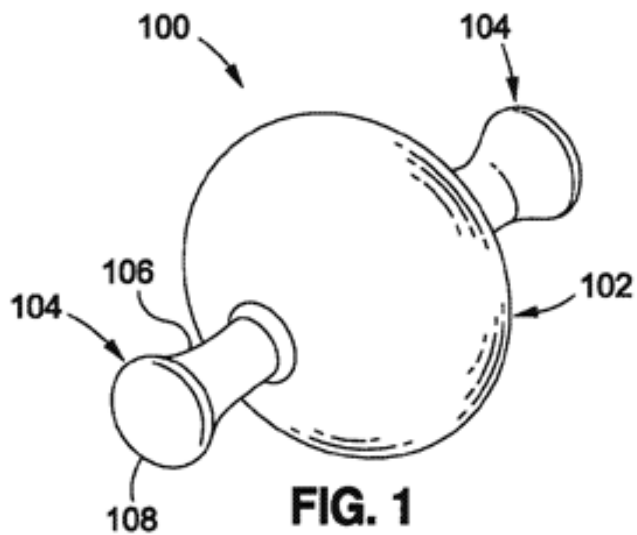
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CN104771253, CN103330608,

Abstract:

Source: US2012089170A The present application provides intragastric devices for the treatment of obesity. The intragastric devices advantageously act as a volume-occupying device, and is able to survive implantation in a patient's stomach for a year or longer. In addition, the intragastric devices may provide additional benefits. For example, the intragastric device may be configured to stimulate an inner stomach wall and/or temporarily block the pylorus to slow gastric emptying and/or be rotationally variant, thereby encouraging different stimulation points on the inner wall of the stomach and limiting the stomach's ability to adapt over long term implantation.

PatBase - W014055766_A1



Title: CLAMPING COUPLING**Priority:** US19940327915 19941024 WO1995DE01475 19951019**Family:**

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TR960344 A2	19960621	TR19950001306	19951024
WO9612443 A1	19960502	WO1995DE01475	19951019
ZA9508949 A	19970723	ZA19950008949	19951023

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International class [A61B17/56](#) [A61B17/60](#) [A61B17/64](#) (Advanced/Invention) ;
 (IPC 8-9) : [A61B17/60](#) (Advanced/Non-invention) ;
[A61B17/60](#) (Core/Invention)

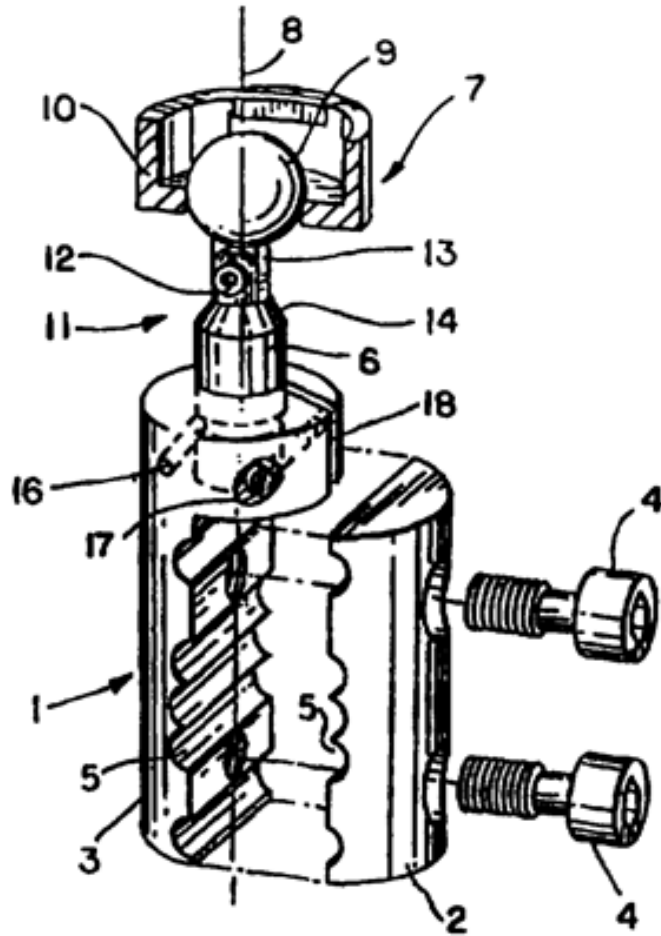
International class [A61B](#) [A61B17/60](#) [F16D](#)
 (IPC 1-7) :

CPC: [A61B17/6458](#)**European class:** [A61B17/64K](#)[Classification Explorer](#)**Cited documents:** WO9308758 A1, EP0522355 A1, DE4139700 A1,**Forward Citations:**

Abstract:

The invention relates to a clamp coupling for securing bone screws, pins or the like and for securing them to an external fixation, consisting of two half-shells which can be secured together by screws and having fittings for the bone screws or the like, and a ball-joint connector secured to one of the half-shells, whereby a rotary joint is fitted between the half-shell supporting the ball-joint connector and the ball-joint connector itself or an intermediate member permitting the jointed connection of the various components.

PatBase - W09612443_A1



77) Family number: 44404867 (US2010042165A)

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Title: BONE ANCHORING MEMBER**Priority:** US20080137255P 20080729 US20090462127 20090729 US20090653086 20091208

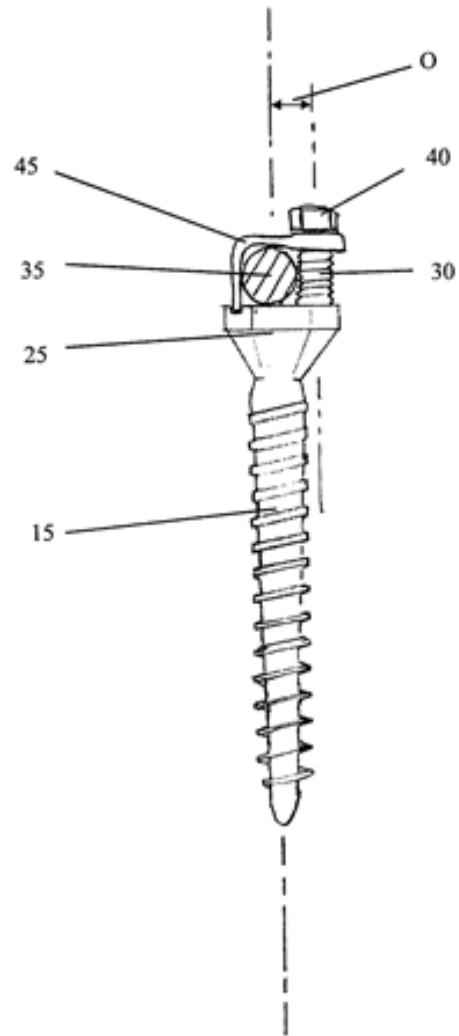
Family:	Publication number	Publication date	Application number	Application date
	<u>US2010042165 AA</u>	20100218	US20090462127	20090729
	<u>US2010168796 AA</u>	20100701	US20090653086	20091208
	<u>US8398684 BB</u>	20130319	US20090462127	20090729

Probable Assignee: KAMRAN AFLATOON**Assignee(s):**^(std) AFLATOON KAMRAN ; ELIASSEN KENNETH ARDEN ; ETTLINGER MARK ; KAMRAN AFLATOON**Inventor(s):**^(std) AFLATOON KAMRAN ; ELIASSEN KENNETH ARDEN ; ETTLINGER MARK ; KAMRAN AFLATOON**Agent(s):** OBER KALER GRIMES AND SHRIVER ATTORNEYS AT LAW; OBER KALER C O ROYAL W CRAIG; OBER KALER GRIMES AND SHRIVER; ROYLA W; CHRISTOPHER F**International class**
(IPC 8-9): [A61B17/70 A61B17/86](#) (Advanced/Invention);
[A61B17/68 A61B17/70](#) (Core/Invention)**CPC:** [A61B17/7001 A61B17/7037 A61B17/7005 A61B17/7035 A61B17/705 A61B2090/037](#)**European class:** [A61B17/70B A61B17/70B5 A61B17/70B5B A61B17/70D2 K61B17/70B1C2 K61B19/30H](#)**US class:** [606/246 606/264 606/264P 606/265 606/267 606/305 606/305P 606/305S 606/308 606/308S](#)[Classification Explorer](#)**Cited documents:** US6699248 BB, US6565567 BA, US6231575 BA, US5584831 A, US5368594 A, US5330474 A, US2009270916 AA, US2008312696 AA, US2006229616 AA, US2005171538 AA, US2004204711 AA, US2004102781 AA,**Forward Citations:** WO17035031, WO14138303, US9636152, US9636151, US9636146, US9629669, US9597119, US9566092, US9532815, US9522021, US9504496, US9504494, US9480517, US9451993, US9439683, US9433441, US9393047, US9339305, US9308027, US9216039, US9198693, US9186184, US9168069, US9055978, US9050139, US8998960, US8998959, US8940020, US8936623, US8926672, US8926670, US8915944, US8911479, US8911478, US8894657, US8870928, US8852239, US8814911, US8585741, US8556938, US8444681, US8394133, US8377067, US8100909, US2016183983, US2016000479, US2014343613, US2013184759, US2012209332, US2011245877, US2010268279, US2009270916, US2009248030,

Abstract:

Source: US2010042165A A threaded rod or pedicle screw for insertion into the pedicle portion of a vertebra and having at its exposed end a second threaded rod rigidly connected in a generally parallel orientation to the longitudinal axis of the pedicle screw. The second rod being offset from the longitudinal axis of the pedicle screw and having a locking pin or arm and retaining nut for affixing a rod to the pedicle screw substantially over and aligned with the longitudinal axis of the pedicle screw.

PatBase - US8398684_BB



78) Family number: 11291256 (WO9904714A1)

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Title: EXTERNAL FIXATOR**Priority:** WO1997BG00009 19970724

Family:	Publication number	Publication date	Application number	Application date
	AU199736156 A1	19990216	AU19970036156	19970724
	WO9904714 A1	19990204	WO1997BG00009	19970724

Probable Assignee: NESTOROV STANISLAV GEORGIEV**Assignee(s):^(std):** NESTOROV STANISLAV GEORGIEV**Assignee(s):** STANISLAV GEORGIEV NESTOROV**Inventor(s):^(std):** NESTOROV STANISLAV GEORGIEV**Inventor(s):** STANISLAV GEORGIEV NESTOROV

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GH GN GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
(IPC 8-9): [A61B17/60](#) [A61B17/66](#) (Advanced/Invention);
[A61B17/60](#) (Core/Invention)

International class
(IPC 1-7): [A61B17/64](#) [A61B17/66](#)

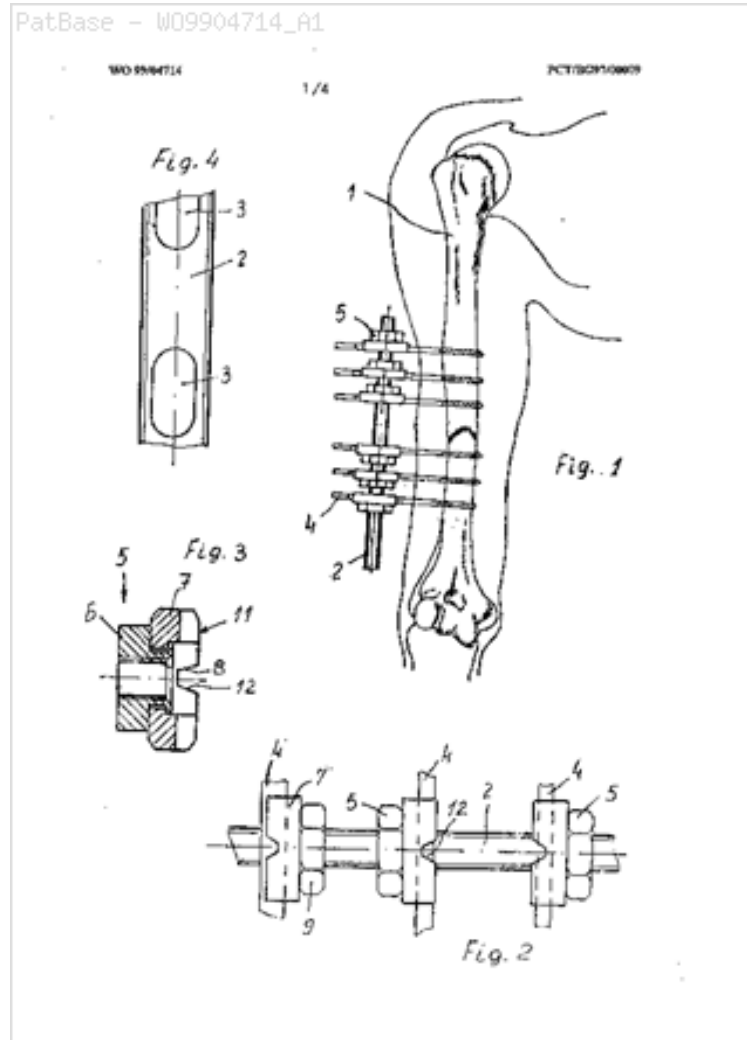
CPC: [A61B17/60](#) [A61B17/66](#)**European class:** [A61B17/60](#) [A61B17/66](#)[Classification Explorer](#)

Cited documents: WO9701628 A1, WO9111151 A1, US4621627 A, SU1739984 T, FR2520607 A3, FR2457676 A1, EP0424292 A2, EP0386308 A1, EP0377744 A1, EP0140786 A2, DE9408668 U, DE9320834 U, DE3837228 A1, DE3543042 A1, BG100328 A, BG100327 A,

Forward Citations: WO15183226, WO11019367, WO08051064, WO0207620, US8696668, US8282636, US7931650, US7731738, US7588571, US7575575, US7507240, CN103976783,

Abstract:

An external fixator is comprising threaded carries (2) with the through hole (3) for receiving the bone implants (4) clamping by fixing nuts (5) and the carries (2) being interconnected by compression-destruction mechanisms (30) and/or ball and socket joints (13).



79) Family number: 9678535 (US5501684A)

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Title: OSTEOSYNTHETIC FIXATION DEVICE**Priority:** EP19920911746 19920625 WO1992CH00125 19920625

Family:	Publication number	Publication date	Application number	Application date
	<u>DE59208301 D1</u>	19970507	DE19925008301	19920625
	<u>EP0599847 A1</u>	19940608	EP19920911746	19920625
	<u>EP0599847 B1</u>	19970402	EP19920911746	19920625
	<u>ES2100348 T3</u>	19970616	ES19920911746T	19920625
	<u>JP3308271 B2</u>	20020729	JP19920510686T	19920625
	<u>JP6509950 T2</u>	19941110	JP19920510686T	19920625
	<u>US5501684 A</u>	19960326	US19940199130	19940726
	<u>WO9400066 A1</u>	19940106	WO1992CH00125	19920625

Probable Assignee: SYNTHES USA LLC**Assignee(s):^(std):** SYNTHES AG ; SYNTHES USA ; HESS MARTIN ; SCHLAEPFER JOHANNES FRIDOLIN**Assignee(s):** SYNTHES ; SYNTHES (USA) ; SYNTHES CHUR AG ; SYNTHES AG CHUR ; SYNTHES AG CHUR CHUR GRAUBUENDEN CH ; SYNTHES U S A ; SYNTHES USA LLC ; SYNTHES CHUR CHUR GRAUBUENDEN CH AG**Inventor(s):^(std):** SCHLAEPFER JOHANNES ; SCHLAEPFER JOHANNES FRIDOLIN ; HESS MARTIN ; SCHLAEPFER JOHANNES F ; SCHLAEPFER JOHANNES FRIDOLIN**Inventor(s):** HESS MARTIN CH 4434 HOELSTEIN CH ; SCHLAEPFER JOHANNES FRIDOLIN CH 8750 GLARUS CH**Designated states:** AT BE CA CH DE DK ES FR GB GR IT JP LI LU MC NL SE US

International class A61B17/58 A61B17/60 A61B17/64 A61B17/70 (Advanced/Invention);
 (IPC 8-9): A61B17/17 (Advanced/Non-invention);
A61B17/58 A61B17/60 A61B17/70 (Core/Invention);
A61B17/16 (Core/Non-invention)

International class A61B17/58 A61B17/60 A61B17/84
 (IPC 1-7):

CPC: Y10T403/32311 A61B17/7035 A61B17/1703 A61B17/1725 A61B17/60 A61B17/6466
A61B17/7007 A61B17/7014 A61B17/7041 A61B17/7055

European class: A61B17/60 A61B17/64M A61B17/70B1C4 A61B17/70B1L A61B17/70B5 A61B17/70B6
A61B17/70G K61B17/17B K61B17/17M

US class: 403/90 606/301 606/328 606/61 606/69 606/72 606/73[Classification Explorer](#)

Cited documents: WO8803781 A1, US5261910 A, US5129899 A, US5057111 A, US5053036 A, US5047029 A, US5002542 A, US4905680 A, US4836196 A, US4484570 A, US4422451 A, FR2640493 A1, EP0450075 A1, EP0216563 A1, DE8609102 U, DE3027148 A1, DE3027138 A1, DE2933637 A1,

Forward Citations: WO9825534, WO14108877, WO13063477, WO13063469, WO12013868, WO12006554, WO11097431, WO07139031, WO07138722, WO07138659, WO07036807, WO07022790, WO06091238, WO06005198, WO05020829, WO04052218, WO03032849, WO0245606, WO02076314, WO0178613, WO0149191, WO0119266, WO0015125, USRE46371, USRE39035, USD643925, USD564097, US9655665, US9655651, US9636148, US9636146, US9629673, US9622790, US9615867, US9615858, US9610105, US9603629, US9597119, US9585707, US9566092, US9526531, US9522021, US9510865, US9510862, US9504499, US9504496, US9498262, US9486245, US9480510, US9468471, US9468469, US9468468, US9456851, US9453526, US9451997, US9451993, US9451992, US9451990, US9451987, US9439681, US9433440, US9421041, US9414870, US9408646, US9408638, US9402663, US9393047, US9387013, US9381048, US9381046, US9358044, US9351776, US9333009, US9326798, US9326796, US9326795, US9320552, US9320546,

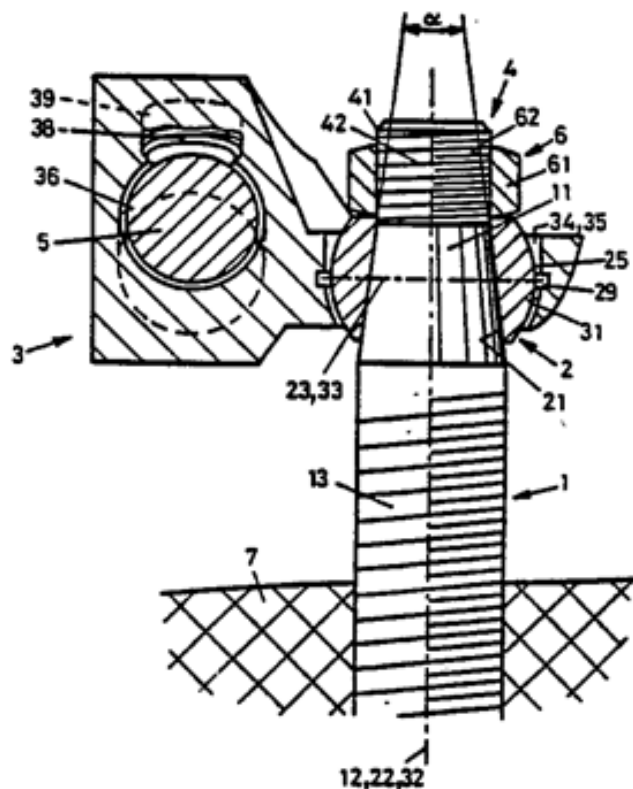
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 AU732351, AU2014274519, AU2002368445,

Abstract:

Source: US5501684A PCT No. PCT/CH92/00125 Sec. 371 Date Jul. 26, 1994 Sec. 102(e) Date Jul. 26, 1994 PCT Filed Jun. 25, 1992 PCT Pub. No. WO/9400066 PCT Pub. Date Jan. 6, 1994. An osteosynthetic fixation device consists of a fixation element 1 which has a conical head section 11 and an anchoring element 12 abutting it which is for attachment into the bone. The fixation device also consists of a spherically formed, layered, slotted clamping piece 2 which has a conical borehole 21 for installation of the conical head section 11, and which is meant for locking within a connecting piece 3 equipped with a spherically shaped layered borehole 31. Fixation piece 1 has an axially arrayed tension element 4, permitting axial displacement and wedging of conical head section 11 in the borehole 21 that corresponds with it. The fixation device is appropriate for use as a plate/screw system, an internal or external fixator, and in particular for spinal column fixation.

PatBase - W09400066_A1



80) Family number: 51740766 (US2012209332A)

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Title: SPINAL FIXATION SYSTEM AND METHOD**Priority:** US20110442617P 20110214 US20120366117 20120203

Family:	Publication number	Publication date	Application number	Application date
	<u>US2012209332 AA</u>	20120816	US20120366117	20120203
	<u>US9186184 BB</u>	20151117	US20120366117	20120203

Probable Assignee: PIONEER SURGICAL TECH INC**Assignee(s):^(std):** JANOWSKI BRIAN P ; PIONEER SURGICAL TECH INC ; PIONEER SURGICAL TECHNOLOGY INC**Assignee(s):** TD BANK NA ADMINISTRATIVE AGENT AS**Inventor(s):^(std):** JANOWSKI BRIAN P**Agent(s):** FITCH EVEN TABIN AND FLANNERY LLP**International class**
(IPC 8-9): A61B17/70 (Advanced/Invention);
A61B19/00 (Advanced/Non-invention)**CPC:** A61B17/7038 A61B17/7041 A61B17/7082 A61B17/7085 A61B2090/037**European class:** A61B17/70B5D A61B17/70B6 A61B17/70T2D A61B17/70T4C K61B19/30H**US class:** 1/1 606/278 606/278P[Classification Explorer](#)

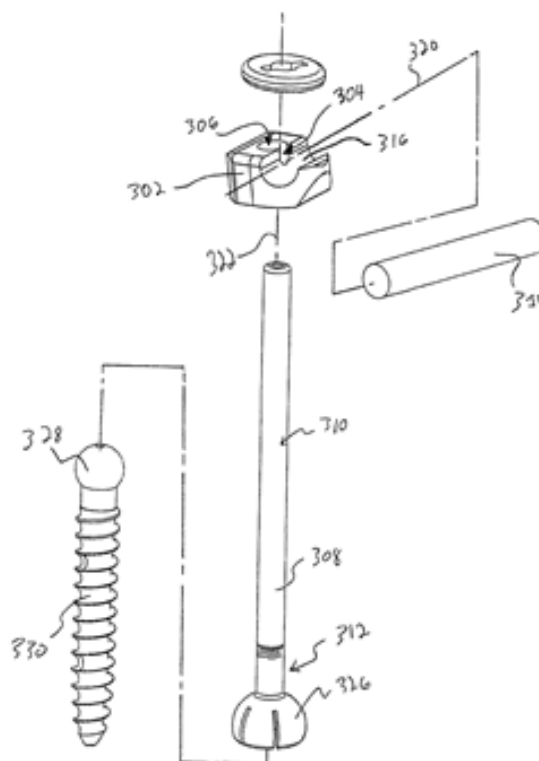
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Forward Citations: WO16094588, US9636152, US9408642, US2016331361, US2016183983, US2016066957, US2016000479, US2014371746, US2014114358, US2013150898,

Abstract:

Source: US2012209332A A spinal fixation system is provided that, in one form, comprises a pedicle screw assembly having a coupling device with an elongate member for guiding a fixation element, such as a spinal rod, into the coupling device and a lock device for fixing the spinal rod to the coupling device. The pedicle screw assembly may be passed through a small incision and connected to a vertebral bone. By connecting a second pedicle screw assembly to a second vertebral bone, the elongate members of the pedicle screw assemblies provide guideposts for directing the spinal rod subcutaneously between the pedicle screw assemblies and into the coupling devices thereof.

PatBase - US9186184_BB



0) WO17014661A3 – CHAIR SIEGE

81) Family number: 64783608 (WO17014661A3)

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Title: CHAIR

Priority: RO20150000461 20150702

Family:

Publication number	Publication date	Application number	Application date
RO131609 A2	20170130	RO20150000461	20150702
WO17014661 A2	20170126	WO2016RO00021	20160629
WO17014661 A3	20170330	WO2016RO00021	20160629

Probable Assignee: JOHNOSON MERCEDES VASILICA

Assignee(s):^(std) JOHNOSON MERCEDES VASILICA ; PORDEA VIOREL

Inventor(s):^(std) PORDEA VIOREL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A47C1/02](#) [A47C7/14](#) [A47C7/36](#) [A47C7/54](#) (Advanced/Invention)
(IPC 8-9):

CPC: [A47C7/022](#) [A47C1/06](#) [A47C7/004](#) [A47C7/36](#) [A47C7/38](#) [A47C7/46](#) [A47C7/54](#) [A47C11/005](#)

[Classification Explorer](#)

Cited documents: US293833 BB, US2009127905 AA, RO112986 B1,

Abstract:

The invention relates to a chair that can be used in a dwelling, in a means of transportation for persons or any other situation that involves a seated position of a person, as well as when it is necessary to protect an occupant of a means of transport and also for strengthen the back and neck muscles, to provide the spine curvature correction and for relaxation and rest, as well as for moving and positioning the sick people in bed, even those immobilized. Chair it is made up of a seat rigid (1) or in one of some inner upholstered profiled and upholstered having safety belts seats (11 and G), supported by a plane support, each of them being secured to the stand or legs mentioned, rigid seat (1) being continued upwardly either by a partial rigid backrest (2), or be a total rigid backrest (A) or a high rigid backrest (B), the latter one being provided at the upper part, with some shoulder side restraint left and, respectively, right (7 and 8), respectively, with a partial rigid headrest (9), to said first upholstered seat (11), being attached by means of a multiple, lower joint (C), profiling upholstered backrest for dwelling (D), continued upwardly by means of a upper multiple joint (E), with a inner partial upholstered headrest (12) and to the other upholstered seat having safety belts (G) being connected by means of a multiple locking joint (H), the profiled upholstered for occupants seat front of a car backrest (I), whereat, by means of a multiple upper locking joint (J) is connected either a partial headrest (K) or a total headrest (V), any of the rigid and, respectively, upholstered seats (1, 11, and G) being provided with seating areas for the chair (130 and 131) left and, respectively, right whose contours are similar to the contours of optimal seating area (122 and 123) left and, respectively, right of a the future occupant buttocks (127), each having an one-finger glove-like shape, the finger, being kept close to the palm and positioned with the tip pointing towards the knees and, the back of the palm comprising the protrusion of the gluteus

maximus muscle, a contour of the first optimal seating area (122) of this occupant's buttocks (127) starting from the as a backbone concave curve line (g''') which descends downwardly on the lateral part of the thigh, up to the gluteus maximus muscle, which continues with a short with inflection concave-convex outward line (h'''), that is connecting with a slightly curved, vertically line (i''') downwards to third region, next to the knee of the thigh, where it continues with a concave curve outwardly, placed horizontally line (j'''), which is connected with a almost vertical convex outwards line (k'''), that closes the contour of this area (122).

PatBase - W017014661_A3

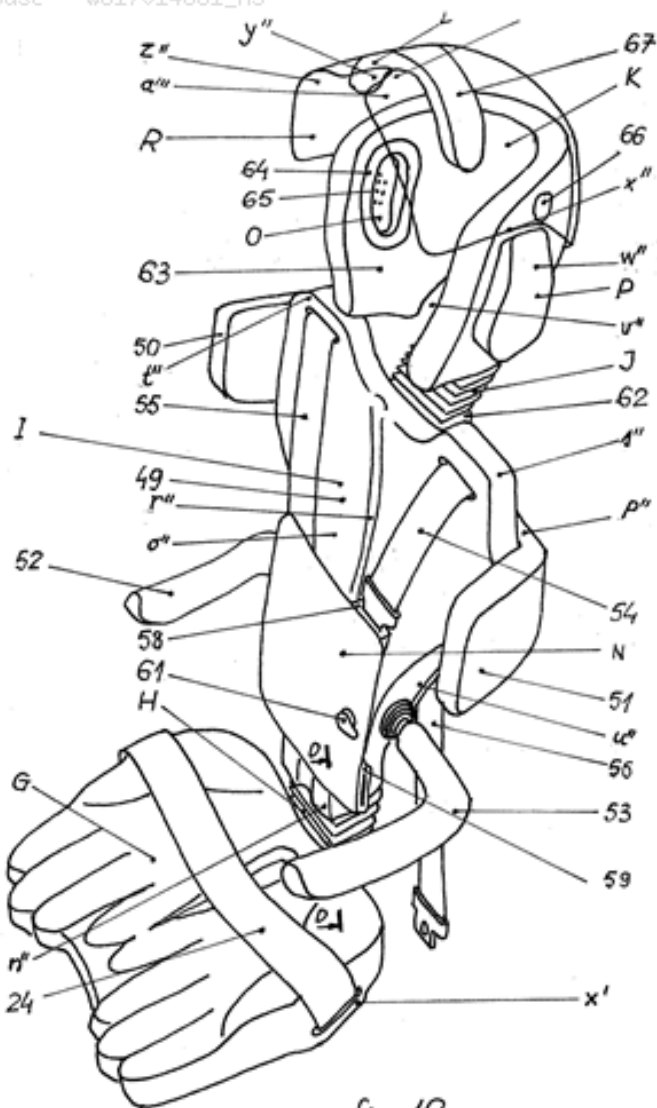


fig. 12

82) Family number: 55667446 (US2015150683A)

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Title: ORTHOPEDIC ANCHORING SYSTEM AND METHODS**Priority:** US20120674233P 20120720 US20130413318 20130719 US20130798922P 20130315
WO2013US51381 20130719

Family:	Publication number	Publication date	Application number	Application date
	<u>US2015150683 AA</u>	20150604	US20130413318	20130719
	<u>US9554909 BB</u>	20170131	US20130413318	20130719
	<u>WO14015309 A1</u>	20140123	WO2013US51381	20130719

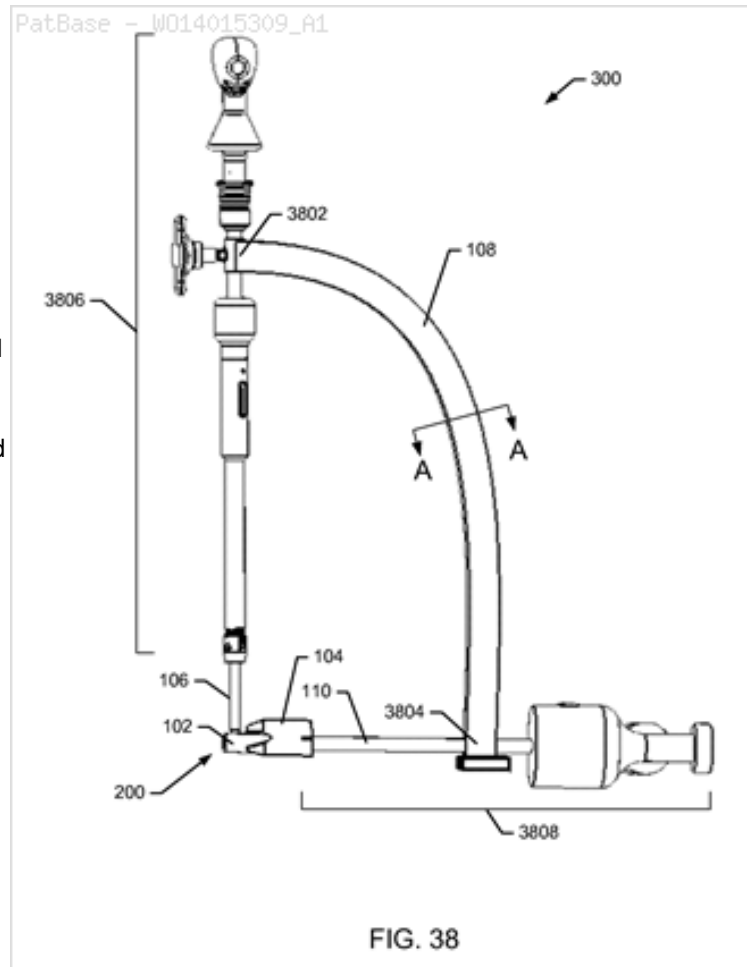
Probable Assignee: JCBD LLC**Assignee(s):**^(std): JCBD LLC**Inventor(s):**^(std): DONNER CHRISTOPHER THOMAS ; DONNER EDWARD JEFFREY**Agent(s):** SAMUEL WADE; POLSINELLI PC; JOSHUA J; MCCAY MICHAEL ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA
LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA
NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK
SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM
ZW**International class**
(IPC 8-9): A61B17/17 A61B17/70 A61B17/84 A61B17/86 A61B17/90 A61F2/30
A61F2/46 (Advanced/Invention);
A61B17/15 A61B17/88 (Advanced/Non-invention)**CPC:** A61F2/30749 A61F2/30 A61F2/4637 A61F2002/30495 A61F2002/30617 A61F2002/4642
A61F2002/30332 A61F2002/30378 A61B17/15 A61B17/1757 A61B17/7055 A61B17/7076
A61B17/8875**US class:** 623/16.11[Classification Explorer](#)**Cited documents:** WO9848717, WO9531947, WO9523559, WO9308745 A1, WO14074853 A1,
WO14055529 A2, WO13166496 A1, WO13020123 A2, WO12015976 A1, WO11091349
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US2002068977 AA, US2002032484 AA, US2002029784 AA, US2001020143 AA,
US2001018616 AA, US2001005796 AA, RU2364359 C1, KR101037206, JP2007275592,
EP1663037 B1,

Forward Citations: US9421109, US9381045, US9333090, CN104434294,

Abstract:

Source: US2015150683A Systems and methods for performing orthopedic surgical procedures to treat a patient are presented herein. The orthopedic anchoring system may include an implant assembly and a delivery tool to perform the orthopedic surgical procedure. The implant assembly may include an implant outer layer, an implant body situated within the implant outer layer, and a fastener attached to a locking element of the implant body. The delivery tool may include a targeting arm, a fastener guide removably attached at a first end of the targeting arm and an implant guide removably attached to a second end of the targeting arm. The delivery tool may maintain a fixed spatial relationship between a longitudinal axis of the fastener and a longitudinal axis of the implant outer layer and implant body. The orthopedic anchoring system may be used to perform orthopedic surgical procedures related to joint reinforcement or immobilization.



83) Family number: 42674791 (US2008312656A)

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Title: ADJUSTABLE FIXATION DEVICES INCORPORATING DRIVE SYSTEMS**Priority:** US20070943816P 20070613 US20080047677 20080313

Family:	Publication number	Publication date	Application number	Application date
	<u>US2008312656 AA</u>	20081218	US20080047677	20080313
	<u>US8167880 BB</u>	20120501	US20080047677	20080313
	<u>WO08156881 A1</u>	20081224	WO2008US56814	20080313

Probable Assignee: AMEI TECHNOLOGIES INC**Assignee(s):**^(std) AMEI TECHNOLOGIES INC ; VASTA PAUL J**Assignee(s):** JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS ; ORTHOFIX INC**Inventor(s):**^(std) VASTA PAUL J**Agent(s):** BAKER AND MCKENZIE LLP, PATENT DEPARTMENT; BAKER AND MCKENZIE LLP; WELLS RICHARD V

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^{(IPC 8-9):} A61B17/00 A61B17/08 A61B17/56 A61B17/64 ^(Advanced/Invention);
A61B17/03 A61B17/56 A61B17/60 ^(Core/Invention)

CPC: A61B17/6416 A61B17/6441 A61B17/66**European class:** A61B17/64C A61B17/64G A61B17/66**US class:** 606/151 606/151S 606/54 606/60 606/60P[Classification Explorer](#)

Cited documents: WO06116234 A2, US6171309 BA, US6171309 B1, US6129727 A, US5334202 A, US4498889 A, US3631582 A, US2004267275 AA, US2003036462 AA, US2002010465 AA,

Forward Citations: US9463045, US9393045, US9161800, US8425519, US2016022315, US2014276816, US2013218216, US2010312291, CN104622550,

Abstract:

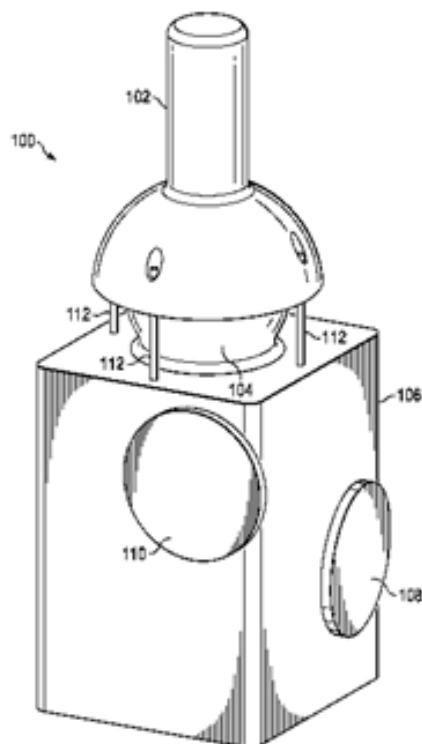
Source: US2008312656A Disclosed embodiments relate to a fixation device for use in supporting and/or aligning an injured body part. An exemplary disclosed fixation device uses a pair of thumb wheel control elements to provide controlled rotational micromovements of a joint fracture. The control elements, their associated drive systems, and at least a tension member allow for converting a rotational force to a translational force to be applied to a driven article in one direction. In addition, the fixation device may incorporate a drive system that introduces a simultaneous longitudinal translation of bone pins with rotation, in order to provide for a translated point of origin of rotation between the fixation device and the affected body part supported by the fixation device.

PatBase - W008156881_A1

WD 3008156881

PCT/US2008/056811

1/12



84) Family number: 3775712 (US4768524A)

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Title: Device for immobilizing a bone structure, especially intended for orthopedic use**Priority:** CA19870530394 19870223 FR19860002818 19860228

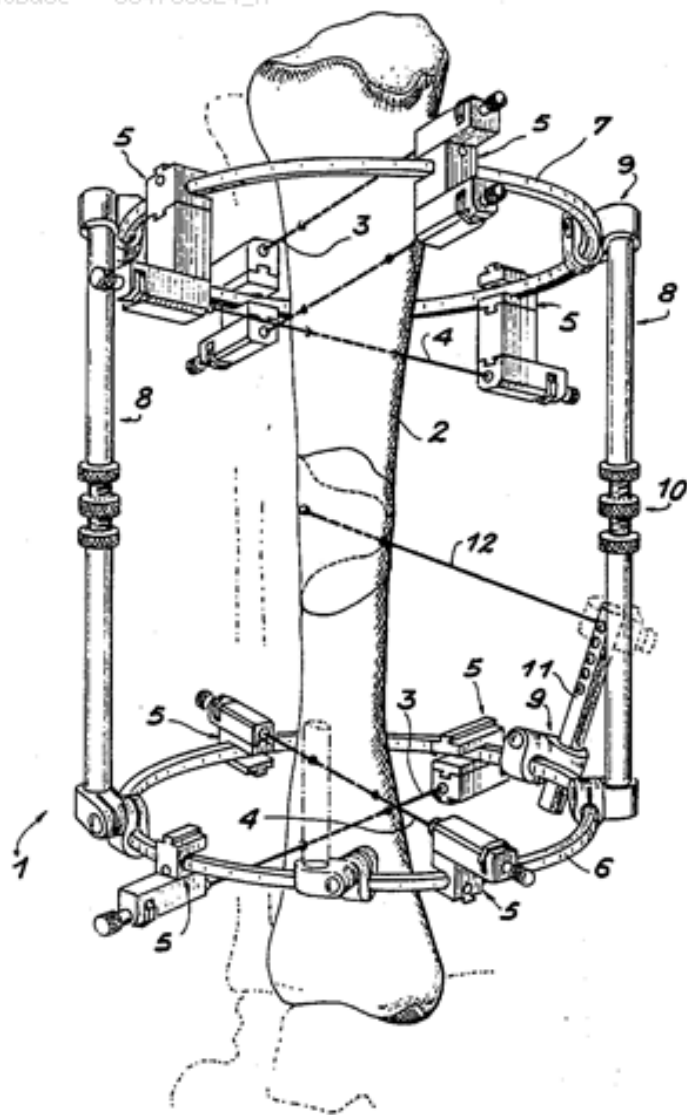
Family:	Publication number	Publication date	Application number	Application date
	<u>CA1284071 A1</u>	19910514	CA19870530394	19870223
	<u>DE3763284 D1</u>	19900726	DE19873763284	19870216
	<u>EP0240376 A1</u>	19871007	EP19870400332	19870216
	<u>EP0240376 B1</u>	19900620	EP19870400332	19870216
	<u>FR2595045 A1</u>	19870904	FR19860002818	19860228
	<u>FR2595045 B1</u>	19911227	FR19860002818	19860228
	<u>JP62253046 A2</u>	19871104	JP19870041242	19870224
	<u>US4768524 A</u>	19880906	US19870017884	19870220

Probable Assignee: HARDY JEAN MARIE**Assignee(s):^(std):** HARDY JEAN MARIE ; JIYAN MARI ARUDEI**Assignee(s):** HARDY JEAN MARIE LARCHES FR**Inventor(s):^(std):** HARDY JEAN MARIE ; JIYAN MARI ARUDEI**Inventor(s):** HARDY JEAN MARIE LARCHES FR**Agent(s):** G RONALD BELL AND ASSOCIATES**Designated states:** BE DE GB IT SE**International class**
(IPC 8-9): [A61B17/56](#) [A61B17/60](#) [A61B17/62](#) (Advanced/Invention);
[A61B17/60](#) (Core/Invention)**International class**
(IPC 1-7): [A61B17/56](#) [A61B17/60](#) [A61F5/04](#)**CPC:** [A61B17/62](#)**European class:** [A61B17/62](#)**US class:** [128/92Z 606/54](#)[Classification Explorer](#)**Cited documents:** US4365624 A, GB2114891 A1, GB2107990 A1, GB2099904 A1, GB1562061 A, GB136297 A, FR2107676 A5, EP0146872 A2,**Forward Citations:** WO9947060, WO9222268, WO9106253, WO9011727, WO9009150, WO03068084, USRE40914, US9642649, US9456849, US9443302, US9381042, US9295493, US9265529, US9220533, US9155559, US9101398, US9078700, US9066756, US9044271, US9023045, US8945128, US8864750, US8834467, US8828056, US8771319, US8679117, US8574232, US8333766, US8257353, US8251937, US8057474, US7887498, US7806843, US7744632, US7628799, US7615051, US7422593, US7311711, US7306601, US6537275, US6537274, US6340361, US5971984, US5968043, US5827283, US5797908, US5785709, US5766173, US5728095, US5702389, US5681309, US5591164, US5527309, US5496319, US5458599, US5405347, US5372597, US5358504, US5275598, US5180380, US5156605, US5067955, US5057113, US5024618, US4973331, US4968316, US4936843, US2012184958, US2012143191, US2012143190, US2011208187, US2011208186, US2011004199, US2010305568, US2010234844, US2010179548, US2010087819, US2010042102, US2009198234, US2009177197, US2009082709, US2008200952, US2007161983, US2007055234, US2005085754, US2004167530, US2004030339, US2003120273, US2002156474, JP6006134, JP4240354, JP2002058677, FR2680966, FR2645428, FR2623390, EP1153576, EP0318356, EP0263878, AU738590,

Abstract:

Source: US4768524A Device for immobilizing a bone element, especially for orthopedic use, comprising pins or needles, passing through the element, mounted in supports themselves borne by two metallic rigid hoops surrounding the bone element and separated from one another by spacing braces having an adjustable length, each hoop having in straight cross-section an external outline presenting two flattened parallel portions 14, 15 respectively connected by two convex portions 16, 17 the supports of the pins or needles 3 borne by the hoop being constituted by laterally open parts having two wings comprising plane surfaces adapted to cooperate through plane sliding with the flattened portions of the hoop, these wings being joined by a concave portion matching the outline of one of the convex portions of the external outline of the hoop.

PatBase - US4768524_A



85) Family number: 1958621 (US4693240A)

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Title: ORTHOPAEDIC FRACTURE FIXATION APPARATUS**Priority:** GB19840009564 19840412

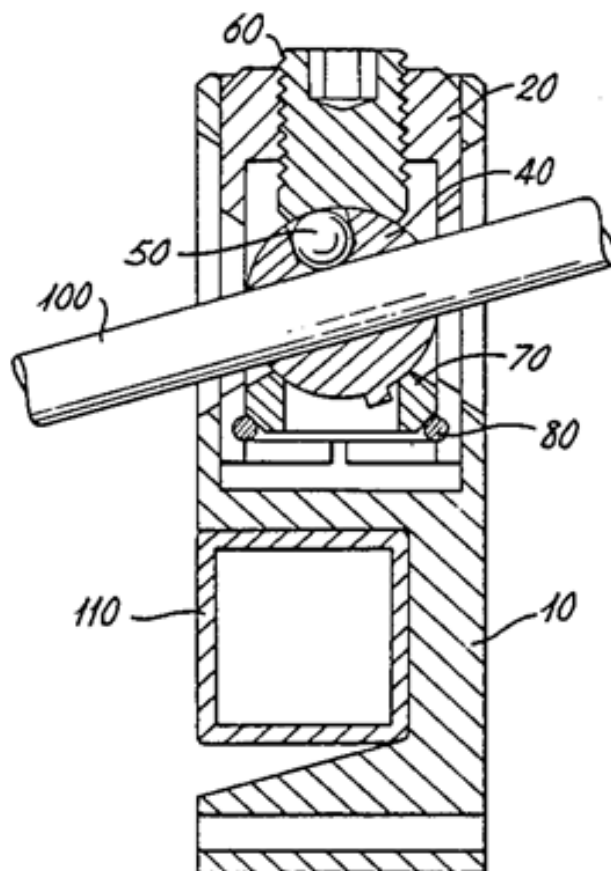
Family:	Publication number	Publication date	Application number	Application date
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	GB2157179 B2	19871021	GB19850009240	19850411
	GB8409564 A0	19840523	GB19840009564	19840412
	GB8509240 A0	19850515	GB19850009240	19850411
	US4693240 A	19870915	US19850722387	19850412

Probable Assignee: EVANS M**Assignee(s):**^(std): EVANS M ; EVANS MERVYN ; NAT RES DEV**Assignee(s):** NATIONAL RESEARCH DEVELOPMENT A BRITISH CORP CORP ; NATIONAL RESEARCH DEVELOPMENT CORP ; BRITISH TECHNOLOGY GROUP LTD ; MERVYN EVANS**Inventor(s):**^(std): EVANS MERVYN**Inventor(s):** MERVYN EVANS**International class**
^(IPC 8-9): [A61B17/64](#) (Advanced/Invention) ;
[A61B17/60](#) (Core/Invention)**International class**
^(IPC 1-7): [A61B17/60](#) [A61F5/04](#)**CPC:** [Y10T403/32024](#) [Y10T403/32311](#) [Y10T403/7041](#) [A61B17/6466](#)**European class:** [A61B17/64M](#)**US class:** [128/92Z](#) [128/92ZW](#) [403/362](#) [403/55](#) [403/90](#) [606/54](#)[Classification Explorer](#)**Cited documents:** US490541 A, US4579009 A, US4541422 A, US4456004 A, US4393868 A, US4271832 A, US4265561 A, US4127119 A, US2391537 A, US2346346 A, US2014638 A, US169383 A, GB2031731 A1, GB2029702 A1, DE392266 A,**Forward Citations:** WO9312729, WO8905126, WO8807357, WO13063477, WO13063469, WO12006554, WO11097431, US9636148, US9615858, US9463045, US9453526, US9393045, US9198695, US9060814, US8663291, US8663290, US8506604, US8465530, US8366710, US8197518, US8109975, US8075603, US8075560, US8029548, US8029547, US8012182, US7951173, US7947065, US7942911, US7942910, US7942909, US7141051, US6607532, US5562661, US5520689, US5496319, US5486174, US5443464, US5047029, US4920959, US4895141, US4887596, US2014276816, US2012253404, US2011208251, US2011009911, US2010312288, US2010076434, US2009306720, US2009275986, US2009093819, US2008183213, US2008183212, US2006195098, GB2290616, GB2290616, EP3167838, EP2030583, EP2030583, EP0953316, EP0572790, EP0314021, EP0314021, EP0240034,

Abstract:

Source: US4693240A A bone pin clamp for external fracture fixation apparatus comprises rotation, slide and housing elements (240, 220, 210) nested one within the next, each such element being apertured to receive a pin (100) therethrough, and the rotation and slide elements respectively affording pin adjustment in azimuth and zenith, and in height, relative to the housing element, and a locking mechanism (60, 80, 170) including a common actuator member (60) operable simultaneously to lock the pin and rotation and slide elements in the housing element. In a preferred form the housing element serves as a cylinder with the slide element as a keyed piston therein, and the rotation element is a disc located between a screw (60) and annular thrust members (80, 170) engaged in the piston, the piston and disc being split respectively to lock by expansion and compaction under screw action towards the thrust members.

PatBase - US4693240_A



86) Family number: 4667866 (US5029841A)

© PatBase

Title: Supply magazine for stacked sheets**Priority:** DE19893906984 19890304 DE19893942326 19891221 DE19905009239 19901218
DE19906009239 19900301

Family:	Publication number	Publication date	Application number	Application date
	<u>AT123642 E</u>	19950615	AT19900124555T	19901218
	<u>DE3906984 A1</u>	19900906	DE19893906984	19890304
	<u>DE3942326 A1</u>	19910627	DE19893942326	19891221
	<u>DE59009239 D1</u>	19950720	DE19905009239	19901218
	<u>DE69009239 D1</u>	19940707	DE19906009239	19900301
	<u>DE69009239 T2</u>	19950112	DE19906009239T	19900301
	<u>EP0386627 A2</u>	19900912	EP19900103981	19900301
	<u>EP0386627 A3</u>	19910410	EP19900103981	19900301
	<u>EP0386627 B1</u>	19940601	EP19900103981	19900301
	<u>EP0436885 A2</u>	19910717	EP19900124555	19901218
	<u>EP0436885 A3</u>	19911211	EP19900124555	19901218
	<u>EP0436885 B1</u>	19950614	EP19900124555	19901218
	<u>ES2075125 T3</u>	19951001	ES19900124555T	19901218
	<u>JP2305725 A2</u>	19901219	JP19900053472	19900305
	<u>JP2736288 B2</u>	19980402	JP19900404510	19901220
	<u>JP2839323 B2</u>	19981216	JP19900053472	19900305
	<u>JP6154240 A2</u>	19940603	JP19900404510	19901220
	<u>US5029841 A</u>	19910709	US19900486981	19900301
	<u>US5147363 A</u>	19920915	US19900629996	19901219

Probable Assignee: KODAK AG**Assignee(s):^(std):** ANTON HERURE ; EASTMAN KODAK CO ; HAERLE ANTON PROF DR ; HAERLE ANTON ; KODAK AG ; HARLE ANTON**Assignee(s):** HAERLE ANTON PROF DR 4400 MUENSTER DE ; KODAK AKTIENGESSELLSCHAFT ; KODAK AG 7000 STUTTGART DE ; KODAK AG 70327 STUTTGART ; KODAK AG 70327 STUTTGART DE ; HAERLE ANTON PROF DR 48161 MUENSTER DE ; HARLE ANTON PROF DR ; IISUTOMAN KODATSUKU CO ; EASTMAN KODAK COMPANY ; EASTMAN KODAK CO ROCHESTER N Y ; EASTMAN KODAK CO ROCHESTER N Y US**Inventor(s):^(std):** ANTON OZUBUARUTO ; ETTISCHER HELMUT ; ANTON HERURE ; HAERLE ANTON ; HAERLE ANTON PROF DR ; HERUMUUTO ETEISHIYAA ; OSWALD ANTON ; HARLE ANTON PROF DR**Inventor(s):** HERUMUUTO ETEISHAA ; OSWALD ANTON 7300 ESSLINGEN DE ; OSWALD ANTON D 7300 ESSLINGEN ; OSWALD ANTON D 7300 ESSLINGEN DE ; HAERLE ANTON PROF DR 48161 MUENSTER DE ; ANTON OZUARUTO ; ETTISCHER HELMUT 7302 OSTFILDERN DE ; ETTISCHER HELMUT D 7301 OSTFILDERN 1 ; ETTISCHER HELMUT D 7301 OSTFILDERN 1 DE**Designated states:** AT CH DE ES FR GB IT LI NL SE**International class**
(IPC 8-9): A61B17/56 A61B17/58 A61B17/86 B65H1/04 F16B35/04 G03G15/00 (Advanced/Invention);
A61B17/80 (Advanced/Non-invention);
A61B17/56 A61B17/58 A61B17/68 B65H1/04 F16B35/04 G03G15/00 (Core/Invention)**International class**
(IPC 1-7): A61B17/56 A61B17/58 B65H1/04 B65H31/20 F16B35/04 F16B35/04 G03G15/00**CPC:** A61B17/8047 A61B17/8605 A61B17/8625 F16B35/04 F16B35/048 B65H1/04**European class:** A61B17/86A A61B17/86B B65H1/04 F16B35/04 F16B35/04B4 K61B17/80D6**US class:** 271/171 271/223 606/305 606/309 606/328 606/72 606/73

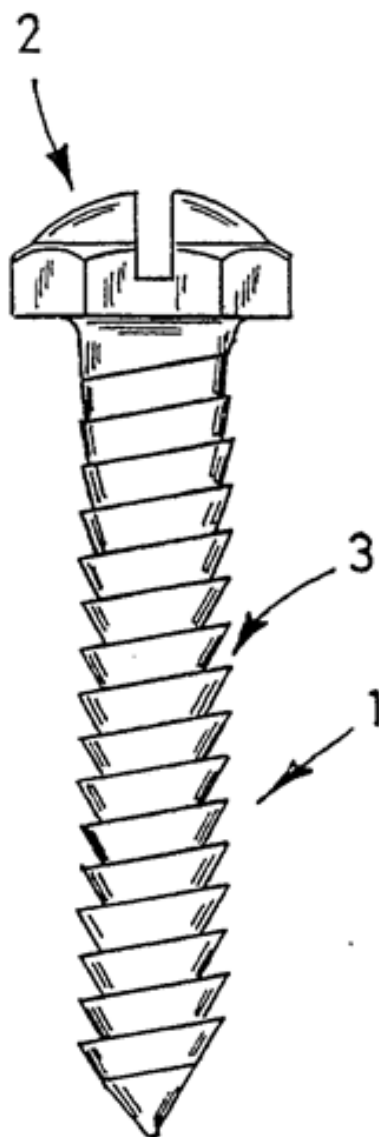
Cited documents: WO9002526 A1, WO8904150 A1, WO8900028 A1, US4943043 A, US4887595 A, US4836196 A, US4786042 A, US4773638 A, US4569338 A, US4493317 A, US4468200 A, US4463753 A, US4280692 A, US3997138 A, US3695259 A, US3488779 A, US3466748 A, US324768 A, US3236141 A, JP55084731 A2, GB2015346 A1, FR2642958 A1, FR1266386 A, EP0325682 A1, EP0242708 A2, EP0201024 A1, EP0181433 A1, DE8713879 U, DE8416663 U, DE3027138 A1, DE2951199 C2, DE251246 A, DE2416782 B2, DE2243964 C3, DE2243964 A1, DE2013968 A1,

Forward Citations: WO9410928, WO04043276, USD630327, USD630326, USD626230, USD625817, US9636151, US9636146, US9629669, US9615866, US9603643, US9597119, US9566092, US9545274, US9532815, US9522021, US9510865, US9504582, US9504496, US9498273, US9498266, US9480517, US9474561, US9468471, US9468469, US9468468, US9451997, US9451993, US9451989, US9451987, US9439683, US9433453, US9414863, US9408638, US9393047, US9358044, US9333009, US9308034, US9308027, US9216041, US9216039, US9211150, US9199808, US9173681, US9168071, US9168069, US9161793, US9144444, US9113959, US9101426, US9101404, US9095444, US9072564, US9055978, US9050148, US9050139, US9011491, US8998960, US8998959, US8979904, US8936623, US8932332, US8926672, US8926670, US8920472, US8911478, US8911477, US8906075, US8900272, US8894657, US8870928, US8852239, US8845649, US8828058, US8814913, US8696711, US8651866, US8636740, US8613760, US8591560, US8591515, US8556938, US8518086, US8506599, US8475498, US8460345, US8444681, US8419779, US8394133, US8377067, US8366745, US8357183, US8357182, US8353932, US8292926, US8292892, US8273089, US8211145, US8162979, US8162948, US8152810, US8142485, US8123785, US8114158, US8105368, US8100915, US8092500, US8070786, US8066739, US8048131, US8043089, US8029285, US8012177, US8002270, US7951176, US7951170, US7901437, US7837716, US7776076, US7766915, US7637496, US7578836, US7464927, US7455695, US7419499, US7377509, US7314467, US7311712, US7306604, US7235079, US7214227, US7204838, US7052499, US6989014, US6984235, US6979334, US6945975, US6945974, US6918912, US6830245, US6770075, US6730093, US6682561, US6655566, US6527777, US6468277, US6395030, US6325803, US6302390, US6299615, US6296642, US6170817, US6149653, US6129728, US6030162, US5984924, US5976141, US5964768, US5871486, US5814046, US5797912, US5776134, US5709382, US5607428, US5520687, US5498265, US5403136, US2011301652, US2011218579, US2011210501, US2011137355, US2011066191, US2010179600, US2009295072, US2009281579, US2009281576, US2009281571, US2009206544, US2009105755, US2009076620, US2008249573, US2008018045, US2007282342, US2006269903, US2006149235, US2006122612, US2006113723, US2006083603, US2006079893, US2006025771, US2005288794, US2005261688, US2005216000, US2005192580, US2005065521, US2005038434, US2005010219, US2005010218, US2005010217, US2004188924, US2004092938, US2004006346, US2003057634, US2003014054, US2002128654, FR2846869, FR2739151, FR2683445, EP1416872, EP0592266, DE20014648, DE10000591, AU682839,

Abstract:

Source: US5029841A A supply magazine (1) for stacked sheets (5) comprises on its bottom surface a slideway (13, 14) adapted for cooperation with a limiting member (11, 12) allowing a continuous size adjustment. The slideway (13, 14) is moreover provided at selected points with abutments (37); and a limiting member (11, 12) which has complementary counterabutments can be arrested by positive engagement with the abutments respectively against shifting movement on the slideway (13, 14) in positions corresponding to given sheet sizes.

PatBase - US5147363_A

Fig. 1

87) Family number: 17958374 (US5480451A)

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Title: Angularly adjustable offset spherical head endoprosthesis
Priority: DE19920011250U 19920817 DE19924227139 19920817 DE19935007628 19930807
Family:

Publication number	Publication date	Application number	Application date
DE4227139 A1	19940224	DE19924227139	19920817
DE4227139 C2	19940601	DE19924227139	19920817
DE59307628 D1	19971211	DE19935007628	19930807
DE9211250 U1	19921022	DE19920011250U	19920817
EP0583711 A2	19940223	EP19930112682	19930807
EP0583711 A3	19940622	EP19930112682	19930807
EP0583711 B1	19971105	EP19930112682	19930807
ES2109402 T3	19980116	ES19930112682T	19930807
US5480451 A	19960102	US19930106152	19930812

Probable Assignee: ESKA MEDICAL GMBH AND CO

Assignee(s):^(std): ESKA IMPLANTS GMBH AND CO ; ESKA MEDICAL GMBH AND CO

Assignee(s): ESKA MEDICAL GMBH AND CO 2400 LUEBECK DE ; ESKA MEDICAL GMBH AND CO 23556 LUEBECK DE ; ESKA MEDICAL GMBH AND CO 23556 LUEBECK ; ESKA IMPLANTS GMBH AND CO 23556 LUEBECK DE ; ESKA MEDICAL GMBH

Inventor(s):^(std): GRUNDEI HANS ; MOSER HEINZ

Inventor(s): MOSER HEINZ 6227 OESTRICH WINKEL ; MOSER HEINZ 6227 OESTRICH WINKEL DE ; MOSER HEINZ D 65375 OESTRICH WINKEL DE ; GRUNDEI HANS 2400 LUEBECK ; GRUNDEI HANS 2400 LUEBECK DE ; GRUNDEI HANS D 23558 LUEBECK DE

Designated states: CH DE ES FR GB IT LI

International class
 (IPC 8-9): [A61F2/36](#) [A61F2/40](#) (Advanced/Invention);
[A61F2/00](#) (Advanced/Non-invention)

International class
 (IPC 1-7): [A61F2/30](#) [A61F2/32](#) [A61F2/36](#) [A61F2/40](#)

CPC: [A61F2/3609](#) [A61F2/3662](#) [A61F2002/30136](#) [A61F2002/30332](#) [A61F2002/30377](#)
[A61F2002/30403](#) [A61F2002/30617](#) [A61F2002/3611](#) [A61F2002/3631](#) [A61F2002/365](#)
[A61F2002/3656](#) [A61F2220/0025](#) [A61F2220/0033](#) [A61F2230/0004](#) [A61F2250/0097](#)
[A61F2310/00011](#) [A61F2310/00179](#)

European class: [A61F2/36C](#) [K61F2/00T1C](#) [K61F2/00T1P](#) [K61F2/00T2N1](#) [K61F2/30A2K2W](#)
[K61F2/30A3T1C](#) [K61F2/30A3T1P](#) [K61F2/30A3T2N](#) [K61F2/30A3W34](#) [K61F2/36C1](#)
[K61F2/36C2G](#) [K61F2/36C4](#) [K61F2/36C8](#) [K61F2/36D](#) [K61F220/00T](#) [K61F220/00T1](#)
[K61F230/00K2](#) [K61F250/00W99A](#) [K61F310/00A2](#) [K61F310/00A6](#)

US class: [623/22.43](#) [623/23](#)

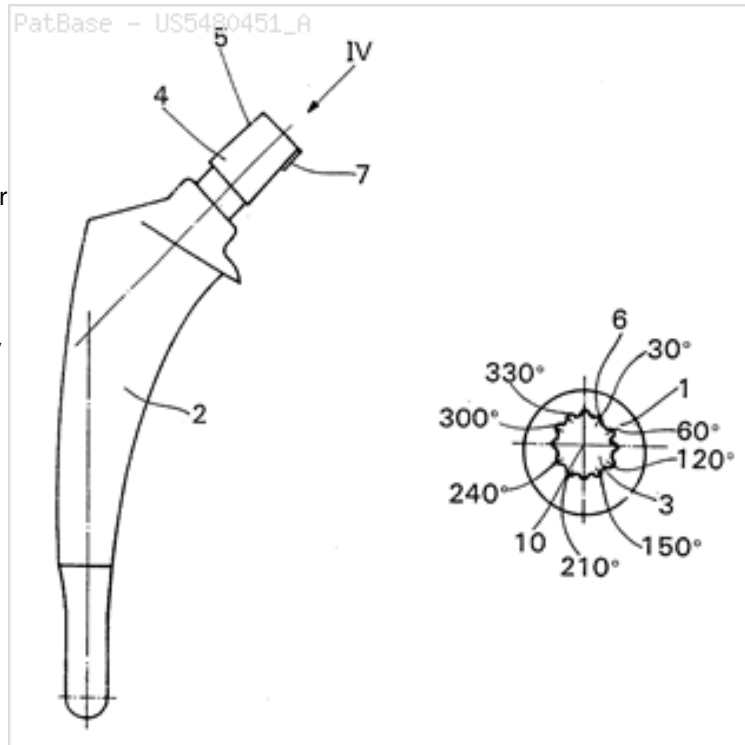
[Classification Explorer](#)

Cited documents: US5314479 A, US5002581 A, US4312079 A, US3685058 A, FR2619502 A1, FR2574283 A1, EP0363019 A2, DE9211250 U, DE9103574 U, DE8901018 U, DE363019 A, DE2921529 A1, CH507704 A,

Forward Citations: WO13011290, WO12175853, WO07109601, WO07109601, US9283075, US9237949, US9211188, US8974540, US8936648, US8795381, US8764845, US8562616, US8480751, US8328873, US8187280, US8163028, US8157869, US8088169, US7914584, US7497874, US7445639, US7323013, US6974483, US6520994, US6436147, US6156070, US6048365, US2013211535, US2013204390, US2013184831, US2011166668, US2010222893, US2010152860, US2009299482, US2009149964, US2008167723, US2008167722, US2007219641, US2007043448, US2006224243, US2006106463, US2003074080, GB2334890, FR2976477, FR2777772, FR2730628, FR2697996, EP2626042, EP1125565, EP0953321, EP0824013, EP0617934, EP0583711, DE19940348, DE19940348, DE19940348, DE19630298, DE102004008138,

Abstract:

Source: US5480451A A spherical head endoprosthesis has a spherical head and a base piece. Between the base piece and the spherical head is a conical interference fit connection, wherein the spherical head has a conical bore and the base piece has a conical pin. The axis of the conical bore and the center line of the spherical head form an angle in the range of 7 DEG to 15 DEG. The conical bore is decentralized in relation to the center line with an offset of 1 to 4 mm. On the inside of the bore are at least five grooves parallel to the axis of the bore, into which, after assembly of the conical interference fit connection, grips at least one locking projection provided on the peripheral surface of the conical pin. The grooves may be designated by markings around the periphery of the bore opening for easy identification of the proper groove for insertion of the locking projection during the replacement operation.



88) Family number: 4800992 (US4054955A)

© PatBase

Title: Orthopaedic endoapparatus designed to grow a new live shoulder and hip joint, to reconstruct a deformed joint or to restore a pathologically dysplastic and congenitally luxated joint

Priority: DE19762605180 19760210 FR19760005402 19760226 GB19760003660 19760130
US19760653544 19760129

Family:	Publication number	Publication date	Application number	Application date
	<u>DE2605180 A1</u>	19770811	DE19762605180	19760210
	DE2605180 B2	19790906	DE19762605180	19760210
	<u>DE2605180 C3</u>	19800514	DE19762605180	19760210
	<u>FR2355493 A1</u>	19780120	FR19760005402	19760226
	<u>FR2355493 B1</u>	19781013	FR19760005402	19760226
	<u>GB1507953 A</u>	19780419	GB19760003660	19760130
	<u>US4054955 A</u>	19771025	US19760653544	19760129

Probable Assignee: TALLINSK POLT INST

Assignee(s):^(std): SEPPO ARNOLD IVANOVICH ; TALLIN POLITEKHN I ; TALLIN POLITEKHN INSTI ; TALLINSK POLT INST

Assignee(s): TALLINSKIJ POTLITECHNITSCHESKIJ INSTITUT ; TALLINSKIJ POLITECHNITSCHESKIJ INST TALLIN SO ; TALLINSKIJ POLITECHNITSCHESKIJ INSTITUT TALLIN SOWJETUNION ; TALLINSKY POLITEKHNICHESKY INSTI ; TALLIN POLI I

Inventor(s):^(std): SEPPO ARNOLD IWANOWITSCH ; SEPPO ARNOLD IVANOVITSCH ; SEPPO ARNOLD IVANOVICH ; SEPPO A I

Inventor(s): SEPPO ARNOLD IVANOVITSCH TALLIN SOWJETUNION ; IWANOWITSCH SEPPO ARNOLD ; A I SEPPO

International class
(IPC 8-9): A61B17/68 A61F2/30 A61F2/32 A61F2/36 A61F2/40 (Advanced/Invention);
A61F2/00 (Advanced/Non-invention)

International class
(IPC 1-7): A61B17/18 A61F1/00 A61F1/24 A61F5/00

CPC: A61B17/68 A61F2/30721 A61F2/32 A61F2/3601 A61F2/40 A61F2002/304
A61F2002/30405 A61F2002/30433 A61F2220/0025 A61F2220/0041

European class: A61B17/68 A61F2/30B A61F2/32 A61F2/36A A61F2/40 K61F2/00T2M4L K61F2/00T4
K61F2/00T7 K61F2/30A3T2M4L K61F2/30A3T4 K61F2/30A3T7 K61F220/00T
K61F220/00T7

US class: 623/19.13

[Classification Explorer](#)

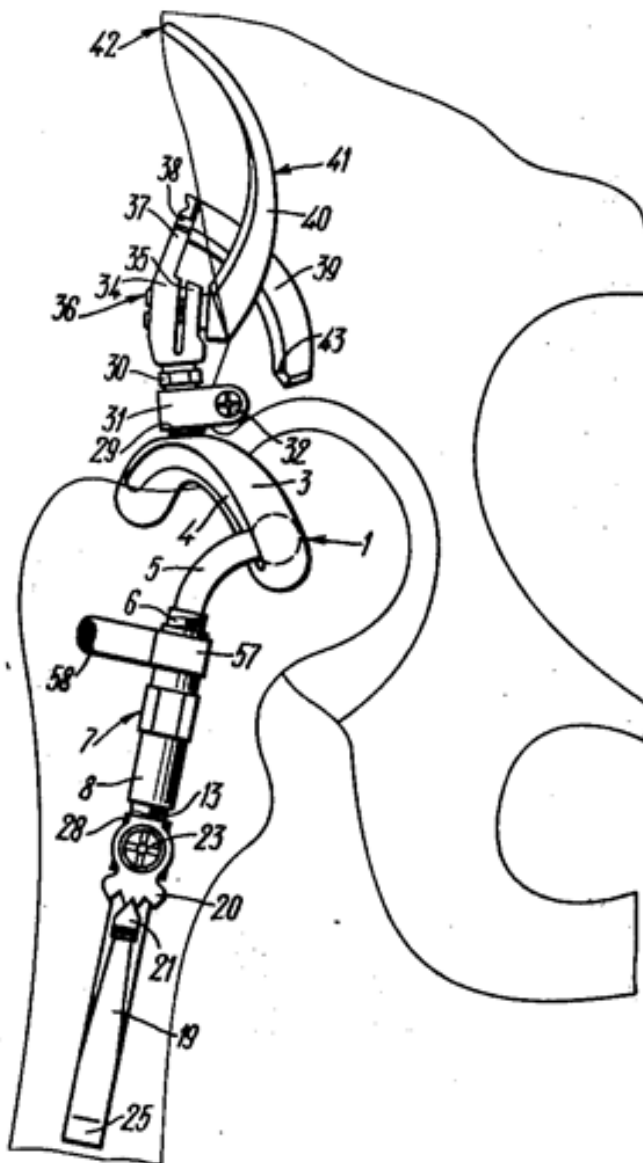
Cited documents: US3680553 A, US3242922 A, US2765787 A,

Forward Citations: WO9834567, WO9107137, WO05044121, US9655648, US9610103, US9545312, US9532804, US9474619, US9468466, US9433507, US9408652, US9398957, US9278004, US9125746, US9114016, US9089435, US9044270, US9005298, US8974536, US8900239, US8894714, US8864834, US8845724, US8801795, US8709090, US8597362, US8303665, US8277511, US8187282, US8100967, US8088166, US8080063, US7887544, US7846211, US7763020, US7678150, US7678147, US7655041, US7632310, US7470287, US7465319, US7462197, US6375684, US5507827, US5282865, US5032130, US4681590, US4261062, US2014277446, US2012253414, US2011213466, US2011202138, US2011166661, US2011137415, US2011087297, US2010145449, US2010114322, US2010106248, US2009058734, US2007244564, US2006247641, US2005288791, US2005278030, NL1005234, GB2250919, GB2250919, FR2872025, EP2488119, EP1682008, EP1611872, EP1421919, EP0966240, EP0808617, EP0628294, EP0388881, EP0073057, DE3991804, DE3909182, DE3605630,

Abstract:

Source: US4054955A The orthopaedic endoapparatus designed to grow a new live shoulder and hip joint, to reconstruct a deformed joint or to restore a pathologically dysplastic and congenitally luxated joint, contains a figured hinge, consisting of a spherical knob engaged with a curved guiding member. The spherical knob is linked by an expandable connecting turnbuckle with an anchor-like pair of curved rods to secure the fixation of the endoapparatus to the hip or shoulder bone, while the guiding member is connected with an anchor-like member fastening the endoapparatus to the pelvis or to the scapula and clavicle. The endoapparatus allows one to connect the joint ends of the bones purposefully with regard to kinematics, maintaining during rest as well as during movements, effected in the provisional joint around a predeterminate point or some axes, a clearance between the faciae articularis indispensable for their conjunctive, congruent and complementary growth, terminated in covering the faciae articularis with a layer of supporting hyaline cartilage of the joint.

PatBase - US4054955_A



89) Family number: 9307206 (WO9510240A1)

© PatBase

Title: A DEVICE FOR THE MUTUAL POSITIONING OF BONE SECTIONS

Priority: NL19930001738 19931008

Family:	Publication number	Publication date	Application number	Application date
	NL9301738 A	19950501	NL19930001738	19931008
	WO9510240 A1	19950420	WO1994NL00249	19941010

Probable Assignee: AGNES MATHILDE TERMATEN GEB VA

Assignee(s):^(std): AGNES MATHILDE TERMATEN GEB VA ; SPANGENBERG THEO ; TERMATEN GERRIT JOHANNES ; THEO SPANGENBERG

Assignee(s): AGNES MATHILDE TERMATEN GEB VAN DER HEIJDEN

Inventor(s):^(std): TERMATEN GERRIT JOHANNES

Designated states: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE US

International class [A61B17/64](#) (Advanced/Invention)
(IPC 8-9):

International class [A61B17/60](#)
(IPC 1-7):

CPC: [A61B17/6483](#)

European class: [A61B17/64M4](#)

[Classification Explorer](#)

Cited documents: WO8503449 A1, SU1161100, GB538600 A, GB2077847 A1, FR2536984 A1, EP0377744 A1, EP0374093 A1, DE2718515 A1,

Forward Citations: WO15014440, WO14111907, WO12072756, WO03049629, WO0211631, WO02080788, US9326795, US8845691, US8758343, US8343219, US8221457, US8162988, US7731738, US7588571, US7575575, US7507248, US7507240, US6458131, US6221072, US2015038966, KR100879046, ITVR20130013, FR2823095, EP1656898, EP0913128, CN104837422, AU2002353305,

Abstract. A device adapted for mutually positioning bone sections, comprising a support bar to be applied laterally along the bone sections to be mutually positioned, at least two pin-holding blocks which are slidably and lockably mounted thereon, said blocks carrying pivotally adjustable clamping supports that have a number of seats for bone pins and cooperate with a clamping means to be fixed thereon so as to lock the pins within the respective seats. According to the invention the bone pin holding blocks have, at each of two opposite sides, a projecting portion for the attachment of a clamping support, whereby the two clamping supports may be fixed in such relative positions that the respective seat planes for the bone pins enclose an acute angle. This enables the bone pins – that projects on both sides from a bone pin holding block – to be placed in a V-configuration and thus to obtain a rigid structure.

WFO 95/30549

PCT/US2004/003494



0) US2001016675A – STRESS REDUCTION APPARATUS AND METHOD

90) Family number: 29993406 (US2001016675A)

© PatBase

Title: Stress reduction apparatus and method

Priority:

EP19970954289	19971231	EP19970954289	19980709	EP19990937483	19990727
EP19990946953	19990917	EP20070014059	19971231	US19990422328	19991021
JP19980530292	19971231	US19980124286	19980729	US19990224349	19990104
US19970933456	19970918	US19990224348	19990104	US19980157486	19980921
US19980124321	19980729	US19970778277	19970102	JP19980530292T	19971231
US20000497118	20000203	US20000697711	20001027	US20020136446	20020502
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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

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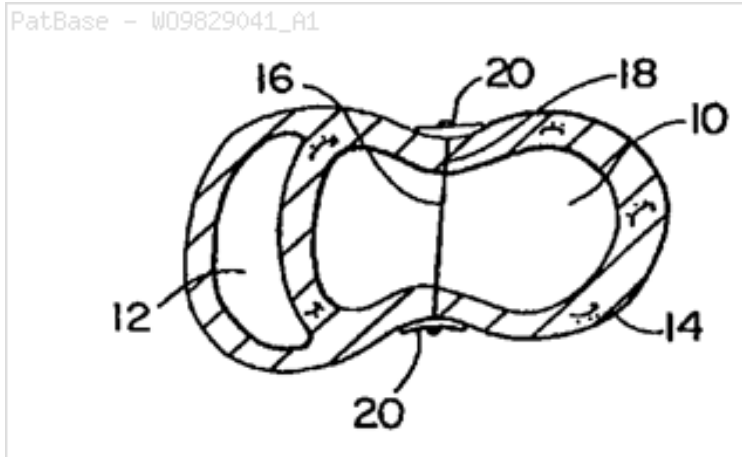
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Abstract:

Source: US2001016675A The device and method for reducing heart wall stress. The device can be one which reduces wall stress throughout the cardiac cycle or only a portion of the cardiac cycle. The device can be configured to begin to engage, to reduce wall stress during diastolic filling, or begin to engage to reduce wall stress during systolic contraction. Furthermore, the device can be configured to include at least two elements, one of which engages full cycle and the other which engages only during a portion of the cardiac cycle.



0) DE102014019730A1 – FIXIERUNGSVORRICHTUNG FUER KNOCHENFRAKTUREN FI...

91) Family number: 60958142 (DE102014019730A1)

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Title: FIXIERUNGSVORRICHTUNG FUER KNOCHENFRAKTUREN Fixation device of fracture
(Machine translation)

Priority: DE201410019730 20140527

Family:	Publication number	Publication date	Application number	Application date
	<u>DE102014019730 A1</u>	20151203	DE201410019730	20140527

Probable Assignee: HIPP MEDICAL AG

Assignee(s):^(std): HIPP MEDICAL AG

Inventor(s):^(std): HIPP MARKUS ; WIRTH ANDRE

International class A61B17/58 A61B17/68 (Advanced/Invention)
(IPC 8-9):

CPC: A61B17/80

[Classification Explorer](#)

Cited documents: DE102012105125 B3
DE102012105123 B3
DE102011001018 A1
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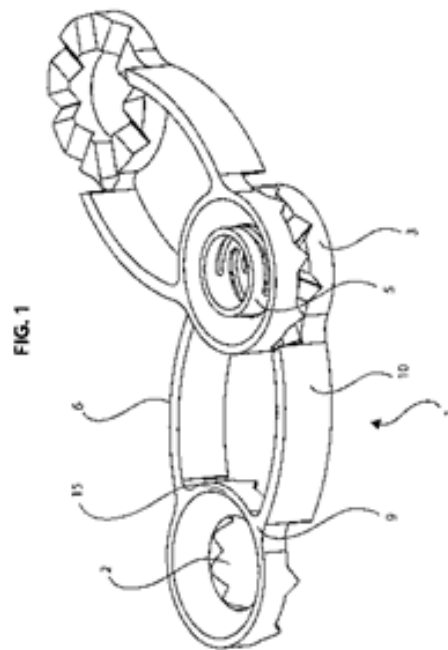
Abstract:

Source: DE102014019730A1 Die vorliegende Erfindung betrifft eine Fixierungsvorrichtung fuer Knochenfrakturen mit wenigstens zwei Spannelementen (1, 1', 1''), wenigstens zwei Befestigungsmitteln (7), sowie wenigstens zwei Huelselementen (5). Ein jedes der Spannelemente (1, 1', 1'') hat einen Konturkoerper (6) und weist, an in Laengsrichtung voneinander beabstandeten Enden, Aufnahmen (2) auf, die Huelselemente (5) und/oder Befestigungselemente (7) umschliessen, so dass durch eine Verknuepfung mehrerer Spannelemente (1, 1', 1''), Huelselemente (5) und/oder Befestigungsmittel (7) diese zu einer Kette oder dergleichen angeordnet werden koennen. Ein jedes Spannelement (1, 1', 1'') ist spiegelsymmetrisch zur Laengsrichtung ausgebildet, wobei sich die Aufnahmen (2) ausgehend von einer gedachten Mittellinie eines jeden Spannelements (1, 1', 1'') in Laengsrichtung (L) jeweils nach oben oder unten zur Aussenkante des Konturkoerpers (6) des Spannelements (1, 1', 1'') in Hoeohenrichtung (H) erstrecken und an ihrer der gedachten Mittellinie zugewandten Kontaktflaeche eine Verzahnung (3) aufweisen, wobei bei der Verbindung einzelner Spannelemente (1, 1', 1'') miteinander diese, durch das miteinander in Eingriff bringen der an den einander zugewandten Kontaktflaechen der Aufnahmen (2) ausgebildeten Verzahnung (3), in eine vorbestimmte Winkellage zueinander ausrichtbar sind. The present invention relates to a fixation device for bone fractures comprising at least two clamping elements (1, 1', 1''), at least two fastening means (7), and at least two Huelselementen (5). Each of the clamping elements (1, 1', 1'') has a Konturkoerper (6) and has, in Laengsrichtung spaced ends, seats (2) which enclose Huelselemente (5) and / or fastening elements (7), so that by linking several clamping elements (1, 1', 1''), Huelselemente (5) and / or fixing means (7) these can be arranged to form a chain or the like. Each clamping element (1, 1', 1'') is formed mirror-symmetrically to the longitudinal extension and, with the receptacles (2), starting from an imaginary center line of each clamping element (1, 1', 1'') in Laengsrichtung (L) in each case up or down to the outer edge of the Konturkoerpers (6) of the clamping element (1, 1', 1'') in the height direction (H) and having at its the imaginary center line facing Kontaktflaeche a toothing (3), wherein in the connection of individual clamping elements (1, 1', 1'') with each other this, by bringing together in engagement of the facing Kontaktflaechen of the receptacles (2) formed of teeth (3), in a predetermined angular position are mutually aligned.

PatBase - DE102014019730_A1

DE 10 2014 019 730 A1 2015.12.03

Anhängende Zeichnungen



1025

0) US5087258A – RING SPLINT TO SET, AFFIX AND REGULATE THE TENS...

92) Family number: 2911500 (US5087258A)

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Title: RING SPLINT TO SET, AFFIX AND REGULATE THE TENSION POSITION OF BONE SEGMENTS

Priority: DE19873720242 19870619 DE19883865842 19880602 DE19883890496 19880602
WO1988DE00323 19880602 EP19880905179 19880602

Family:	Publication number	Publication date	Application number	Application date
	AT68680 E	19911115	AT19880905179T	19880602
	AU198819354 A1	19890119	AU19880019354	19880602
	DE3720242 A1	19881229	DE19873720242	19870619
	DE3865842 D1	19911128	DE19883865842	19880602
	DE3890496 D2	19890524	DE19883890496	19880602
	EP0366678 A1	19900509	EP19880905179	19880602
	EP0366678 B1	19911023	EP19880905179	19880602
	US5087258 A	19920211	US19900457745	19900119
	WO8810099 A1	19881229	WO1988DE00323	19880602

Probable Assignee: SCHEWIOR THOMAS

Assignee(s):^(std): SCHEWIOR THOMAS ; SCHEWIOR THOMAS DR MED

Assignee(s): THOMAS SCHEWIOR

Inventor(s):^(std): SCHEWIOR THOMAS ; SCHEWIOR THOMAS DR MED

Inventor(s): THOMAS SCHEWIOR ; VERZICHT DES ERFINDERS AUF NENNUNG

Designated states: AT AU BB BE BG BJ BR CF CG CH CM DE DK FI FR GA GB HU IT JP KR LI LU ML MR NL NO RO SD SE SN SU TD TG US

International class [A61B17/60 A61B17/62](#) (Advanced/Invention)
(IPC 8-9):

International class [A61B17/60 A61F5/04](#)
(IPC 1-7):

CPC: [A61B17/62](#)

European class: [A61B17/62](#)

US class: [606/56 606/59](#)

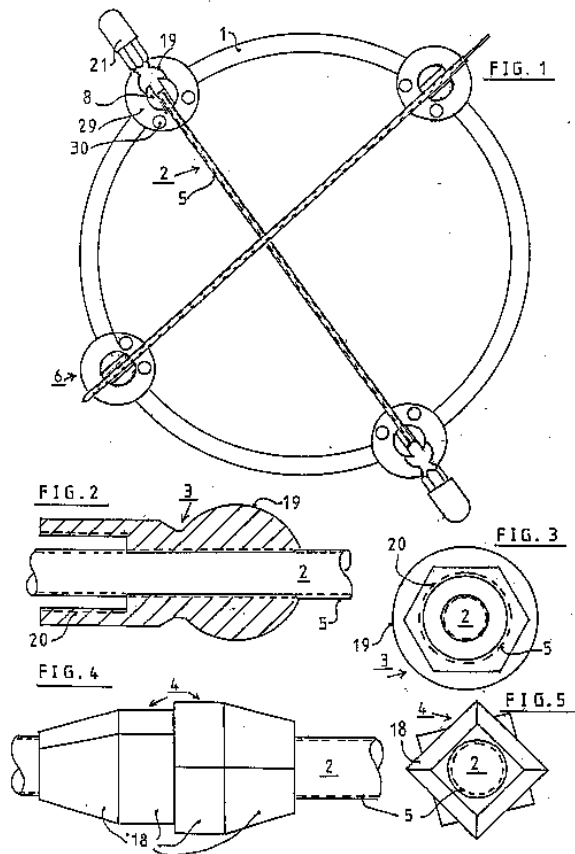
[Classification Explorer](#)

Cited documents: WO8503449 A1, US4615338 A, US4584995 A, SU538710 T, FR2536984 A1, FR2405063 A1, EP0194187 A1, EP0190990 A1, EP0146872 A2, DE3510305 A1, DE3345276 A1, DE2832631 A1,

Forward Citations: WO10104567, WO10083033, WO07067297, US9642649, US9510860, US9463045, US9393045, US9351763, US9265529, US9220533, US9101398, US9044271, US9011438, US8951252, US8945128, US8906020, US8870799, US8858555, US8834467, US8641714, US8382757, US8333766, US8251937, US8137347, US8114077, US8062293, US8057474, US8029505, US7985221, US7887498, US7806843, US7749224, US7615051, US7479142, US7422593, US7261713, US7147639, US6964663, US6746448, US6652524, US6283964, US6056748, US5797908, US5591164, US5578041, US5496319, US5437668, US5376090, US5372597, US5330476, US5304160, US2016022314, US2014276820, US2014276819, US2014276816, US2012303030, US2012143190, US2011208186, US2011082458, US2010234844, US2010179548, US2010125273, US2010042102, US2009264883, US2009198236, US2009198235, US2009198234, US2009177197, US2009099565, US2009082709, US2008021451, US2007161984, US2007161983, US2007049930, US2005059968, US2004167530, US2003139744, US2003069580, EP1959837, EP1959837, EP0465866, DE4119720,

Abstract:

Source: US5087258A PCT No. PCT/DE88/00323 Sec. 371 Date Jan. 19, 1990 Sec. 102(e) Date Jan. 19, 1990 PCT Filed Jun. 4, 1988 PCT Pub. No. WO88/10099 PCT Pub. Date Dec. 29, 1988. A fixation device for fractured bones includes a pair of spaced arcuate supports having square or rectangular cross sections. Each of the supports is embraced by a plurality of first U-shaped holders and a plurality of second U-shaped holders, and the holders can be releasably clamped at selected positions along the supports. The first holders carry pivotable and rotatable guides, and the guides are provided with passages which receive wires to be anchored in a bone. The wires are threaded throughout their lengths and the free ends of the wires project outwardly of the guides and are provided with tensioning nuts. Additional nuts for holding the wires in position may be disposed on the central portions of the wires. Each of the second holders of one support is connected to a respective second holder of the other support by way of a strut. Each strut has slotted sleeves adjacent to the corresponding second holders and the ends of the sleeves nearest the second holders define ball-and-socket joints with the latter. The opposite ends of the sleeves are internally threaded and receive externally threaded adjusting elements designed to permit changes in the lengths of the struts. The slots in the sleeves allow the ball-and-socket joints as well as the adjusting elements to be fixed in predetermined positions by means of screws which pass through the slots. The adjusting elements of each strut are connected by a carrier including a pair of spaced columns which define a longitudinally extending gap on the strut axis. One or more anchors for additional wires are mounted on the respective carriers so as to be shiftable relative thereto. The additional wires extend through the corresponding gaps into the bone.



93) Family number: 4648667 (US5026372A)

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Title: Fixation device for the external adjusting of bone fragments

Priority: DE19873737617 19871105 DE19883837228 19881102 EP19880118531 19881107
EP19880118531 19881107 EP19880118531 19881107 DE19883878155 19881107

Family:	Publication number	Publication date	Application number	Application date
	<u>AT85200 E</u>	19930215	AT19880118531T	19881107
	<u>DE3737617 A1</u>	19890601	DE19873737617	19871105
	<u>DE3837228 A1</u>	19900503	DE19883837228	19881102
	<u>DE3878155 D1</u>	19930318	DE19883878155	19881107
	<u>EP0315215 A2</u>	19890510	EP19880118531	19881107
	<u>EP0315215 A3</u>	19891206	EP19880118531	19881107
	<u>EP0315215 B1</u>	19930203	EP19880118531	19881107
	<u>ES2037799 T3</u>	19930701	ES19880118531T	19881107
	<u>US5026372 A</u>	19910625	US19880266809	19881103

Probable Assignee: STURTZKOPF ROBERT

Assignee(s):^(std): STEDTFELD HANS WERNER ; STEDTFELD HANS WERNER DR ; STURTZKOPF ROBERT ; STURTZKOPF ROBERT DR

Assignee(s): STURTZKOPF ROBERT DR 8000 MUENCHEN DE ; STEDTFELD HANS WERNER DR 8500 NUERNBERG DE

Inventor(s):^(std): STEDTFELD HANS WERNER ; STEDTFELD HANS WERNER DR ; STURTZKOPF ROBERT ; STURTZKOPF ROBERT DR

Inventor(s): STURTZKOPF ROBERT DR 8000 MUENCHEN DE ; STEDTFELD HANS WERNER DR 8500 NUERNBERG DE

Designated states: AT CH DE ES FR GB IT LI NL SE

International class A61B17/60 A61B17/64 (Advanced/Invention);
(IPC 8-9): A61B17/66 (Advanced/Non-invention)

International class A61B17/60 A61F5/04
(IPC 1-7):

CPC: A61B17/6458 A61B17/6491 A61B17/66

European class: A61B17/64K A61B17/64P K61B17/66

US class: 606/105 606/54 606/59

[Classification Explorer](#)

Cited documents: WO8803395 A1, US4745913 A, US4714076 A, US4628922 A, US4621627 A, US4600000 A, US4523585 A, US4102339 A, US3709219 A, FR1569090 A, EP0011258 B1, DE3543042 A1, DE11258 A,

Forward Citations: WO9904714, WO9516401, WO9406364, WO9402078, WO04026156, US9655648, US9610103, US9468466, US9398957, US9278004, US9125746, US9114016, US9060867, US9044270, US9034049, US9005298, US8894714, US8845724, US8801795, US8758343, US8709090, US8679178, US8597362, US8523948, US8409281, US8382757, US8192449, US8123805, US8100967, US8088166, US7763020, US7678147, US7655041, US7611540, US7147640, US6171309, US6171308, US6162224, US6036691, US5976125, US5746763, US5743898, US5662650, US5405347, US5376090, US5358504, US5342360, US5320622, US5209750, US2014276819, US2011202138, US2011196371, US2011137415, US2011093080, US2010145449, US2010145336, US2010137996, US2010121457, US2010114322, US2010106248, US2010106247, US2009248026, US2008275567, US2008275565, US2008275561, US2008275560, US2008275559, US2008275558, US2008275557, US2008275556, US2008275555, US2007123916, US2005261680, TR27104, FR2679765, EP0880942,

Abstract:

Source: US5026372A The invention relates to a fixation device for externally adjusting bone fragments. A pair of members anchored to the bone fragments are connected to each other to allow a longitudinal displacement of the fixing unit. According to the invention the connection of the members is defined by a hinge configuration which allows guiding and aligning both members when the fixing unit is released for stimulating the healing process. A bracket is mounted on a parallelogram hinge to generate a pressure or, respectively, a tension force to move the bone fragments apart or draw them together. According to the invention the hinge configuration comprises telescopic members centered by spring means.

PatBase - US5026372_A

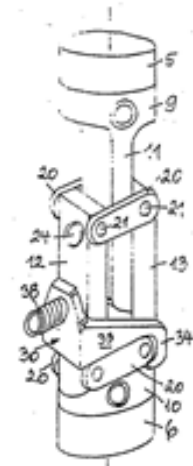
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FIG. 3

0) US2005015131A – DEVICE DESTINED TO BE COUPLED TO AT LEAST ONE S...

94) Family number: 31411338 (US2005015131A)

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Title: DEVICE DESTINED TO BE COUPLED TO AT LEAST ONE SUPPORT, AND IN PARTICULAR A SURGICAL IMPLANT DESTINED TO BE COUPLED TO A BONE

Priority: FR20030007237 20030616

Family:	Publication number	Publication date	Application number	Application date
	<u>CN1572259 A</u>	20050202	CN200410048130	20040616
	<u>EP1488754 A1</u>	20041222	EP20040356097	20040614
	<u>EP1488754 B1</u>	20170329	EP20040356097	20040614
	<u>FR2856119 A1</u>	20041217	FR20030007237	20030616
	<u>FR2856119 B1</u>	20051230	FR20030007237	20030616
	<u>JP2005007173 A2</u>	20050113	JP20040177131	20040615
	<u>US2005015131 AA</u>	20050120	US20040869126	20040616
	<u>US7846163 BB</u>	20101207	US20040869126	20040616

Probable Assignee: NEWDEAL

Assignee(s):^(std): GAUNEAU BERTRAND XAVIER FRANCO ; NEWDEAL ; SURFIX TECHNOLOGIES ; SURFIC TECHNOLOGIES

Assignee(s): NEWDEAL TECHNOLOGIES ; GAUNEAU BERTRAND XAVIER FRANCOIS ; GIET JEAN CHRISTOPHE ALAIN ; KNEVELS THEO JAN MARIA ; FOURCAULT ERIC STEPHANE

Inventor(s):^(std): FORCAULT ERIC STEPHANE ; FOURCAULT ERIC STEPHANE ; FRANCO GAUNEAU BERTRAND XAVIER ; GAUNEAU BERTRAND XAVIER FRANCO ; GAUNEAU BERTRAND XAVIER FRANCOIS ; GIET JEAN CHRISTOPHE ALAIN ; KNEVELS THEO JAN MARIA ; MARIA KNEVELS THEO JAN ; STEPHANE FORCAULT ERIC ; ALAIN GIET JEAN CHRISTOPHE

Inventor(s): BERTRAND XAVIER FRANCOIS GAUNEAU ; ERIC STEPHANE FOURCAULT ; THEO JAN MARIA KNEVELS ; JEAN CHRISTOPHE ALAIN GIET

Agent(s): MARTIN DIDIER ROLAND VALERY; CABINET DIDIER MARTIN; THOMAS KAYDEN HORSTEMEYER AND RISLEY LLP

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

International class
(IPC 8-9): A61B17/58 A61B17/70 A61B17/80 A61F2/28 F16B39/10 (Advanced/Invention);
A61B17/58 A61B17/68 A61B17/70 A61F2/28 F16B39/00 (Core/Invention)

International class
(IPC 1-7): A61B17/58 A61B17/70 A61B17/80 A61F2/28 A61N1/00 F16B39/10 F16B39/24

CPC: A61B17/7059 A61B17/8042 A61B17/8047 A61B17/8052 F16B39/103

European class: A61B17/70K A61B17/80D4 A61B17/80D6 F16B39/10C K61B17/80F

US class: 606/246 606/280 606/288 606/290 606/68 607/116 607/116P

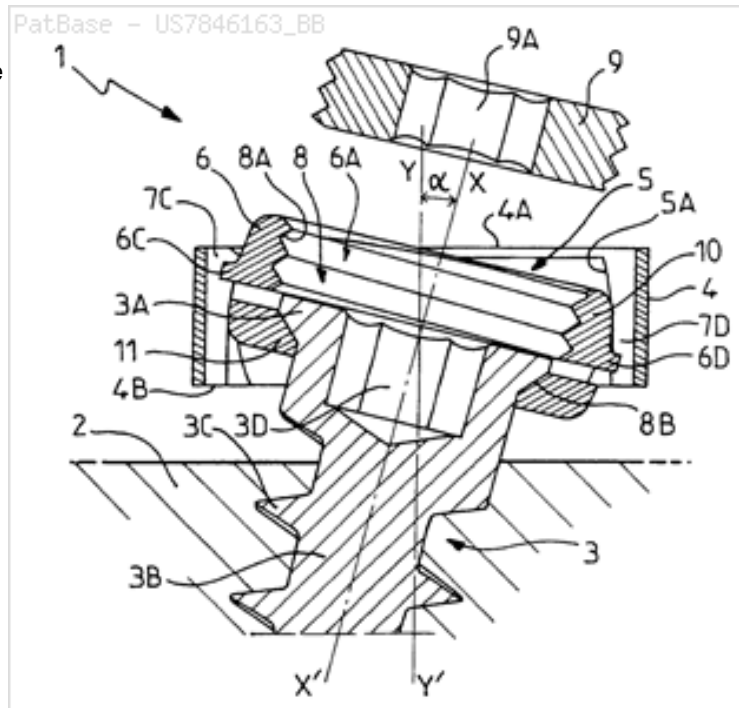
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Cited documents: WO9959492 A1, US7220263 BB, US6235033 BA, US5954722 A, US2004127900 AA, US2003105462 AA, US2003023240 AA, US2002045901 AA, US2002045898 AA, FR2790198 A1, EP0345133 A1,

Forward Citations: WO08145902, WO08145902, USD754857, USD734853, US9636156, US9615866, US9572606, US9504584, US9414871, US9320551, US9308031, US9254153, US9233003, US9101420, US9072548, US9039745, US8940030, US8870962, US8771324, US8734494, US8728129, US8617223, US8398636, US8388666, US8287600, US8257407, US8187276, US8114140, US8100952, US2014222084, US2013317554, US2013090656, US2012197255, US2012177462, US2012109111, US2011152945, US2010174324, US2010087927, US2009088807, US2008306550, US2008269807, US2008119895, US2007173843, JP2011515186, JP2009513268, ITTO20111228, FR2915081, FR2908627, EP2271274, EP2271274, EP1940303, EP1923013, CN104814783, AU2006306120,

Abstract:

Source: US2005015131A Disclosed herein is a device destined to be coupled to at least one support, and in particular a surgical implant destined to be coupled to a bone. The invention relates generally to a device (1) including a fixing element (3) including a head (3A) and a pin (3B) destined to be anchored in a support. The device further includes an assembly part (4) including a through hole (5), and a ring (6) housed in a manner that can be oriented within the through hole (5). The ring (6) has a passage (6A) shaped so as to allow passage of the pin (3B) and to stop the head (3A). The ring (6) is expandable according to its axial direction between a configuration wherein the ring (6) can be oriented and a configuration wherein the ring (6) is blocked.



0) US2238869A – AMBULATORY SPLINT

95) Family number: 21524130 (US2238869A)

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Title: AMBULATORY SPLINT

Priority: US19380198122 19380325

Family:	Publication number	Publication date	Application number	Application date
	<u>US2238869 A</u>	19410415	US19380198122	19380325

Probable Assignee: HAYNES HERBERT H

Assignee(s):^(std): HAYNES HERBERT H

Inventor(s):^(std): HAYNES HERBERT H

International class
(IPC 8-9): A61B17/64 (Advanced/Invention);
A61B17/60 (Core/Invention)

International class
(IPC 1-7): A61F5/04

CPC: A61B17/6416 A61B17/6441

European class: A61B17/64C A61B17/64G

US class: 606/56 606/57

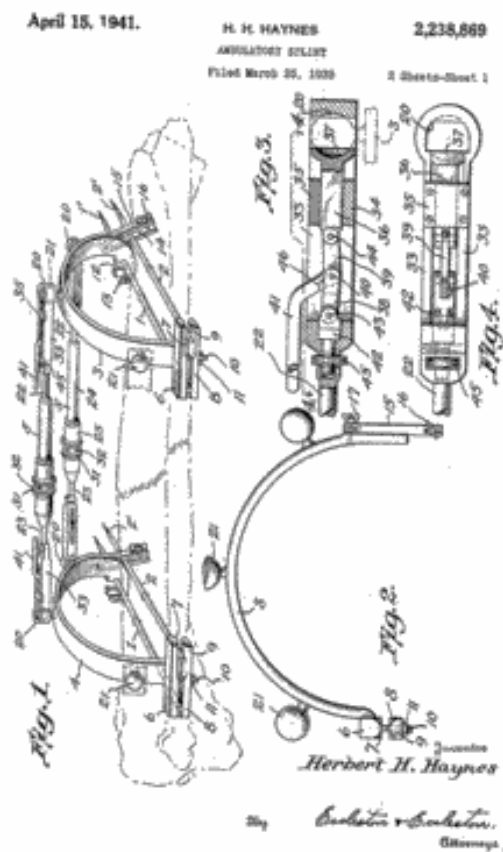
[Classification Explorer](#)

Forward Citations: US9265529, US9265528, US8870803, US6428540, US5147358, US4968316, US4757809, US4554915, US4456004, US4273116, US4127119, US3985127, US3977397, US3941123, US3028577, US2608192, US2443106, US2014276822, US2014276820, US2012285472, EP0011258,

Abstract:

Source: US2238869A 1. An ambulatory splint comprising a pair of yoke members, means for skeletally attaching said members to a human limb, a plurality of bars securing said yokes in fixed relative positions, and lever-actuated clamping members securing the bars to the yokes.

PatBase - US2238869_A



96) Family number: 12351303 (US5336268A)

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Title: Adjustable hip joint endoprosthesis**Priority:** DE19914127989 19910823 DE19914141527 19911217 US19970833688 19970408
US19960675371 19960702 WO1992EP01925 19920821 DE19924200749 19920114

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199224076 A1</u>	19930316	AU19920024076	19920821
	<u>DE4127989 A1</u>	19930225	DE19914127989	19910823
	<u>DE4127989 C2</u>	19930617	DE19914127989	19910823
	<u>DE4141527 A1</u>	19930624	DE19914141527	19911217
	<u>DE4200749 A1</u>	19930715	DE19924200749	19920114
	<u>EP0547354 A1</u>	19930623	EP19920118859	19921104
	<u>EP0600972 A1</u>	19940615	EP19920917684	19920821
	<u>JP5285165 A2</u>	19931102	JP19920336960	19921217
	<u>JP7502176 T2</u>	19950309	JP19930504129T	19920821
	<u>US5336268 A</u>	19940809	US19920991347	19921215
	<u>US6083263 A</u>	20000704	US19970833688	19970408
	<u>WO9303688 A1</u>	19930304	WO1992EP01925	19920821

Probable Assignee: THURGAUER KANTONALBANK A CHARTERED IN AND EXISTING**Assignee(s):^(std):** DRAENERT KLAUS ; PIPER ORTWIN ; PORSCHE AG**Assignee(s):** DRAENERT KLAUS GABRIEL MAX STR ; DRAENERT KLAUS DR MED DR MED HABIL ; KLAUS DRAENERT ; DRAENERT KLAUS PROF DR MED ; DRAENERT KLAUS PROF DR MED 8000 MUENCHEN DE ; DRAENERT KLAUS DRMEDDRMEDHABIL ; DRING HC F PORSCHE AG ; THURGAUER KANTONALBANK A CHARTERED IN AND EXISTING ; DR ING H C F PORSCHE AG ; DR ING H C F PORSCHE AG 7000 STUTTGART DE ; DR ING H C F PORSCHE AKTIENGESSELLSCHAFT ; DR ING HC F PORSCHE AG ; DR ING HCF PORSCHE AG**Inventor(s):^(std):** DRAENERT KLAUS ; DRAENERT KLAUS PROF DR MED ; JIIKUFURIITO RISUPEETAA ; PIPER ORTWIN ; PUPER ORTWIN ; RISPETER SIEGFRIED**Inventor(s):** RISPETER SIEGFRIED 7122 BESIGHEIM DE ; PUPER ORTWIN 7141 SCHWIEBERDINGEN DE ; KLAUS DRAENERT ; ORTWIN PIPER**Designated states:** AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO PL RO RU SD SE SN TD TG US**International class**
(IPC 8-9): A61F2/36 (Advanced/Invention);
A61F2/00 A61F2/02 A61F2/30 A61F2/32 A61F2/34 (Advanced/Non-invention);
A61F2/36 (Core/Invention);
A61F2/00 A61F2/02 A61F2/30 (Core/Non-invention)**International class**
(IPC 1-7): A61F2/34 A61F2/36**CPC:** A61F2002/30332 A61F2002/30485 A61F2002/30558 A61F2002/30561 A61F2002/30822 A61F2002/365 A61F2220/0033 A61F2250/0073 A61F2/32 A61F2/34 A61F2002/30433 A61F2/3609 A61F2/3662 A61F2002/30143 A61F2002/30434 A61F2002/30438 A61F2002/30443 A61F2002/30494 A61F2002/30537 A61F2002/30795 A61F2002/3652 A61F2002/3656 A61F2220/0025 A61F2220/0041 A61F2230/0017 A61F2250/0004**European class:** A61F2/36C K61F2/00K4H K61F2/00T1C K61F2/00T33F K61F2/00T7 K61F2/00T7B K61F2/00T7N K61F2/00T7W K61F2/30A2K4H K61F2/30A3T33Q K61F2/30A3T7B K61F2/30A3T7N K61F2/30A3T7W K61F2/30A3W2 K61F2/30L2B K61F2/36C5 K61F2/36C8 K61F2/36D K61F220/00T K61F220/00T7 K61F230/00K4 K61F250/00G**US class:** 623/22.4 623/22.46 623/23[Classification Explorer](#)

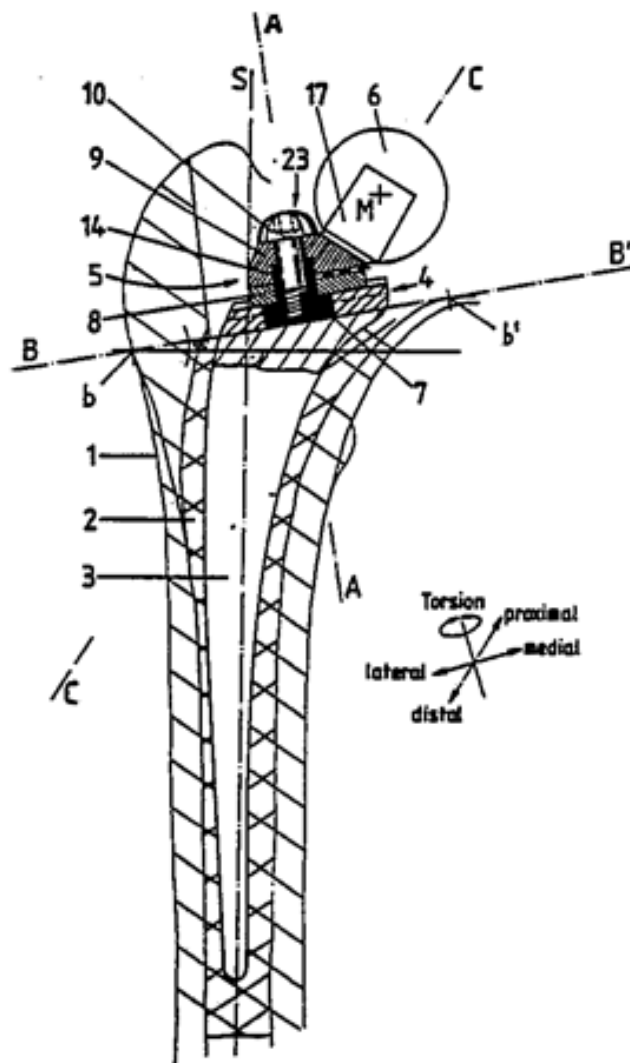
Cited documents: WO9002533 A2, US5336268 A, US5211666 A, US5002581 A, US5002578 A, US4963155 A, US4129903 A, US4115875 A, US4051559 A, US3067740 A, FR2640497 A1, FR2605514 A1, FR2578738 A1, FR2575383 A1, EP0428303 A1, EP0399920 A1, EP0393608 A2, EP0339530 A2, EP0190981 A1, EP0038897 A1, EP0000549 A1, DE9002533 U, DE8703491 U,

Forward Citations: WO9903430, WO9804215, WO12030409, WO07125125, WO03053280, WO03053280, WO0213733, WO0213733, WO02067810, WO02067810, WO0197718, WO0197718, US9579208, US9566162, US9452066, US9439784, US9333084, US9308092, US9237949, US9216086, US9132012, US9039778, US8974540, US8968327, US8920509, US8814946, US8808306, US8795381, US8764845, US8679185, US8628584, US8585711, US8579985, US8562686, US8535382, US8460390, US8444698, US8425618, US8425615, US8419798, US8366781, US8273093, US8211183, US8137409, US8114163, US8110005, US8066779, US8056874, US8029573, US8002838, US7993408, US7918892, US7803193, US7785371, US7785370, US7758653, US7641698, US7572295, US7537618, US7425214, US7323013, US7297163, US7255712, US7247171, US7238207, US7166132, US7014661, US6977000, US6896436, US6736852, US6688798, US6616697, US6494913, US6306174, US6284001, US6193758, US6179877, US6168628, US6168627, US6102953, US6083263, US5961555, US5951606, US5800560, US5645607, US5507818, US2016256288, US2016235539, US2013304225, US2013197656, US2011224798, US2010331996, US2010114324, US2009299484, US2009204225, US2009192624, US2009192623, US2009149966, US2008302938, US2008114461, US2007162140, US2007118230, US2007073412, US2007043448, US2006259152, US2006229732, US2005177244, US2005149199, US2005143836, US2005137711, US2005137710, US2005033443, US2004267372, US2004186579, US2004151535, US2003173867, US2003171819, KR101387360, JP2008000630, JP2005193045, FR2711510, FR2690841, EP2145604, EP1707157, EP1080704, EP0915686, EP0781535, EP0634154, EP0510239, DE10040617, AU2002364295,

Abstract:

Source: US5336268A An adjustable hip joint endoprosthesis has an adjustable prosthesis head, which is connected with a stem that can be fixed in the femur. To absorb overloads, which would result in damage to the prosthesis part implanted into the femur and therefore in another implantation, a limiting element is provided. This limiting element is arranged in the prosthesis head and absorbs the overload by deformation, fracture or, in the case of a frictionally engaged connection, by sliding. After the occurrence of an overload, the limiting element must be replaced or re-adjusted.

PatBase - W09303688_A1



97) Family number: 28531343 (US2003097183A)

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Title: SHOULDER JOINT PROSTHESIS**Priority:** EP20010811120 20011121 EP20020018730 20020821 EP20030010285 20030507

Family:	Publication number	Publication date	Application number	Application date
	EP1314407 A1	20030528	EP20010811120	20011121
	EP1321114 A1	20030625	EP20020018730	20020821
	EP1415621 A2	20040506	EP20030010285	20030507
	EP1415621 A3	20090422	EP20030010285	20030507
	EP1415621 B1	20160914	EP20030010285	20030507
	US2003097183 AA	20030522	US20020287289	20021104
	US6887277 BB	20050503	US20020287289	20021104
	US6899736 BA	20050531	US20030646064	20030821

Probable Assignee: CENTERPULSE ORTHOPEDICS LTD**Assignee(s):^(std):** CT PULSE ORTHOPEDICS LTD ; SULZER ORTHOPEDICS LTD ; ZIMMER GMBH**Assignee(s):** CENTERPULSE ORTHOPEDICS LTD ; WENDT PETER ; RAUSCHER MARKUS**Inventor(s):^(std):** RAUSCHER MARKUS ; WENDT PETER**Agent(s):** MANITZ FINSTERWALD AND PARTNER GBR; CHRISTIE PARKER AND HALE LLP**Designated states:** AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

International class
(IPC 8-9): [A61F2/40](#) [A61F2/46](#) (Advanced/Invention);
[A61F2/00](#) [A61F2/02](#) [A61F2/30](#) (Advanced/Non-invention);
[A61F2/30](#) [A61F2/46](#) (Core/Invention);
[A61F2/00](#) [A61F2/02](#) (Core/Non-invention)

International class
(IPC 1-7): [A61F2/40](#)

CPC: [A61F2/40](#) [A61F2/4014](#) [A61F2002/30332](#) [A61F2002/4037](#) [A61F2002/4062](#)
[A61F2002/4066](#) [A61F2220/0033](#) [A61F2/4059](#) [A61F2/4081](#) [A61F2/4637](#) [A61F2/4684](#)
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European class: [A61F2/40](#) [A61F2/40C](#) [A61F2/46T](#) [K61F2/00K2](#) [K61F2/00K2E](#) [K61F2/00K4T](#) [K61F2/00T](#)
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[K61F230/00K4T](#) [K61F250/00G1](#)

US class: [623/19.12](#) [623/19.120S](#) [623/19.13](#) [623/19.130P](#)[Classification Explorer](#)

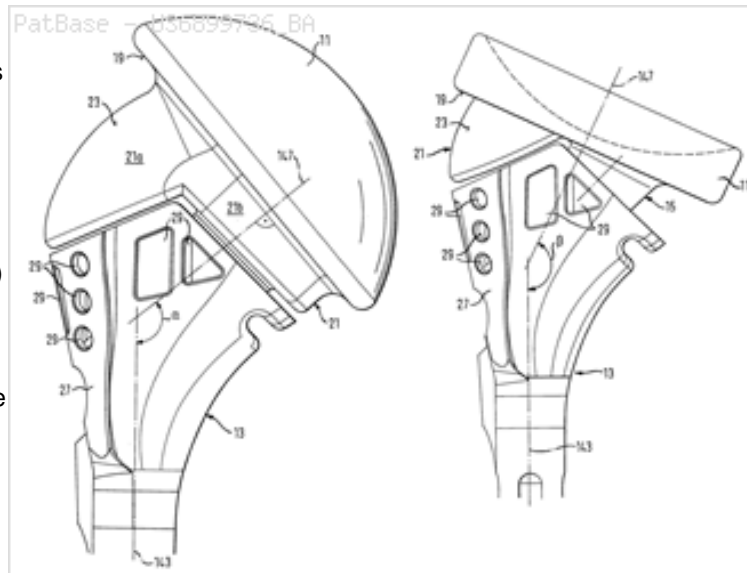
Cited documents: WO9937254 A1, WO9725943 A1, WO0018335 A1, US6508840 BA, US6406496 BA, US6203575 BA, US6197063 BA, US6197062 BA, US6045582 A, US5885295 A, US5741335 A, US5702457 A, US5569263 A, US5507819 A, US5489310 A, US5358526 A, US5156626 A, US4964865 A, US4738681 A, US4003095 A, US3228393 A,

US2004034431 AA, US2003028253 AA, US2002116068 AA, US2002099445 AA, US2001011193 AA, FR2727857 A1, FR2721200 A1, FR2706283 A1, EP1321114 A1, EP1314407 A1, EP1125565 A2, EP1059071 A1, EP1048274 A2, EP0953321 A1, EP0931522 A1, EP0845250 A2, EP0821924 A1, EP0679375 A1,

Forward Citations: WO16153658, WO15051476, WO14096912, WO14067961, WO10146545, WO07082925, WO07082925, WO07057054, US9603712, US9597203, US9597190, US9549826, US9545312, US9498344, US9474619, US9433507, US9421106, US9408652, US9326862, US9301848, US9283083, US9283075, US9241803, US9233004, US9149362, US9132012, US9089435, US9078758, US8985125, US8974536, US8968327, US8961611, US8945234, US8940054, US8906103, US8906102, US8864834, US8858641, US8808306, US8795379, US8790350, US8758445, US8702804, US8690951, US8689425, US8679185, US8663334, US8608805, US8585711, US8562686, US8556980, US8545511, US8480750, US8465548, US8460390, US8444698, US8419798, US8303665, US8277514, US8277511, US8273093, US8257363, US8241365, US8236059, US8231684, US8231683, US8187282, US8152855, US8118876, US8092466, US8080063, US8075628, US8070820, US8062376, US8002838, US7927335, US7922769, US7892287, US7887544, US7854768, US7819923, US7785371, US7785370, US7678150, US7628819, US7625408, US7621961, US7537618, US7470287, US7465319, US7462197, US7452381, US7309360, US7241314, US7211113, US7186269, US7175663, US7135044, US7033396, US6899736, US6887277, US2015134066, US2013325134, US2013325133, US2013006369, US2012255587, US2012150308, US2012029647, US2012016488, US2011166662, US2011153023, US2011144758, US2011137424, US2011126403, US2011106267, US2011098822, US2011082557, US2011035015, US2011035014, US2010222886, US2010076568, US2009312838, US2009216332, US2009192624, US2009192623, US2009192621, US2009187251, US2009112328, US2009099662, US2009036991, US2008294268, US2008234829, US2008228281, US2008183297, US2008114461, US2007250174, US2007225821, US2007225818, US2007225817, US2007173945, US2007142918, US2007078519, US2007050039, US2006142872, US2006142871, US2006074353, US2006069445, US2006069444, US2006069443, US2006020344, US2006004462, US2005288681, US2005278033, US2005278032, US2005278031, US2005278030, US2005261778, US2005261775, US2005203634, US2005197708, US2005174124, US2005165490, US2005143829, US2005049709, US2004230311, US2004230197, US2004220674, US2004186580, US2004039449, ITMI20122177, FR2992548, FR2972627, FR2946863, EP2668930, EP2604224, EP1787603, EP1782765, EP1681038, EP1639965, EP1405614, CN104755047, CN103565560, AU2013340867,

Abstract:

Source: US2003097183A A shoulder joint prosthesis is shown having two bearing bodies (1, 2; 11, 12) which slide on one another and which can be respectively connected to the upper arm (3) by a shaft (5) and to the shoulder bone (4) by a platform (6). When the connection to the shaft (5) is brought about by a non-rotationally symmetrical, conical body (7) with a self-locking seat, with its periphery (8) being form matched to a mating shape (15) in the shaft (5) which is rotationally fixed relative to a longitudinal axis (9) and keyed by the taper so that the connection is releasable and repeatedly fixable in the same angular position, large forces can be transmitted by the connection.



0) DE202009009195U1 – CHIRURGISCHE KNOCHENVERANKERUNGSVORRICHTUNG UND ...

98) Family number: 43695450 (DE202009009195U1)

© PatBase

Title: CHIRURGISCHE KNOCHENVERANKERUNGSVORRICHTUNG UND WIRBELSAEULENFIXATIONSSYSTEM SURGICAL AND KNOCHENVERANKERUNGSVORRICHTUNG WIRBELSAEULENFIXATIONSSYSTEM (Machine translation)

Priority: DE200920009195U 20090626

Family:	Publication number	Publication date	Application number	Application date
	<u>DE202009009195 U1</u>	20090827	DE200920009195U	20090626

Probable Assignee: AESCULAP AG

Assignee(s):^(std) AESCULAP AG ; AESCULAP WERKE AG

International class
(IPC 8-9): A61B17/70 A61B17/86 (Advanced/Invention);
A61B17/68 A61B17/70 (Core/Invention)

CPC: A61B17/7041 A61B17/1728 A61B17/1757 A61B17/7007 A61B17/701 A61B17/7037
A61B17/7044 A61B17/7091 A61B17/809 A61B17/848 A61B17/8897 A61B17/92
A61B2017/00469 A61B2090/037

European class: A61B17/70B6 A61B17/70B8 A61B17/70T10 A61B17/88T A61B17/92 K61B17/00H4
K61B17/17P K61B17/17S4 K61B17/70B1C4 K61B17/70B1E K61B17/70B5B K61B17/80S
K61B17/84N2 K61B17/88S K61B19/30H

[Classification Explorer](#)

Cited documents: US6299616 BA, US2009105718 AA,

Abstract:

Source: DE202009009195U1 (Claim 1) 1.
Chirurgische

Knochenverankerungsvorrichtung (12) fuer ein Wirbelsaeulenfixationssystem (10), umfassend einen Verankerungsteil (18) zum Verankern in oder an einem Knochen (14), einen Lagerteil (20) zum Lagern mindestens eines Verbindungselements (74) zum Festlegen an mindestens zwei

Knochenverankerungsvorrichtungen (12) des Wirbelsaeulenfixationssystems (10) und ein Fixierelement (116), wobei der Verankerungsteil (18) und der Lagerteil (20) aneinander gelagert, in einer Montagestellung relativ zueinander bewegbar und mit dem Fixierelement (116) in einer Implantationsstellung relativ zueinander festlegbar sind, welches Fixierelement (116) einstuueckig ausgebildet ist und einen proximalen Fixierelementabschnitt (120), einen distalen Fixierelementabschnitt (118) und einen Sollbruchbereich (122) umfasst, welcher Sollbruchbereich (122) zwischen dem proximalen und dem distalen Fixierelementabschnitt (120, 118) ausgebildet ist, dadurch gekennzeichnet, dass am distalen Fixierelementabschnitt (118) eine Werkzeugelementaufnahme (128) vorgesehen ist zum kraft und/oder formschluessigen in Eingriff Bringen mit einem Werkzeug (176) zum ueberfuehren der Knochenverankerungsvorrichtung (12) von der Montagestellung in die Implantationsstellung.

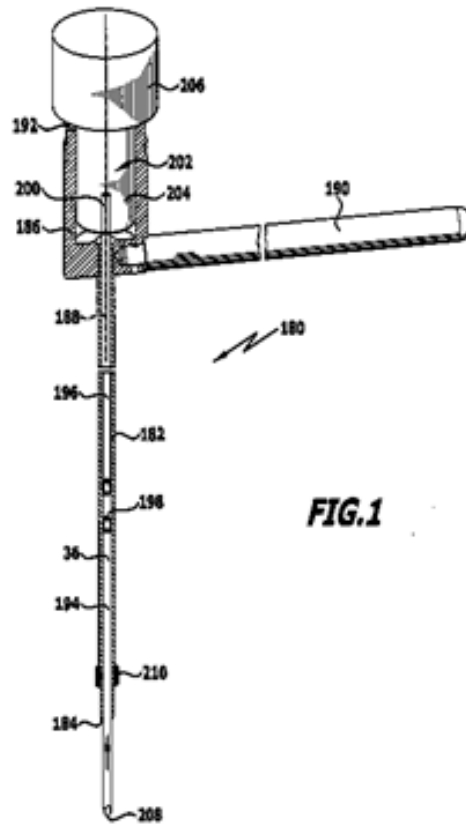
(Claim 1) 1 Surgical bone anchoring device (12) for a Wirbelsaeulenfixationssystem (10) comprising an anchoring portion (18) for anchoring in or to a bone (14), a bearing part (20) for supporting at least one connecting member (74) for fixing to at least two bone anchoring devices (12) of

Wirbelsaeulenfixationssystemen (10) and a fixing member (116), wherein the anchoring part (18) and the bearing part (20) mounted together in an assembly position relative to each other movable, and with the fixing element (116) into implantation position relative to one another can be fixed, which the fixing element (116) is formed integrally and a proximal Fixierelementabschnitt (120), a distal Fixierelementabschnitt (118) and a predetermined breaking region (122), wherein predetermined breaking region (122) is formed between the proximal and distal Fixierelementabschnitt (120, 118), characterized in that at the distal Fixierelementabschnitt (118) a tool element housing (128) is provided for force and / or formschluessigen engaging with a tool (176) for transferring the bone anchoring device (12) from the mounting position to the implant position.

PatBase - DE202009009195_U1

DE 20 2009 009 195 U1 2009.10.01

Anhängende Zeichnungen



0) DE202011109808U1 – SPANNELEMENT ZUM FIXIEREN EINER KNOCHENFRAKTUR ...

99) Family number: 51089281 (DE202011109808U1)

© PatBase

Title: SPANNELEMENT ZUM FIXIEREN EINER KNOCHENFRAKTUR SOWIE SELBIGES AUFWEISENDE MODULARE FIXIERUNGSVORRICHTUNG CLAMPING ELEMENT FOR SECURING A BONE FRACTURE FIXATION DEVICE AND The same HAVING MODULAR (Machine translation)

Priority: DE201120109808U 20110302

Family:	Publication number	Publication date	Application number	Application date
	<u>DE202011109808 U1</u>	20120327	DE201120109808U	20110302

Probable Assignee: HIPPI MEDICAL AG

Assignee(s):^(std): HIPPI MEDICAL AG

International class A61B17/58 A61B17/68 (Advanced/Invention)
(IPC 8-9):

CPC: A61B17/8085 A61B17/8004 A61B17/68 A61B17/86 A61B2017/681

European class: A61B17/68 K61B17/68B K61B17/80A K61B17/86

[Classification Explorer](#)

Cited documents: WO05086708 A2, WO04034916 A1, US7763056 BB, DE20001879 U1,

Forward Citations: WO13185864, WO13185863, JP5966083, JP5938145, JP2015523124, JP2015519156, DE102012105125, DE102012105123, CN104619277, CN104582611,

Abstract:

Source: DE202011109808U1 Spannelement

(1) zum Fixieren von Bruchenden von Knochen einer Knochenfraktur, aufweisend einen in Draufsicht hohlen, eine umlaufende Wandung (10) aufweisenden Konturkoerper, mit zwei einander gegenueberliegenden stirnseitigen Aufnahmeabschnitten (12) zur Aufnahme von Befestigungsmitteln (2), die durch den Konturkoerper hindurchsteckbar sind, und zwei Seitenflanken mit Beugeabschnitten (11), wobei die umlaufende Wandung (10) des Konturkoerpers wenigstens abschnittsweise im Bereich der stirnseitigen Aufnahmeabschnitte (12) und im Bereich der seitlichen Beugeabschnitte (11), federelastisch verformbar ist, und wobei ueber die Beugeabschnitte (11) ein definiertes elastisches Verhalten des Spannelements (1) derart eingepraegt ist, dass eine vorbestimmte Spannung zwischen den Aufnahmeabschnitten (12) erzeugbar ist.

Machine translation: Clamping element (1) for fixing of broken ends of bone of a bone fracture, comprising a hollow in plan view, a peripheral wall (10) having Konturkoerper, with two mutually opposite front side holding portions (12) for receiving fastening means (2) defined by the Konturkoerper are hindurchsteckbar, and two side flanks with bending sections (11), wherein the circumferential wall (10) of the Konturkoerpers at least in sections in the area of the front side holding portions (12) and in the region of the lateral bending portions (11), resiliently deformable, and wherein by the bending portions (11) a defined elastic behavior of the clamping element (1) such eingepraegt is that a predetermined voltage between the receiving portions (12) can be generated.

PatBase - DE202011109808_U1

DE 20 2011 109 808 U1 2012.05.18

Anhängende Zeichnungen

Fig. 1

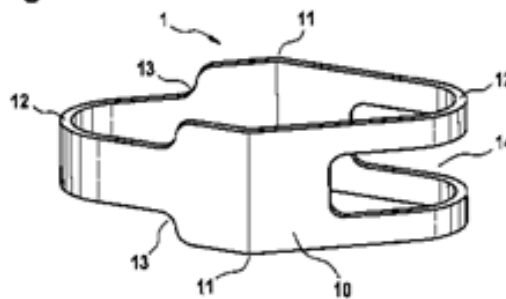
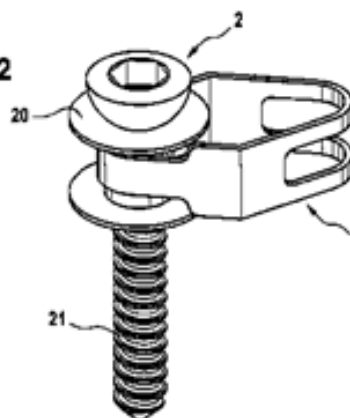


Fig. 2



16 / 28

100) Family number: 20528384 (GB538599A)

© PatBase

Title: Improvements in or relating to fracture apparatus**Priority:** GB19400002164 19400203

Family:	Publication number	Publication date	Application number	Application date
	<u>GB538599 A</u>	19410811	GB19400002164	19400203

Probable Assignee: HERBERT HODGE HAYNES**Assignee(s):^(std):** HERBERT HODGE HAYNES

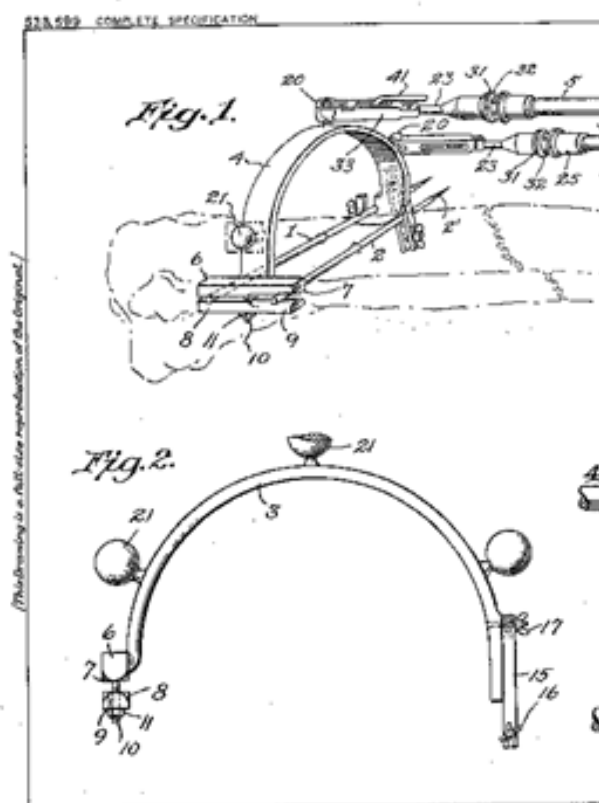
International class A61B17/64 (Advanced/Invention);
 (IPC 8-9); A61B17/60 (Core/Invention)

CPC: A61B17/6441**European class:** A61B17/64G[Classification Explorer](#)**Abstract:**

Source: GB538599A 2164. [Class 81 (ii)]

Apparatus for holding the broken ends of fractured bones in position comprises a pair of yokes 3, 4, (Fig. 1), two pairs of pins 1, 2 of stainless steel or the like secured to the yokes by means of two pairs of plates 6, 8, set screws 13 and pivoted clamping members 14, and a pair of adjustable holding bars 5. The pins 1, 2 having been placed in position in the bones are secured by plates 6, 8 by means of nuts 11, the ends 7, 9 of the plates being rounded transversely to allow for the different inclination of the pins 1, 2. Set screws 13 and clamping members 14 are then tightened. Holding bars 5 comprise two aligned rods 22, 23 (Fig. 10) having an internally threaded sleeve 25 and gripping element 26 which permit the adjustment of their total length, and end portions formed by sockets 20 (Fig. 3) and parallel plates 33. Sliding bar 36, with a toggle mechanism permits the rapid fixation of ball members 21 on the yokes 3, 4, within the sockets 20. A tool to facilitate the fitting of the apparatus to the broken limb is described.

PatBase - GB538599_A



Title: SURGICAL ROBOT PLATFORM

Priority: US20060774586P 20060216 US20060775816P 20060216 US20120542560 20120705
 US20070845557 20070827 US20070838027 20070813 US20070676023 20070216
 US20130924505 20130621 US20120662702P 20120621 US20130800527P 20130315
 US20130062707 20131024 US20140476101 20140903 US20140475998 20140903
 US20150602723 20150122 US20150729096 20150603 WO2013US47194 20130621
 US20160095883 20160411 US20160135658 20160422 WO2014US62083 20141024
 US20160157444 20160518 US20160178706 20160610 US20160156903 20160517
 US20160267950 20160916 US20160289537 20161010 US20160343255 20161104
 US20160371304 20161207 US20160347841 20161110

Family:

Publication number	Publication date	Application number	Application date
EP2863827 A1	20150429	EP20130807863	20130621
EP2863827 A4	20160420	EP20130807863	20130621
EP3060138 A1	20160831	EP20140856284	20141024
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JP2015528713 T2	20151001	JP20150518631T	20130621
JP2016539681 T2	20161222	JP20160526094T	20141024
US2013345718 AA	20131226	US20130924505	20130621
US2014275955 AA	20140918	US20130062707	20131024
US2014378999 AA	20141225	US20140476101	20140903
US2015032164 AA	20150129	US20140475998	20140903
US2015209119 AA	20150730	US20150602723	20150122
US2016220320 AA	20160804	US20160095883	20160411
US2016235493 AA	20160818	US20160135658	20160422
US2016242849 A9	20160825	US20130924505	20130621
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US2016278875 AA	20160929	US20160178706	20160610
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US2017071691 AA	20170316	US20160343255	20161104
US2017079727 AA	20170323	US20160371304	20161207
US2017119339 AA	20170504	US20160347841	20161110
WO13192598 A1	20131227	WO2013US47194	20130621
WO15061638 A1	20150430	WO2014US62083	20141024
WO16118744 A1	20160728	WO2016US14316	20160121

Probable Assignee: GLOBUS MEDICAL INC**Assignee(s):^(std):** EXCELSIUS SURGICAL L L C ; GLOBUS MEDICAL INC**Assignee(s):** EXCELSIUS SURGICAL LLC

Inventor(s):^(std): BARTELME MICHAEL ; CHENG YUAN ; CICCHINI STEPHEN ; CLEARY DAVID ;
 CRAWFORD NEIL ; CRAWFORD NEIL R ; FORSYTH JEFFREY ; FOSTER MITCHELL ;
 FOSTER MITCHELL A ; JOHNSON NOBERT ; JOHNSON NORBERT ; KRULL
 ALEXANDER ; LEBOEUF II ROBERT J ; LEBOEUF ROBERT ; MAJOR CHRIS ;
 MOKHTAR JAWAD ; MOULTON TIMOTHY ; OLENIO ZACHARY ; THEODORE
 NICHOLAS ; THEODORE NICHOLAS A ; WEBER WES ; YAU JAMES ; ZHANG KEVIN

Agent(s): MORABITO SARA; HARAKENZO WORLD PATENT AND TRADEMARK; FELLOWS
 GERALD L; CASTELLANO KRISTINA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
 CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE

GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ
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NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA
ZM ZW

International class
(IPC 8-9):

A61B17/00 A61B17/02 A61B17/16 A61B17/17 A61B17/34 A61B17/70 A61B19/00
A61B34/00 A61B34/20 A61B34/30 A61B5/00 A61B5/055 A61B5/06 A61B6/00 A61B6/03
A61B90/00 A61B90/90 A61B90/98 B25J13/06 B25J3/00 B25J9/02 G01S5/16
G06T7/00 (Advanced/Invention);
A61B34/10 A61B34/32 (Advanced/Non-invention)

CPC:

A61B2017/0256 A61B2017/00876 A61B17/7002 A61B17/7074 A61B17/17 A61B10/0275
A61B2010/0208 A61B17/1757 A61B5/066 A61B17/025 A61B90/11 A61B90/96
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A61B2034/2051 A61B2034/2055 A61B2034/301 A61B2090/374 A61B2090/378
A61B2090/3966 A61B2090/3975

US class:

382/131 600/409 600/424 600/473 606/130 606/279 700/259

[Classification Explorer](#)

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US8452443 BB, US8219178 BB, US8219177 BB, US8206304 BA, US8190238 BB,
US8147503 BB, US8095200 BB, US8073528 BB, US8041459 BB, US8010181 BB,
US7981092 BB, US6951535 BB, US6738656 BA, US6728599 BB, US6725080 BB,
US6587750 BB, US5808665 A, US5603318 A, US5590215 A, US5531227 A, US5492527
A, US5230338 A, US5066288 A, US2015032164 AA, US2015011866 AA, US2014378999
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US2013107508 AA, US2011295240 AA, US2010158331 AA, US2010125284 AA,
US2010114115 AA, US2009306499 AA, US2008294096 AA, US2008215181 AA,
US2008154389 AA, US2008027586 AA, US2007238985 AA, US2007197939 AA,
US2007197896 AA, US2007156123 AA, US2007078473 AA, US2006111704 AA,
US2006052792 AA, US2005228365 AA, US2005215888 AA, US2004030237 AA,
US2003040667 AA, US2002167309 AA, US2002065481 AA, JP2007029232 A2,
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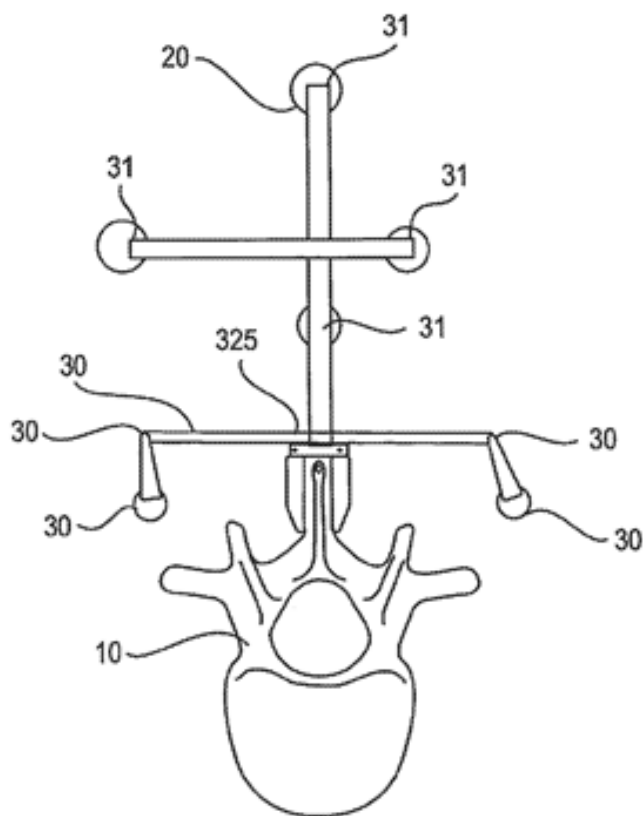
Forward Citations:

WO17076886, WO17066106, WO17048736, WO17037127, WO17028916, WO16198844,
WO16141378, WO16123697, WO16087539, WO15193479, WO15184146, US9630318,
US9622831, US9604359, US9597797, US9585700, US9585596, US9579789,
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US9314924, US9308050, US9232980, US9179051, US9119655, US9066755,
US2016338797, US2015359454, US2015341615, US2015338214, US2015335386,
US2015305786, US2015272685, US2015212521, US2015193946, US2015164606,
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US2014229007, US2014200621, US2014039681, US2013345718, US2013310824,
US2013072982,

Abstract:

Source: US2013345718A A medical robot system, including a robot coupled to an effectuator element with the robot configured for controlled movement and positioning. The system may include a transmitter configured to emit one or more signals, and the transmitter is coupled to an instrument coupled to the effectuator element. The system may further include a motor assembly coupled to the robot and a plurality of receivers configured to receive the one or more signals emitted by the transmitter. A control unit is coupled to the motor assembly and the plurality of receivers, and the control unit is configured to supply one or more instruction signals to the motor assembly. The instruction signals can be configured to cause the motor assembly to selectively move the effectuator element and is further configured to (i) calculate a position of the at least one transmitter by analysis of the signals received by the plurality of receivers; (ii) display the position of the at least one transmitter with respect to the body of the patient; and (iii) selectively control actuation of the motor assembly in response to the signals received by the plurality of receivers.

PatBase - W016118744_A1

**FIG. 8A**

Title: BONE FIXATION**Priority:** GB19900002065 19900130 WO1991GB00276 19910130

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199173053 A1</u>	19910821	AU19910073053	19910130
	GB9002065 A0	19900328	GB19900002065	19900130
	<u>WO9111151 A1</u>	19910808	WO1991GB00276	19910130

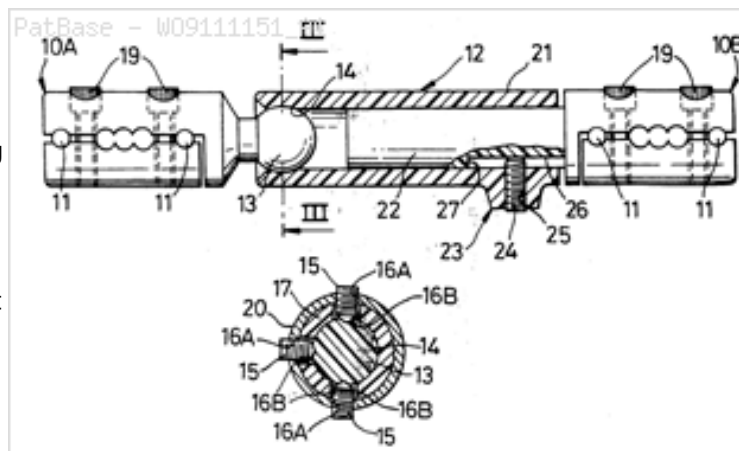
Probable Assignee: SHEFFIELD CITY COUNCIL**Assignee(s):**^(std): SHEFFIELD CITY COUNCIL**Inventor(s):**^(std): OLIVER ALBERT EDWARD**Inventor(s):** ALBERT EDWARD OLIVER**Designated states:** AT AU BE CH DE DK ES FR GB GR IT JP LU NL SE US

International class A61B17/64 A61B19/00 (Advanced/Invention);
^{(IPC 8-9):} A61B19/00 (Advanced/Non-invention);
A61B17/60 (Core/Invention);
A61B19/00 (Core/Non-invention)

International class A61B17/60
^{(IPC 1-7):}

CPC: A61B17/6458 A61B2017/00902**European class:** A61B17/64K[Classification Explorer](#)**Cited documents:** WO8909031 A1, US4554915 A, GB2168255 A1, EP0011258 B1,**Forward Citations:** WO9904714, US8758343, US8628530, US6235029, US6102911, US6030385, US6024745, US5951556, US5376090, EP0807419, DE4139700, AU722193,**Abstract:**

Figures (1 and 2) show a bone fixator having clamps (10A, 10B) for bone pins (11) connected by means (12) including a ball-and-socket joint (13, 14) having at least one setscrew (15) in the socket wall (17) to dig into the ball (13) for setting up a fracture, but with the intention of being releasable for re-setting of the clamps at a later stage; also having the advantage of being more convenient for use in high ambient temperatures or in poor lighting conditions that previously disclosed fixators using hardenable resin filler to secure the ball joint. Three setscrews (15) in the socket wall (17) are preferred.



Title: BONE FIXATION**Priority:** GB19900002033 19900130 WO1991GB00134 19910130

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199173018 A1</u>	19910821	AU19910073018	19910130
	GB9002033 A0	19900328	GB19900002033	19900130
	<u>WO9111150 A1</u>	19910808	WO1991GB00134	19910130

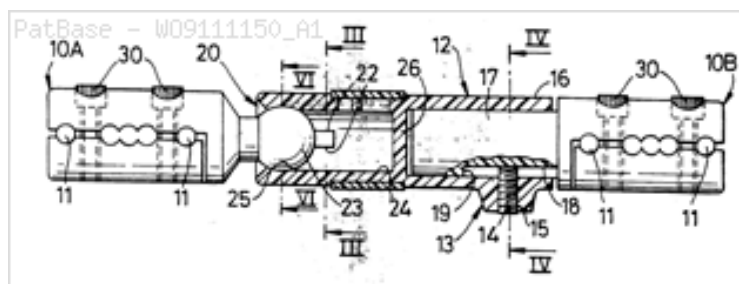
Probable Assignee: SHEFFIELD CITY COUNCIL**Assignee(s):**^(std): SHEFFIELD CITY COUNCIL**Inventor(s):**^(std): OLIVER ALBERT EDWARD**Inventor(s):** ALBERT EDWARD OLIVER**Designated states:** AT AU BE CH DE DK ES FR GB GR IT JP LU NL SE US

International class
(IPC 8-9): A61B17/64 A61B19/00 (Advanced/Invention);
A61B19/00 (Advanced/Non-invention);
A61B17/60 (Core/Invention);
A61B19/00 (Core/Non-invention)

International class
(IPC 1-7): A61B17/60

CPC: A61B17/6458 A61B2017/00902**European class:** A61B17/64K[Classification Explorer](#)**Cited documents:** WO9007305 A1, WO8909031 A1, US2391537 A, GB2168255 A1, EP0011258 B1, DE3722595 A1,**Forward Citations:** WO9423662, WO9423662, US8758343, US8382757, US7261713, US6024745, US5951556,**Abstract:**

Figure (1) shows a bone fixator having clamps (10A, 10B) connected by telescoping means (12) provided with releasable securing means (13) for locking the telescoping means in at least partially extended condition for initial setting of a fracture, the securing means (13) being adapted to be released at the appropriate later stage in the healing process for the telescoping means (12) to allow of dynamic distraction of the fracture. The telescoping means (12) can also be used to effect adjustment of the nominal length of the fixator to suit different lengths of fractured bones and/or different locations of fractures.



Title: INTRAMEDULLARY PIN
Priority: CN20012077174 20011229 CN20012077174U 20011229 WO2002CN00924 20021230
Family:

Publication number	Publication date	Application number	Application date
AU2002354077 AA	20030715	AU20020354077	20021230
CN2519659 Y	20021106	CN20012077174U	20011229
EP1495731 A1	20050112	EP20020787332	20021230
JP2006500965 T2	20060112	JP20030555978T	20021230
KR20040071770 A	20040812	KR20047010354	20021230
US2005107790 AA	20050519	US20040499655	20040629
WO03055399 A1	20030710	WO2002CN00924	20021230

Probable Assignee: SHANGHAI FUSHENG MEDICAL APPAR

Assignee(s):^(std): QIAN BENWEN ; SHANGHAI FUSHENG MEDICAL APPAR

Assignee(s): SHANGHAI FUSHENG MEDICAL APPARATUS CO ; SHANGHAI FUSHENG MEDICAL APPARATUS CO LTD

Inventor(s):^(std): QIAN BENWEN

Inventor(s): BENWEN QIAN

Agent(s): BACON AND THOMAS PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
 (IPC 8-9): [A61B17/58](#) [A61B17/72](#) [A61B17/88](#) (Advanced/Invention);
[A61B17/28](#) [A61B17/56](#) [A61B17/72](#) (Advanced/Non-invention);
[A61B17/68](#) [A61B17/88](#) (Core/Invention);
[A61B17/28](#) [A61B17/56](#) (Core/Non-invention)

International class
 (IPC 1-7): [A61B17/58](#) [A61B17/72](#)

CPC: [A61B17/2812](#) [A61B17/7266](#) [A61B17/88](#) [A61B2017/564](#)

European class: [A61B17/72E6B](#) [A61B17/72G](#) [A61B17/88](#) [K61B17/28D](#) [K61B17/56M](#)

US class: [606/62](#) [606/62P](#)

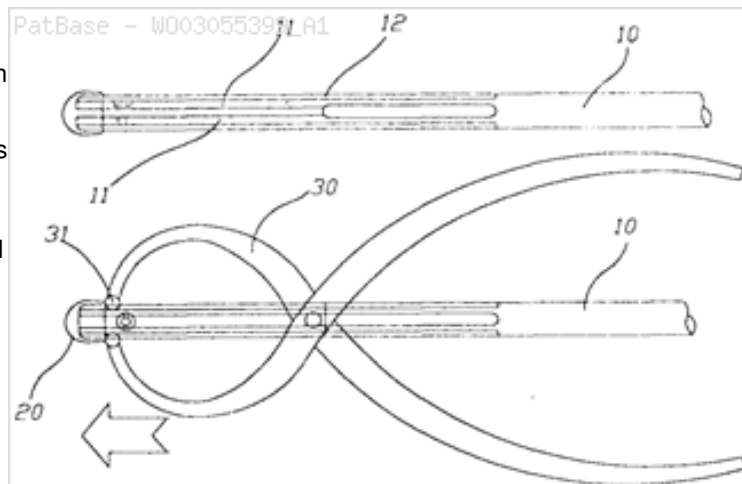
[Classification Explorer](#)

Cited documents: US6197029 BA, US5672178 A, US5441500 A, US5281225 A, US5195979 A, US5053035 A, US4227518 A, US4204531 A, US4091806 A, US3759257 A, US3678925 A, US3216414 A, EP0738502 A2, EP0564941 A1, DE7218224 U, CN87201185 U, CN2493171 Y, CN2411762 Y,

Forward Citations: US9572606, US9320551, US9308031, US8778029, US8394103, US8303590, US8157802, US2012165950, US2010152740, US2008294164, US2008221577, US2008183171,

Abstract:

Source: US2005107790A The present invention relates to an intramedullary pin which includes a body. Prongs which respectively extend towards different directions are provided on one end of the said body. Grooves which extend along the axial direction are provided on the outside of the said prongs. A clamping ring which is inserted in the said grooves is mounted on the free end of the said prongs.



105) Family number: 62995984 (WO16116571A1)

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Title: TEMPLATES, PROSTHESES AND ORTHOSES**Priority:** DE201510201029 20150122

Family:	Publication number	Publication date	Application number	Application date
	<u>DE102015201029 A1</u>	20160728	DE201510201029	20150122
	<u>WO16116571 A1</u>	20160728	WO2016EP51252	20160121

Probable Assignee: SCHUSTER LUIS**Assignee(s):^(std):** SCHUSTER LUIS**Inventor(s):^(std):** SCHUSTER LUIS**Agent(s):** MUELLER F PETER ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/15 A61B17/16 A61F2/38 A61F2/46 A61F5/01 (Advanced/Invention)
(IPC 8-9).

CPC: A61B17/155 A61B17/157 A61F2/3859 A61F2/3872 A61F2/389[Classification Explorer](#)

Cited documents: WO14140808 A1, WO09001083 A1, WO07092841 A2, US2014114320 AA, EP1074229 A2, DE69517296 T2, DE4434539 C2, DE19747979 C2,

DE112010003901 T5

DE102010049886 B4

DE102009031269 B4

DE102009028503 B4

DE102009028503 A1

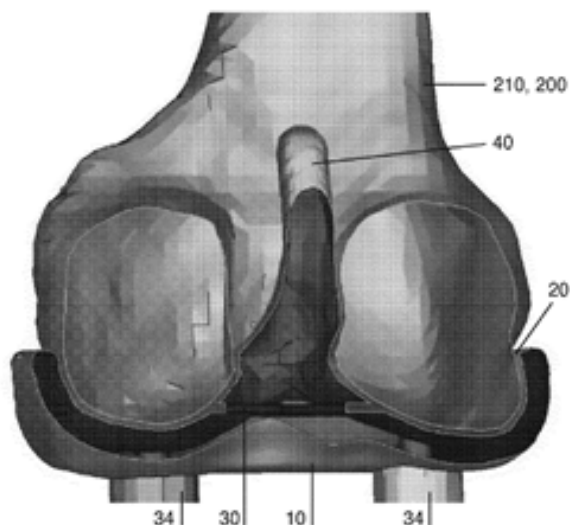
Abstract:

The invention relates to a resection template (10) for the resection of a bone (200), comprising at least one support device (20) for support on the bone (200) and at least one tool guide (30) for guiding a tool for machining, in particular resection, of the bone (200), characterized in that the resection template (10) has a clamping mechanism, locking mechanism and/or snap-action mechanism for fixing it to the bone (200), or in that the resection template (10) is an at least two-part structure and has a first template part (11) for carrying out a first resection and a second template part (12) for carrying out a second resection, the first template part (11) being particularly designed as an individual template, preferably for distal resection, and the second template part (12) being particularly designed as a standardized template part for multiple use and preferably for multiple resection, or in that the resection template (10) has a drill guide (35), in particular parallel to the tool guide (30) and designed as a saw guide, in particular for producing a groove in a resection surface of the bone (200), and/or is precisely and stably fixable to the bone by means of locking or snap-action mechanisms, and in particular allowing the exact implantation of an individually adapted endoprosthesis (100) whose size has been reduced as much as possible. The invention further relates to an

exo-template or exoprosthesis or knee-joint orthosis for the, for example, post-operative stabilization of the knee joint and relief of the strain thereon, comprising a hinge, which permits a physiological movement of the knee joint, wherein, in particular, on the model of individual knee-joint prostheses, sliding hinges are attached to the outside of the exoprosthesis to ligament insertion points corresponding to the Burmester curve and held in place by braces.

PatBase - W016116571_A1

Fig.1



0) US6112623A – TOOL FOR SCREWING A SCREW HAVING TWO THREADED P...

106) Family number: 12139074 (US6112623A)

© PatBase

Title: Tool for screwing a screw having two threaded portions separated by an intermediate screwing portion

Priority: FR19970006696 19970530

Family:	Publication number	Publication date	Application number	Application date
	EP0880943 A1	19981202	EP19980401307	19980529
	FR2763833 A1	19981204	FR19970006696	19970530
	FR2763833 B1	19990806	FR19970006696	19970530
	US6112623 A	20000905	US19980086081	19980528

Probable Assignee: MATERIEL ORTHOPEDIQUE EN ABREG

Assignee(s):^(std): MATERIEL ORTHOPEDIQUE EN ABREG ; SOFAMOR

Assignee(s): SOFAMOR S N C : SOCIETE DE FABRICATION DE MATERIEL ORTHOPEDIQUE EN ; SOCIETE DE FABRICATION DE MATERIEL ORTHOPEDIQUE EN ABREGE SOFAMOR ; DE FABRICATION DE MATERIEL ORTHOPEDIQUE EN ABREGE

Inventor(s):^(std): BIGAND DOMINIQUE ; CLAUZE JACQUES ; GOURNAY JOSE ; MOREAU JEAN CHARLES ; SAURAT JEAN

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

International class [A61B17/88 B25B13/48 B25B23/10](#) (Advanced/Invention)
(IPC 8-9):

International class [A61B17/88 B25B13/00](#)
(IPC 1-7):

CPC: [B25B13/48 A61B17/8891 B25B23/10 B25B23/103](#)

European class: [A61B17/88S A61B17/88S4P B25B13/48 B25B23/10 B25B23/10C](#)

US class: [81/451 81/59.1 81/591](#)

[Classification Explorer](#)

Cited documents: US5651294 A, US5649931 A, US5509332 A, US5498265 A, US5490683 A, US5484440 A, US5352231 A, US4581962 A, US4275893 A, US4140161 A, FR2703288 A1, EP0387392 A2,

Forward Citations: WO09060389, US9277940, US8763499, US8632572, US7922725, US7766917, US6745652, US2012215232, US2011166604, US2009275994, US2009275992, US2009275954, US2008262551, US2008045969, US2006116680, US2005247165, US2004186483, US2004020335, FR2923153, EP1661527,

Abstract:

Source: US6112623A A tool for driving a screw having two threaded shanks separated by an intermediate portion. The tool includes a rod having a tapped end portion adapted to engage one of the threaded shanks. The tool also includes a cage adapted to receive the intermediate portion of the screw therein. The cage is provided with at least one opening containing a rolling member configured to be applied against a surface of the intermediate portion of the screw. The tool additionally includes a tube surrounding the rod and the cage. The tube includes an inner wall having a profile configured such that as the tube is rotated about the longitudinal axis, the inner surface applies a radial force to the rolling member, causing the rolling member to be radially displaced through the opening in the cage and placing it in abutment with the intermediate portion of the screw.

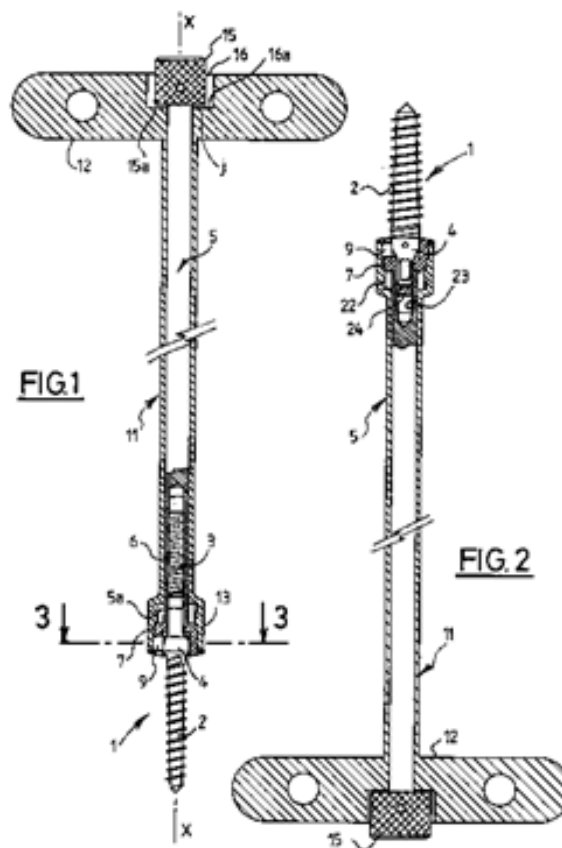
PatBase - US6112623_A

U.S. Patent

Sep. 5, 2000

Sheet 1 of 4

6,112,623



107) Family number: 18902723 (WO9730650A1)

© PatBase

Title: EXTERNAL FIXATOR APPARATUS FOR BONE SURGERY**Priority:** IT1996VR00018 19960221 WO1996EP04713 19961030

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199675616 A1</u>	19970910	AU19960075616	19961030
	<u>IT1289078 B1</u>	19980925	IT1996VR00018	19960221
	<u>ITVR960018 A0</u>	19960221	IT1996VR00018	19960221
	<u>ITVR960018 A1</u>	19970821	IT1996VR00018	19960221
	<u>WO9730650 A1</u>	19970828	WO1996EP04713	19961030

Probable Assignee: ORTHOFIX SRL**Assignee(s):^(std):** NEAL MICHAEL ; ORTHOFIX SRL ; SALEH MICHAEL ; VENTURINI DANIELE**Assignee(s):** ORTHOFIX S R L**Inventor(s):^(std):** MICHAEL NEAL ; MICHAEL SALEH ; NEAL MICHAEL ; SALEH MICHAEL ; VENTURINI DANIELE**Inventor(s):** DANIELE VENTURINI**Designated states:** AL AM AT AU AZ BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GR HU IE IL IS IT JP KE KG KP KR KZ LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN**International class**
(IPC 8-9): A61B17/62 A61B17/64 (Advanced/Invention);
A61B17/60 (Core/Invention)**International class**
(IPC 1-7): A61B17/60 A61B17/62 A61F**CPC:** A61B17/62 A61B17/6441**European class:** A61B17/62 A61B17/64G K61B17/64G[Classification Explorer](#)**Cited documents:** US4338927 A, US4185623 A, EP0190990 A1, EP0029298 A1, DE4421223 A1, DE4123439 C1,**Forward Citations:** WO14040738, WO11163406, WO09127663, WO09127663, WO09100247, WO0185041, US9456849, US9443302, US9381042, US9295493, US9220533, US9155559, US9101398, US9078700, US9011438, US8951252, US8945128, US8864750, US8834467, US8758343, US8574232, US7955334, US7226449, US5997537, JP2011510761, FR2907660, EP2110089, EP1153575, EP1042988, EP1042988, CZ300014, CZ298334, CN104434282,

Abstract:

An external fixator for bone surgery including a plurality of pins (V, F) which can be inserted in a bone fragment (M', M'') so that at least one end thereof projects outwardly from the peripheral muscle tissues, a rigid frame arranged to stably support the pins at their outer end while keeping them at an adjustable distance from one another. The frame includes at least a first element (2; 102) adapted to removably and selectively clamp a first group of pins (V) which extend from one side with respect to a first bone fragment (M'), at least a second element (3; 103, 104) arranged to clamp a second group of pins (F) which extend from one side to the other of the bone and, connecting elements (31; 104, 105) extending between at least the first and second elements in order to change their orientation and their distance from one another.

PatBase - W09730650_A1

WO 97/30650

1/10

PCT/EP96/04793

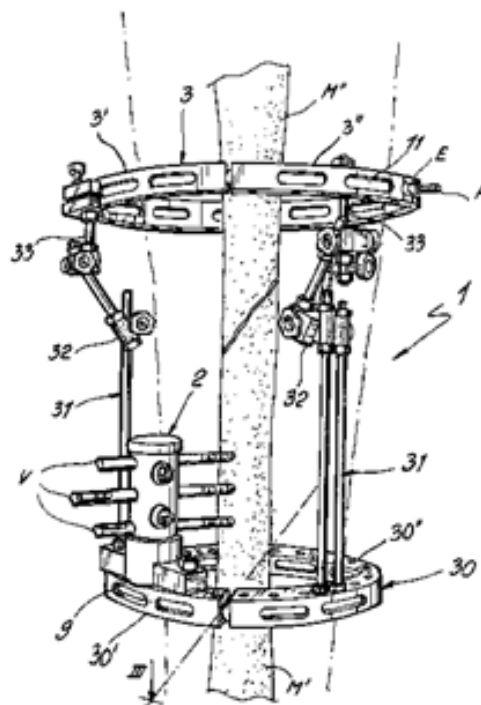


FIG. 1

108) Family number: 10914569 (EP0707832A1)

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Title: External fixator

Priority: FR19940012495 19941012

Family:	Publication number	Publication date	Application number	Application date
	EP0707832 A1	19960424	EP19950420276	19951010
	FR2725613 A1	19960419	FR19940012495	19941012
	FR2725613 B1	19970314	FR19940012495	19941012

Probable Assignee: HARDY JEAN MARIE

Assignee(s):^(std): HARDY JEAN MARIE

Inventor(s):^(std): HARDY JEAN MARIE

Designated states: ES GB GR IT PT

International class
(IPC 8-9): [A61B17/64](#) (Advanced/Invention);
[A61B17/60](#) (Advanced/Non-invention)

International class
(IPC 1-7): [A61B17/60](#) [A61B17/64](#)

CPC: [A61B17/6466](#) [A61B17/6433](#)

European class: [A61B17/64M](#) [K61B17/60D](#) [K61B17/64F](#)

[Classification Explorer](#)

Cited documents: WO9318717 A1, WO9312729 A1, FR2683446 A1, EP0611007 A1, EP0604697 A1, EP0490812 A1, EP0431441 A1, EP0216563 A1,

Forward Citations: WO9741790, WO9741790, US8758343, US6340361, US5976133, US5746741, GR1003098, EP0940124, AU710260,

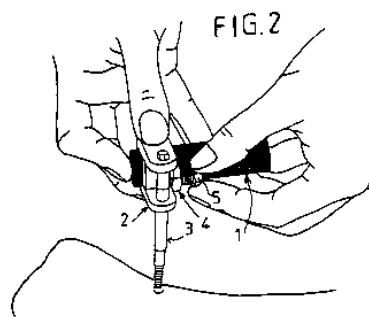
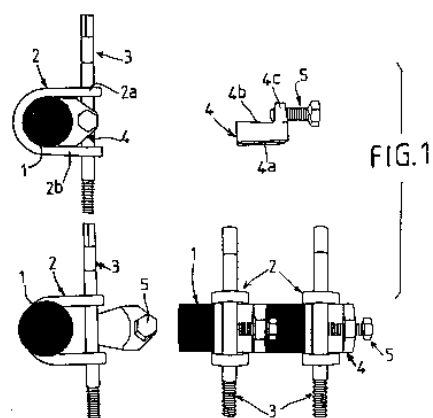
Abstract:

The apparatus, consists of bars (1) of a composition material, connected to one or more bone pins (3) by brackets, each comprising a collar (2) and a locking member (5). Each collar surrounds half the circumference of the bar and can be moved along it, and has two projecting arms to receive a bone pin (3). The ends of the bars can be joined by a variety of couplings which enable them to be extended or set at various angles to one another, e.g, telescopic and threaded joint or ball and socket couplings. The bars themselves can be made from high-strength carbon.

PatBase - FR2725613_R1

2725613

1/17



0) DE3924610A1 – BONE FRACTURE DISTRACTION PIN APPTS. – HAS LONG...

109) Family number: 29533074 (DE3924610A1)

© PatBase

Title: Bone fracture distraction pin appts. – has long forked and short hooked pin clamped together at free ends

Priority: DE19880009715U 19880728 DE19893924610 19890722

Family:	Publication number	Publication date	Application number	Application date
	<u>DE3924610 A1</u>	19900322	DE19893924610	19890722
	<u>DE8809715 U1</u>	19881020	DE19880009715U	19880728

Probable Assignee: MECRON MEDIZINISCHE PRODUKTE GMBH 1000 BERLIN DE

Assignee(s):^(std): GEORGES JAWDAT DR MED ; MECRON MED PROD GMBH

Assignee(s): MECRON MEDIZINISCHE PRODUKTE GMBH 1000 BERLIN DE ; GEORGES JAWDAT DR MED 7640 KEHL DE

Inventor(s):^(std): GEORGES JAWDAT DR MED

Inventor(s): GEORGES JAWDAT DR MED 7640 KEHL DE

International class A61B17/72 (Advanced/Invention)
(IPC 8-9):

International class A61B17/58
(IPC 1-7):

CPC: A61B17/7208 A61B17/7216 A61B17/7266

European class: A61B17/72B K61B17/72C K61B17/72E6B

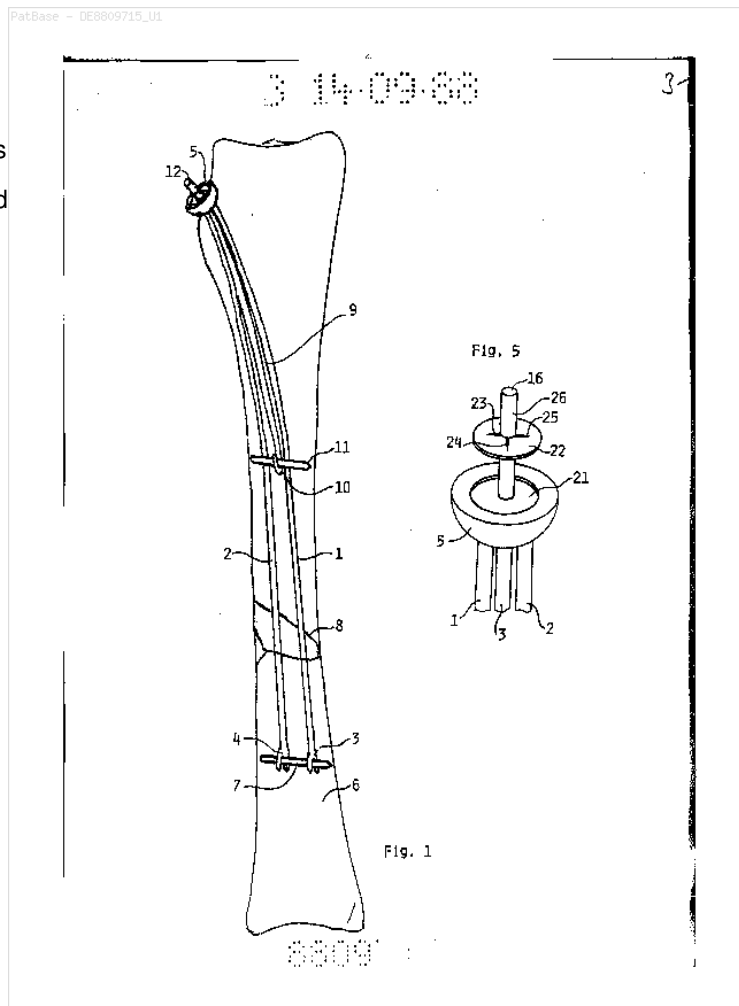
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Cited documents: EP0170787 B1, AT321447 B, AT321447,

Forward Citations: WO9512358, WO9119461, WO15090954, US6533788, US6273892, US5658310, US5603715, GR90100453, GR900100453, FR2844701, FR2722396, FR2711910, FR2658715, FR2649312, EP0748615, EP0693272, EP0689800, EP0561295, EP0408477, DE102014117319, DE102008036689,

Abstract:

Source: DE3924610A1 The distraction-pin appts. is for use with bone fractures. It comprises a first pin (1,2) with forked end (3,4), and longer than a second one (9) with hook end (10). A common clamp (21-26) locks the free ends of the pins in position in relation to each other. This can comprise tension - and compression-load stops for the short and long pins respectively. USE/ADVANTAGE - Distraction pin appts. for reducing bone fractures is usable in marrow cavity.



0) DE19726754A1 – IMPLANT FOR FIXING PARTS OF BONES IN PARTICULAR...

110) Family number: 16931183 (DE19726754A1)

© PatBase

Title: Implant for fixing parts of bones in particular at spine
Priority: DE19971026754 19970624 DE19972010979U 19970624
Family:

Publication number	Publication date	Application number	Application date
DE19726754 A1	19990204	DE19971026754	19970624
DE19726754 C2	19990722	DE19971026754	19970624
DE29710979 U1	19970821	DE19972010979U	19970624

Probable Assignee: AESCULAP AG AND CO KG

Assignee(s):^(std): AESCULAP AG AND CO KG ; AESCULAP AND CO AG KG

Assignee(s): AESCULAP AG AND CO KG 78532 TUTTLINGEN DE

Inventor(s):^(std): BEGER JENS DIPL ING

Inventor(s): BEGER JENS DIPL ING UNIV 78532 TUTTLINGEN DE

International class
(IPC 8-9): [A61B17/70](#) [A61B17/88](#) (Advanced/Invention) ;
[A61B17/86](#) [A61F2/00](#) [A61F2/30](#) [A61F2/44](#) (Advanced/Non-invention)

International class
(IPC 1-7): [A61B17/58](#) [A61B17/70](#) [A61B17/88](#) [A61F2/44](#) [A61F2/46](#)

CPC: [A61B17/7044](#) [A61B17/7037](#) [A61B17/7079](#) [A61B17/708](#) [A61B17/7082](#) [A61B17/7091](#)
[A61B17/864](#) [A61B17/8685](#) [A61F2002/30235](#) [A61F2002/3085](#) [A61F2002/4475](#)
[A61F2230/0069](#)

European class: [A61B17/70B8](#) [A61B17/88S](#) [K61B17/70B5B](#) [K61B17/86D](#) [K61B17/86P](#) [K61F2/00Y3T](#)
[K61F2/30A2Y3T](#) [K61F2/30L2Q](#) [K61F2/44H](#) [K61F230/00Y3](#)

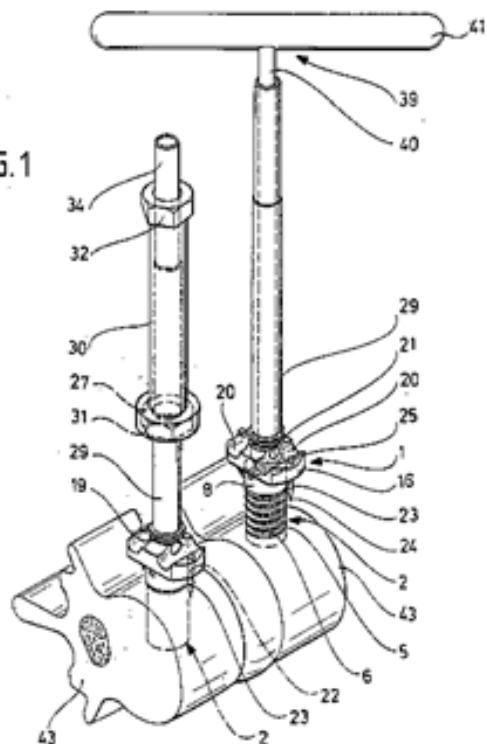
[Classification Explorer](#)

Cited documents: WO9629016 A1, EP0242708 A2, DE4434574 A1, DE4307576 C1, DE3639810 C2, DE3624067 A1, DE19512709 A1,

Forward Citations: WO06094754, WO03045261, WO0128436, WO0010474, WO0010473, USRE45676, USRE45338, US9655685, US9622795, US9603631, US9597127, US9539012, US9510875, US9504499, US9498262, US9408716, US9402663, US9364275, US9345463, US9314274, US9247977, US9119684, US9101401, US9011447, US8979851, US8961524, US8915925, US8900275, US8894655, US8808296, US8758407, US8721685, US8685063, US8663328, US8535318, US8506574, US8480718, US8454658, US8361124, US8337556, US8317838, US8221470, US8211153, US8177817, US8157809, US8083774, US8070751, US8002798, US7955355, US7914536, US7909830, US7867259, US7862595, US7833249, US7780705, US7771476, US7763055, US7758584, US7727262, US7717944, US7695475, US7628800, US7582106, US7473267, US7455685, US7118571, US7083621, US7011660, US7008424, US7008422, US6964667, US6899713, US6821277, US6749614, US6706043, US6610063, US6530929, US6508818, US6299616, KR100795649, JP5108061, JP5108060, JP4574931, JP2010264257, JP2010264256, JP2003511190, FR2832620, EP2730245, EP2366349, EP1269927, EP1221901, EP1105058, DE20010207, DE20010206, DE19851370, DE19851370, DE10125717, DE10028181, DE10005134, DE10005134, DE10005133, DE10005133, DE10004444, DE10004444,

Source: DE19726754A1 The implant for fixing parts of bones has indents (20) on both sides for the accommodation of two connecting bars (3) which keep the bones and the implant safely in position and prevent them from getting twisted. The implant consists mainly of two bearings (1) with indents (20) on both sides (18) to accommodate two connecting bars which are held in position by a nut (27) screwed onto a thread (19) on the upper side of the bearing (1). A ball joint (12) is movable attached to the anchoring element (4).

2006-06-07



2007

AESCULAP AG & Co KG
78532 Tuttlingen

HÖRGER, STELLSCHT & FARTHER

A 53 875 u⁺

111) Family number: 48857747 (CN102038547A)

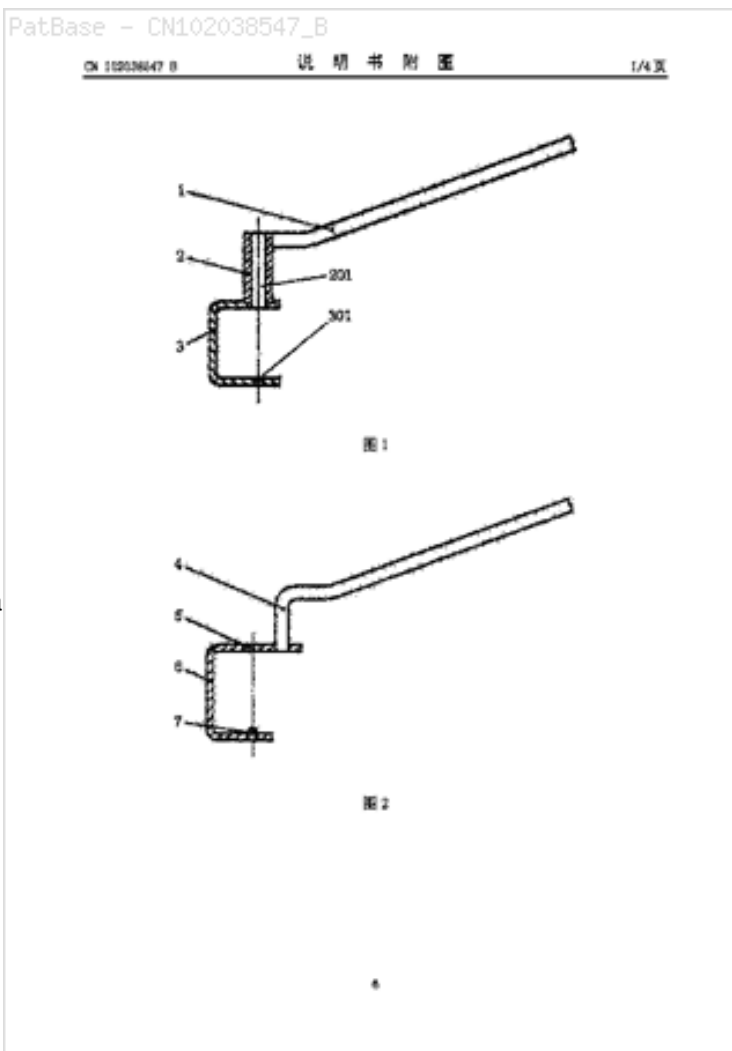
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Title: APPLIANCE FOR BEING IMPLANTED INTO STERNOCLAVICULAR HOOK BONE PLATE**Priority:** CN201110007940 20110114

Family:	Publication number	Publication date	Application number	Application date
	<u>CN102038547 A</u>	20110504	CN201110007940	20110114
	<u>CN102038547 B</u>	20120307	CN201110007940	20110114

Probable Assignee: ZHEJIANG CANWELL MEDICAL LTD**Assignee(s):**^(std): CANWELL MEDICAL CO LTD ; ZHEJIANG CANWELL MEDICAL LTD**Inventor(s):**^(std): HAOXING ZHAO ; HUIHUA FANG ; JIFENG XU ; LIE LIN ; MING FANG**Inventor(s):** XU JIFENG ; ZHAO HAOXING ; FANG HUIHUA ; FANG MING ; LIN LIE**International class** A61B17/92 (Advanced/Invention)
(IPC 8-9):[Classification Explorer](#)**Cited documents:** US2009182335 AA, CN101695456 A, CN101028208 A,**Forward Citations:** CN105310755,**Abstract:**

Source: CN102038547A The invention relates to an appliance for being implanted into a sternoclavicular hook bone plate, which is used for treating anterior and posterior dislocation of a sternoclavicular joint or the anterior and posterior dislocation associated with proximal fracture of clavicle. The appliance comprises a drilling guide device for drilling positioning on a presternum, a thread drawing guide device for threading on the presternum after drilling and a guide rotary tool, wherein the drilling guide device comprises a handle 1, a guide sleeve and a clamping sleeve 1, the clamping sleeve 1 is in the shape of C, the guide sleeve is fixed on an upper plate of the clamping sleeve 1, and a positioning groove is arranged on the inner side of a lower plate of the clamping sleeve 1; the thread drawing guide device comprises a handle 2 and a clamping sleeve 2, the clamping sleeve 2 is in the shape of C, a circular hole with an open slot is arranged on the upper plate of the clamping sleeve 2, and a screw is arranged on the inner side of the clamping sleeve 2; and the guide rotary tool comprises a cross nut, a rotary tool rod, a thread and a ball, a rotary tool handle is arranged at the tail part of the rotary tool rod, the thread penetrates a through hole on the rotary tool rod, one end of the thread is connected with the cross nut, and the other end of the thread is connected with the ball. The appliance has the characteristics of small iatrogenic injuries, short operation time and safety, and can reduce the suffering of a patient.



Title: CONNECTOR ASSEMBLIES**Priority:** GB19800019297 19800612 GB19810017519 19810608

Family:	Publication number	Publication date	Application number	Application date
	<u>GB2077847 A1</u>	19811223	GB19810017519	19810608

Probable Assignee: NAT RES DEV**Assignee(s):^(std):** NAT RES DEV**Assignee(s):** NATIONAL RESEARCH DEVELOPMENT CORP

International class A61B17/64 F16C11/06 (Advanced/Invention);
 (IPC 8-9): A61B17/60 F16C11/06 (Core/Invention)

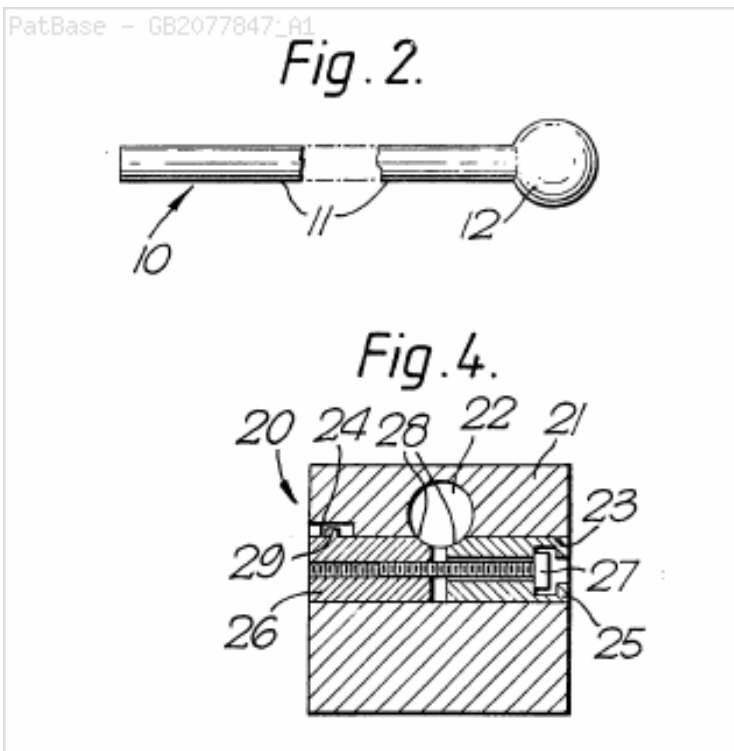
International class F16C11/10
 (IPC 1-7):

CPC: F16C2316/10 F16C11/0619 A61B17/6416 A61B17/6466**European class:** A61B17/64C A61B17/64M F16C11/06C[Classification Explorer](#)

Forward Citations: WO9510240, WO9308758, USRE40914, US6530925, US5971984, US5961515, US5728095, US5702389, US5653707, US5601551, US5429637, US5160335, ITMO20120160, GB2171313, GB2146533, FR2808181, FR2683446, FR2551650, EP0374093, EP0140591, EP0140591, EP0140591, AU599015,

Abstract:

Source: GB2077847A A connector assembly comprises an elongate member (10) and connector (20), the member being a rod (11) with enlarged ball head (12) at one end, and the connector including a body (21) having a stopped bore (22) wholly receiving the head, a relatively transverse throughbore (23) partially intersecting the stopped bore at respective intermediate portions, a keyway (24) in the through bore leading from one end thereof first axially and then circumferentially, a sleeve insert (26) with a key (29) at its outer end engaged in the keyway and its inner end having a part-cylindrical notch (28) and a screw mechanism suitably including a similar sleeve insert (25) in the other end of the through-bore and a bolt (27) inter-connecting the sleeves. The relative locations of the key (29) and the part-cylindrical notch (28) of the first sleeve being in a predetermined relationship with the relative locations of the keyway and stopped bore (22) to mutually close and open the sleeves when the bolt (27) is actuated. Such an assembly suitably forms part of an orthopaedic fracture fixation apparatus with another elongate member similarly connected in opposition with the connector, and respective sets of bone pin connectors (30) individually rotatably and longitudinally adjustably connected on the members, the last connectors each having clamp mechanisms for their members and pins of similar, but simplified, sleeve/bolt form to those of the first connector.



113) Family number: 8795651 (WO9716128A1)

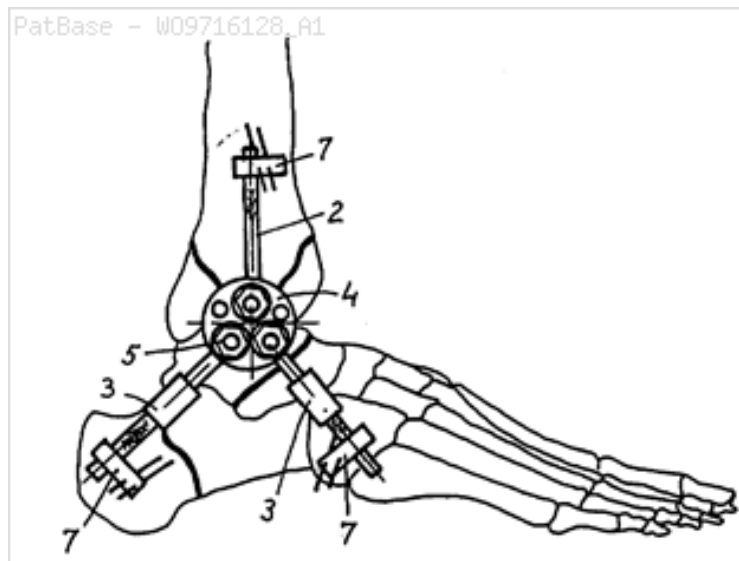
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Title: MODULAR EXTERNAL FIXATION SYSTEM**Priority:** WO1995BG00010 19951027**Family:**

Publication number	Publication date	Application number	Application date
<u>AU199536946 A1</u>	19970522	AU19950036946	19951027
<u>EP0868152 A1</u>	19981007	EP19950944866	19951027
<u>WO9716128 A1</u>	19970509	WO1995BG00010	19951027

Probable Assignee: NESTOROV STANISLAV GEORGIEV**Assignee(s):**^(std) NESTOROV STANISLAV GEORGIEV ; STANISLAV GEORGIEV NESTOROV**Inventor(s):**^(std) NESTOROV STANISLAV GEORGIEV**Inventor(s):** STANISLAV GEORGIEV NESTOROV**Designated states:** AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LI LK LR LS LT LU LV MC MD MG ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TT UA UG US UZ VN**International class**
(IPC 8-9): A61B17/64 (Advanced/Invention);
A61B17/60 (Core/Invention)**International class**
(IPC 1-7): A61B17/60 A61B17/64**CPC:** A61B17/6425**European class:** A61B17/64D[Classification Explorer](#)**Cited documents:** WO9212683 A1, WO8909031 A1, US4696293 A, US4554915 A, US2238870 A, GB1496738 A, EP0380674 A1, EP0192440 A2, EP0140786 A2, EP0011258 B1, DE9319433 U, DE4219156 A1,**Forward Citations:** WO14140831, WO03068085, US9463045, US9393045, US8696668, US8382755, US7931650, US7887537, US7758582, US7608074, US7048735, US7004943,**Abstract:**

The modular external fixation system can be used in orthopedics and traumatology in the treatment of traumas and deformations of various parts of the locomotory system for the building of external fixation devices used in reposition, fixation and traction. The system consists of supporting elements – one piece and adjustable, with circular section and a rifflled external surface, jet comprising modular coupling elements for coupling supporting elements or coupling a supporting element to implants, in addition to that comprising a flat coupling element with holes in which can be mounted modular coupling elements for building ties with flat reciprocally arrangement of the supporting elements. Each modular coupling element has a stepped body with holes and ring bodies with slits, both manufactured from materials with different rigidity.



114) Family number: 17674123 (DE9311049U1)

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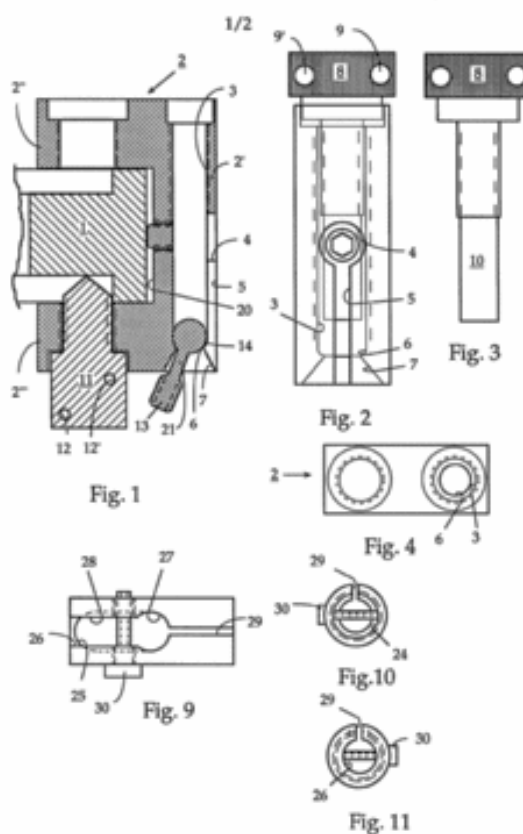
Title: Konnektor zum Aufsetzen auf Ringe eines Ringfixateurs Connector for attachment to a ring fixator rings (Machine translation)**Priority:** DE19930011049U 19930723

Family:	Publication number	Publication date	Application number	Application date
	DE9311049 U1	19931104	DE19930011049U	19930723

Probable Assignee: SCHEWIOR THOMAS DR**Assignee(s):^(std):** SCHEWIOR THOMAS DR**Assignee(s):** SCHEWIOR THOMAS DR 69151 NECKARGEMUEND DE**International class** A61B17/62 (Advanced/Invention);
(IPC 8-9): A61B17/60 (Core/Invention)**International class** A61B17/60
(IPC 1-7):**CPC:** A61B17/62**European class:** A61B17/62[Classification Explorer](#)**Abstract:**

Source: DE9311049U1 (Claim 1) 1. Konnektor (2,15) zum Aufsetzen auf Ringe (1) eines Ringfixateurs, der zum Einrichten, Manoevrieren, Befestigen und Regulieren der veraenderbaren Halterung und Lage von Knochenabschnitten dient, und zum Haltern von Verbindungsstangen (13,34) entweder zwischen zwei Ringen oder einem Ring und einem den Knochen penetrierenden Nagel, wobei der Konnektor (2,15) Cfoermig gestaltet aus einem ruckwaertigen Teil (2') und zwei angeformten Schenkeln (2'', 2''') besteht, die zwischen sich eine Aufnahmeoefnung (20) fuer den Ring (1) bilden und die durchgehende Loecher zum Befestigen des Konnektors (2, 15) am Ring aufweisen, gekennzeichnet durch folgende Merkmale: a) innerhalb des ruckwaertigen Teils (2') des Konnektors (2) senkrecht zur Ebene des Ringes (1) ist eine Bohrung (3,18) angeordnet, die wenigstens teilweise ein Gewinde zur Aufnahme einer Gewindeschraube (8,35) aufweist und die an ihrem Ende einen Sitz (6,19) ausbildet, wobei in die Bohrung (3,18) von mindestens einer der drei aeusseren Begrenzungswaende des ruckwaertigen Teils (2') eine Durchbrechung (4,16) muendet, an die sich ein in Richtung der Bohrung (3,18) verlaufender und von derselben nach aussen offener Schlitz (5,17) anschliesst, dessen Durchmesser geringer ist als der Durchmesser der Durchbrechung (4,16) b) die Verbindungsstangen (13,34) weisen an wenigstens einem der Enden einen Kopf (14) auf, der in einen gegenueber dem Kopf (14) verjuengten Halsabschnitt (21) uebergeht c) der Durchmesser des Kopfes (14) und des Halsabschnittes (21) ist etwas geringer als der Durchmesser der Durchbrechung (4,16) bzw. des Schlitzes (5,17) zum Einfuehren des Kopfes (14) durch die Durchbrechung (4,16) in die Bohrung (3,18) des Konnektors (2) und Plazieren innerhalb des Sitzes (6,19) der

PatBase - DE9311049_U1



Bohrung (3,18).

Machine translation: (Claim 1) 1 Connector (2.15) to be placed on rings (1) of a ring fixator, used to set up, maneuvering, fixing and regulating the bracket and changeable situation of bone sections, and to holders of connecting rods (13,34) between either one or two rings ring and a nail penetrating the bone, with the connector (2.15) C-shaped design from a rear part (2 ') and two molded-limbs (2', 2 '"') is made between a Aufnahmeöffnung (20) for the form ring (1) and the through holes for attaching the connector (2, 15) on the ring, characterized by the following characteristics: a) inside the rear part (2 ') of the connector (2) perpendicular to the plane of the ring (1) is a hole (3:18) arranged to at least partially threaded for receiving a threaded screw (8.35) and a seat at the end (6.19) is formed, while in the hole (3.18) of at least one of the three outer Begrenzungsfläche of the rear part (2 ') an aperture (4.16), empties itself into the direction of the bore (3.18) and extending outward from the same open slot (5.17) connects, the diameter is smaller than the diameter of the aperture (4.16) b) the connecting rods (13,34) have at least one of the ends of a head (14), which merges into one opposite the head (14) tapered neck portion (21) c) the diameter of the head (14) and the neck portion (21) is slightly smaller than the diameter of the aperture (4.16) or the slot (5.17) for insertion of the head (14) through the opening (4, 16) into the hole (3.18) of the connector (2) and placing inside the seat (6.19) of the bore (3.18).

115) Family number: 58448475 (US2015039037A)

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Title: SYSTEMS FOR AND METHODS OF PREPARING A SACROILIAC JOINT FOR FUSION

Priority: US20130798225P 20130315 US20130859134P 20130726 US20130912494P 20131205
 US20130891345P 20131015 US20130891330P 20131015 US20130860185P 20130730
 US20140514221 20141014 US20140447612 20140731 US20140954594P 20140317
 US20130914409P 20131211 US20140979857P 20140415 US20140955126P 20140318
 US20140567956 20141211 US20150660784 20150317 WO2014US30889 20140317
 US20170418633 20170127

Family:	Publication number	Publication date	Application number	Application date
	US2015039037 AA	20150205	US20140514221	20141014
	US2015094765 AA	20150402	US20140567956	20141211
	US2015173805 AA	20150625	US20140447612	20140731
	US2015182268 AA	20150702	US20150660784	20150317
	US2017135733 AA	20170518	US20170418633	20170127
	WO15017593 A1	20150205	WO2014US48990	20140731

Probable Assignee: JCBD LLC**Assignee(s):^(std):** JCBD LLC**Assignee(s):** KAPSTONE MEDICAL LLC ; SI TECHNOLOGY LLC**Inventor(s):^(std):** DONALDSON CATHLENE ; DONNER CHRISTOPHER THOMAS ; DONNER EDWARD JEFFREY ; LEWIS RYAN ; LINDQUIST STUART**Agent(s):** MCCAY MICHAEL ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
 CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
 GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ
 LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ
 NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
 SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA
 ZM ZW

International class [A61B17/15](#) [A61B17/16](#) [A61B17/17](#) [A61B17/68](#) [A61B17/70](#) [A61B17/80](#) [A61B17/86](#)
 (IPC 8-9): [A61B17/88](#) [A61F2/32](#) (Advanced/Invention)

CPC: [A61B17/7055](#) [A61B17/7074](#) [A61B17/86](#) [A61B17/8872](#) [A61B17/8066](#) [A61B17/808](#)
[A61B17/1757](#) [A61B17/1659](#) [A61B17/1671](#) [A61B17/7037](#) [A61B17/8057](#) [A61B17/809](#)
[A61B17/863](#) [A61B17/8665](#) [A61B17/1735](#) [A61B2090/3966](#) [A61B17/144](#) [A61B17/149](#)
[A61B17/15](#) [A61B17/1604](#) [A61B17/1739](#) [A61B2017/922](#) [A61B17/17](#) [A61F2/46](#)
[A61B17/1742](#) [A61B17/68](#) [A61F2002/30995](#) [A61B17/7076](#) [A61B17/7058](#) [A61B17/7049](#)

US class: [606/246](#) [606/279](#) [606/281](#) [606/286](#) [606/290](#) [606/291](#) [606/292](#) [606/85](#) [606/87](#)[Classification Explorer](#)

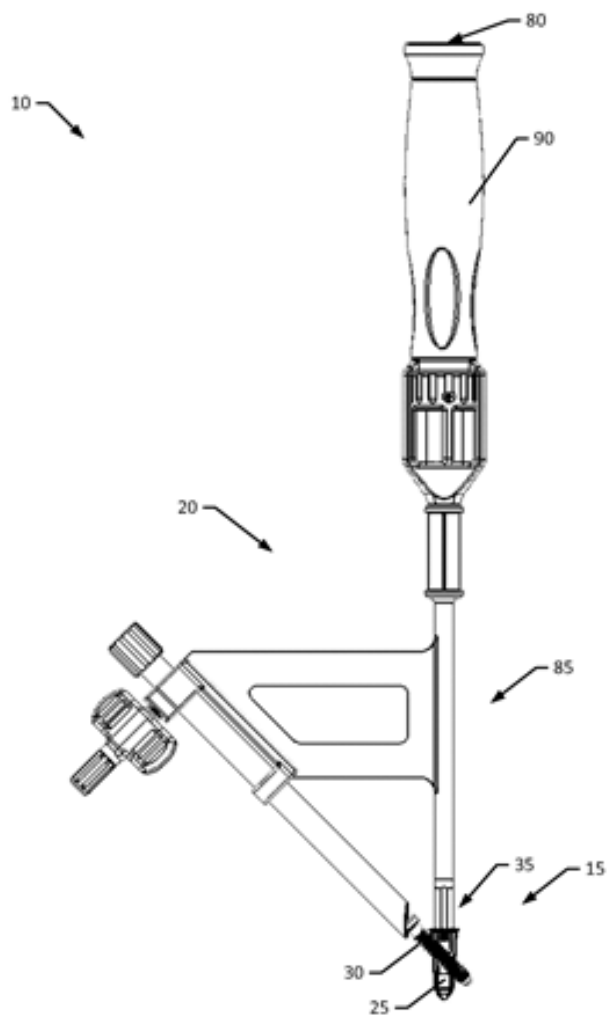
Cited documents: US8317862 BB, US7837732 BB, US6669698 BA, US5334205 A, US2014336763 AA,
 US2012095560 AA, US2011238181 AA, US2011184519 AA, US2011009869 AA,
 US2005149192 AA, US2002068941 AA,

Forward Citations: US9554909, US9421109, US9381045, US9333090, US2016361074, US2016081809,
 US2015320451, US2015320450, US2015209087, US2015112444, US2015105828,
 US2015012096, US2014180342, DE102015117884,

Abstract:

Source: US2015039037A A surgical preparation tool for preparing a sacroiliac joint for a surgical procedure comprising a trial tool assembly and a cutting tool configured to releasably and slidably couple with the trial tool assembly, wherein the trial tool assembly is configured to guide the cutting tool during distal-proximal translation such that as the cutting tool distally advances relative to an implant trial of the trial tool assembly, at least a portion of a cutting element of the cutting tool extends generally over and perpendicularly outward from a first top surface of a body of the implant trial.

PatBase - W015017593_A1

**FIG. 1**

116) Family number: 23965128 (WO02076552A1)

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Title: OSTEOPOROSIS TREATMENT UNIT**Priority:** KR20010015851 20010327 WO2002KR00500 20020326

Family:	Publication number	Publication date	Application number	Application date
	AU2002243048 AA	20021008	AU20020243048	20020326
	KR100405143 B1	20031112	KR20010015851	20010327
	KR20020075655 A	20021005	KR20010015851	20010327
	WO02076552 A1	20021003	WO2002KR00500	20020326

Probable Assignee: NBM CO LTD**Assignee(s):^(std):** KIM HONG GOH ; NBM CO LTD**Assignee(s):** NBM CO**Inventor(s):^(std):** KIM HONG GEO ; KIM HONG GOH

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class
 (IPC 8-9): [A61H23/02 A61N7/00](#) (Advanced/Invention);
[A61B18/20 A61N5/01 A61N5/06 A61N5/067](#) (Advanced/Non-invention);
[A61H23/02 A61N7/00](#) (Core/Invention);
[A61B18/20 A61N5/01 A61N5/06](#) (Core/Non-invention)

International class
 (IPC 1-7): [A61H23/02 A61N5/06 A61N7/00](#)

CPC: [A61B18/20 A61H23/0245 A61N5/01 A61N7/00 A61N2005/065 A61N2005/0659 A61N2005/067 A61N2007/0078](#)

European class: [A61H23/02P A61N7/00 K61B18/20 K61N5/01 K61N5/067 K61N5/06T K61N5/06W2 K61N7/00N](#)

[Classification Explorer](#)

Cited documents: US4530360 A, KR980000372 A, KR20010233762 U, KR20010106564 A, KR20000177456 U, JP7299066 A2,

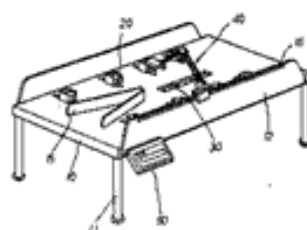
Forward Citations: US9446260, US2012239059, KR100723446, EP1944000,

Abstract:

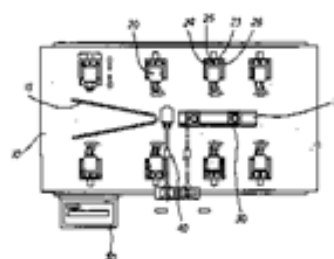
Disclosed is an osteoporosis treatment apparatus which creates a bone cell in an osteoporosis occurring region of the body of an osteoporotic patient by using an IR laser and an ultrasonic wave, treats an osteoporosis by activating the surrounding bone tissues, and rapidly joins fracture regions of the patient while eliminating a pain owing to an anti-inflammatory effect. The osteoporosis treatment apparatus comprises; a bed adapted to allow an osteoporotic patient to lie down on the top surface thereof; at least one side probe mounted on each of both sides of the top surface of the bed in such a fashion that it is moved along the lateral direction thereof to be in close contact with both side faces of the body of the osteoporotic patient, the at least one side probe having an ultrasonic wave generator and a laser beam generator built therein; at least one spine probe mounted in a recess formed in the middle portion of the top surface of the bed in such a fashion that it is moved along the longitudinal direction of the bed to adhere closely to the spinal region of the body of the osteoporotic patient; a manipulator displaceably mounted to the upper edge of one of both side plates provided uprightly on both side edges of the bed and adapted to irradiate an IR laser beam toward the body of the osteoporotic patient, the manipulator having an IR laser beam generator built therein; and a control panel mounted to one side of the bed and adapted to control the driving of the ultrasonic wave generators and the laser beam generators of the side and spine probes, and the driving of the IR laser beam generator of the manipulator.

1/6

(Fig. 1)



(Fig. 2)



117) Family number: 17511272 (CN2193726Y)

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Title: Universal fracture reposition external fixator**Priority:** CN19942018921U 19940813

Family:	Publication number	Publication date	Application number	Application date
	<u>CN2193726 Y</u>	19950405	CN19942018921U	19940813

Probable Assignee: ZENG XIANGWEI**Assignee(s):**^(std): ZENG XIANGWEI**Inventor(s):**^(std): LI LIN ; LIN LI ; TIEJUN ZHOU ; XIANGWEI ZENG ; ZENG XIANGWEI ; ZHOU TIEJUN

International class A61B17/58 (Advanced/Invention);
^{(IPC 8-9):} A61B17/58 (Core/Invention)

International class A61B17/58
^{(IPC 1-7):}

[Classification Explorer](#)**Abstract:**

Source: CN2193726Y The utility model provides a universal fracture reposition external fixer with a spherical surface, adopting two full thread screw rods; the upper and the lower parts are respectively movably fixed with a sliding arc and a sliding block; a steel needle fixing clamp in a groove of the sliding arc and the sliding block are used for clamping a bone needle; the middle part of the screw rod is provided with a rotatable universal adjuster with a spherical surface. The universal adjustment of the spherical surface can cause the reposition of the displaced fracture to obtain the ideal reposition; a frame is formed by the combination of double rods and fixing needles, the fixation is firm and reliable, promoting the rapid healing of fracture; the used steel needle is small, reducing the infection chance of a pinhole, reserving enough space, and being convenient for changing dressings.

118) Family number: 41017865 (WO08002992A1)

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Title: RADIOLUCENT EXTERNAL FIXATION ELEMENT WITH RADIO-OPAQUE ALIGNMENT STRUCTURES**Priority:** US20060816696P 20060627

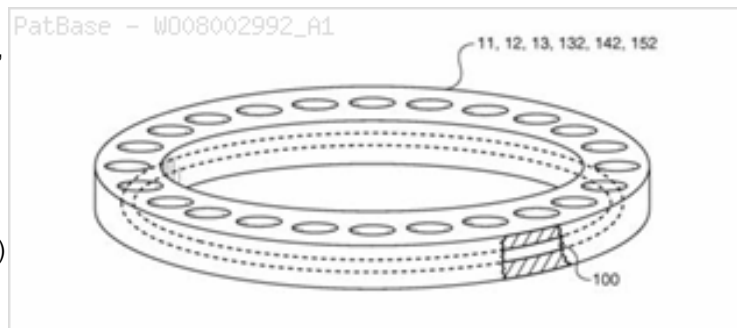
Family:	Publication number	Publication date	Application number	Application date
	WO08002992 A1	20080103	WO2007US72267	20070627

Probable Assignee: SMITH AND NEPHEW INC**Assignee(s):^(std):** AUSTIN GENE EDWARD ; SMITH AND NEPHEW INC**Inventor(s):^(std):** AUSTIN GENE EDWARD**Agent(s):** CHAMBERS DAVID ET AL**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A61B17/62 (Advanced/Invention);
A61B19/00 (Advanced/Non-invention);
A61B17/60 (Core/Invention);
A61B19/00 (Core/Non-invention)

CPC: A61B17/62 A61B6/0421 A61B17/6458 A61B90/39 A61B2017/00902 A61B2017/00915 A61B2090/0807**European class:** A61B17/62 A61B17/64K A61B6/04A4 K61B17/00S25 K61B17/00S25R K61B19/48H K61B19/54[Classification Explorer](#)**Cited documents:** WO03065907 A1, US5776132 A, US5062844 A, US5003969 A, US2004199251 AA, FR2822367 A1, EP0460944 A1,**Forward Citations:** WO14055202, US9456849, US9443302, US9381042, US9295493, US9155559, US9078700, US8864750, US8574232, US2015257788, ITGE20120093, EP2543320, CN105213000,**Abstract:**

A radiolucent external fixation element (11, 12, 13, 132, 142, 152) with radio-opaque alignment structures (100) is disclosed. The radio-opaque alignment structure (100) may include, among other things, wire (110), spheres (112), or paint (114). The alignment structure (100) is used to form a plane orthogonal to the axis of the bone and center the fixation element (11, 12, 13, 132, 142, 152) upon the axis of the bone.



Title: CUTTING DEVICE AND TOOL THEREFOR**Priority:** US19280320376 19281119 US19290353322 19290408 19290513

Family:	Publication number	Publication date	Application number	Application date
	ES118088 A1	19300701	ES19300118088	19300512
	FR37099 E	19300930		00000000
	FR675575 A	19300212		19290513
	GB334527 A	19300829	GB19290013263	19290429
	GB334544 A	19300829	GB19290013264	19290429
	US1771764 A	19300729	US19280320376	19281119
	US1781564 A	19301111	US19290353322	19290408

Probable Assignee: CLIFTON B LEECH**Assignee(s):**^(std) BEATTIE ERNEST J ; CLIFTON B LEECH ; CLIFTON BRIGGS LEECH ;
ORANIENBURGUER CHEM FAB A G**Assignee(s):** ORANIENBURGUER CHEMISCHE FABRIK A G ; ORANIENBURGUER CHEMISCHE
FABRIK AG**Inventor(s):**^(std) BEATTIE ERNEST J ; DECRAENE FELIX ; LEECH CLIFTON BRIGGS**International class**
^{(IPC 8-9):} [A61F15/02 B23D57/00 B23D59/02 B27C1/00 C08L89/06 H01H13/28](#) (Advanced/Invention);
[A61F15/00 B23D57/00 B23D59/00 B27C1/00 C08L89/00 H01H13/26](#) (Core/Invention)**International class**
^{(IPC 1-7):} [A61F15/02](#)**CPC:** [H01H13/28 B23D59/02 C08L89/06 Y10T409/306216 B27C1/007 A61F15/02 B23D57/00](#)**European class:** [A61F15/02 B23D57/00 B23D59/02 B27C1/00D C08L89/06 H01H13/28](#)**US class:** [30/276 30/286 30/347 30/370 30/388 409/175 606/180 606/80](#)[Classification Explorer](#)**Forward Citations:** US5628748, US4575937, US4071030, US3750671, US3704517, US3461875,
US3274889, US3223088, US3158933, US3146675, US2872731, US2670018,
US2663331, US2490878, US2010024223, DE1010700,

Abstract:

Source: GB334527A Cutting plaster bandages.—A portable cutting appliance, particularly applicable to the cutting and removal of plaster bandages, comprises a rotatable tool 14 having three helical cutting edges, of high pitch, and a guide foot 17, comprising a bevelled disc, freely rotatable about the tool and having a recess at 20 forming a supporting bearing therefor. The tool 14 is secured to the shaft of an electric motor 3 preferably by screwing. The guide foot 17 is connected by a strut 16 with a cap 11 rotatably secured to an extension of the motor bearing 5 by screws 12 which engage an annular groove in the bearing. The strut 16 is formed with a pin 25 which functions to clear the tool and to assist the latter to remove the cut material. The motor 3 is supported by a bifurcated member 2 the arms of which are secured to the upper motor-bearing 4 and to the casing at 6. The member 2 is formed with a handle 1 through which the motor leads 22 pass, the motor being started by a switch 24 in the form of a trigger. In use the guides foot 17 is pushed beneath the edge of the plaster bandages b in contact with the patient a; the motor is then started and the cutter caused to traverse the material in any desired direction, the cutter being turnable through relatively sharp angles without difficulty. The cap 11 may be locked against rotation when desired by a screw 27.

PatBase - US1781564_A

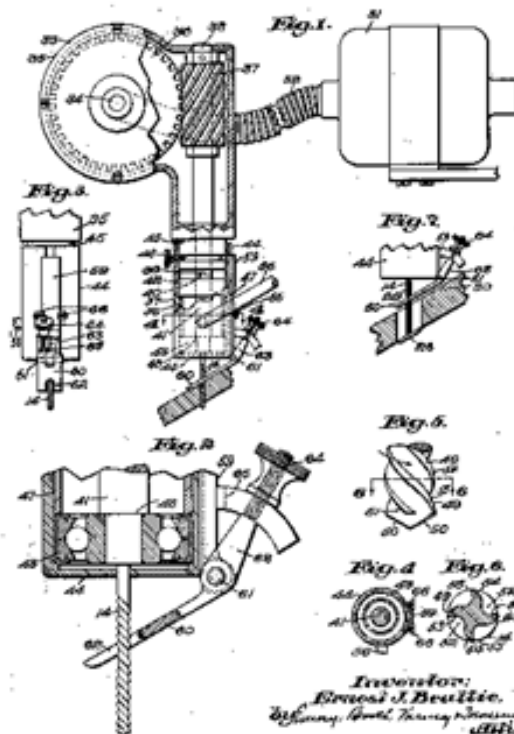
Nov. 11, 1930.

K. J. BEATTIE

1,781,564

CUTTING DEVICE AND TOOL THEREFOR

Filed April 22, 1929



120) Family number: 25671825 (CH303453A)

© PatBase

Title: FIXATEUR, NOTAMMENT POUR LE TRAITEMENT DES FRACTURES DES OS. FIXER, ESPECIALLY FOR THE TREATMENT OF FRACTURE OS. (Machine translation)

Priority: 19520513

Family:	Publication number	Publication date	Application number	Application date
	<u>CH303453 A</u>	19541130		00000000

Probable Assignee: HOFFMANN RAOUL DR

Assignee(s):^(std): HOFFMANN RAOUL DR

Inventor(s):^(std): HOFFMANN RAOUL DR

International class A61B17/64 (Advanced/Invention);
(IPC 8-9): A61B17/60 (Core/Invention)

International class A61B17/18
(IPC 1-7):

CPC: A61B17/6466

European class: A61B17/64M

[Classification Explorer](#)

Forward Citations: WO9532676, WO07098631, WO03065911, WO0061019, US7527626, US7048735, US7004943, US5167661, US4604997, FR2720261, FR2322579, EP1522267, EP1522266, EP1312316, EP0420813, DE2838662, AU639486,

Abstract:

Source: CH303453A (Claim 1) 1. Fixateur selon la revendication, caracterise en ce qu'il comprend un boitier constitue par deux joues presentant chacune a leur extremite retenue a la mordache une collerette destinee a penetrer dans une rainure circulaire menagee dans la paroi du logement que presente ladite mordache.

Machine translation: (Claim 1) 1. Fixer of Claim, characterized in that it comprises a housing constituted by two cheeks presenting each with their extremity soft jaws has chosen a collar for penetrating a circular groove cut in the wall of said housing that present soft jaws.

PatBase - CH303453_A

Dr. Ernst Rüdiger

Revue N° 318 503
1. 1912

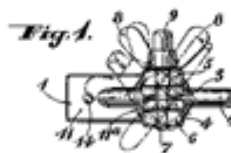
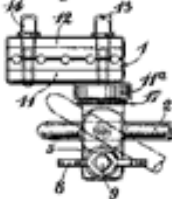


Fig. 3.



Fig. 2.



0) US2008021475A – ORTHOPAEDIC APPLIANCES

121) Family number: 41119912 (US2008021475A)

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Title: ORTHOPAEDIC APPLIANCES

Priority: US20060491116 20060724

Family:	Publication number	Publication date	Application number	Application date
	<u>US2008021475 AA</u>	20080124	US20060491116	20060724

Probable Assignee: LAWRIE STEVEN ALAN

Assignee(s):^(std): LAWRIE STEVEN ALAN

Inventor(s):^(std): LAWRIE STEVEN ALAN

Agent(s): MICHAEL MOLINS MOLINS AND CO

International class
(IPC 8-9): A61F2/30 (Advanced/Invention);
A61F2/30 (Core/Invention)

CPC: A61B17/8047 A61B17/8061 A61F2/0095 A61F2/30721 A61F2/4637 A61F2002/3021
A61F2002/30217 A61F2002/30219 A61F2002/30332 A61F2002/30672 A61F2002/3069
A61F2002/30718 A61F2002/30772 A61F2002/365 A61F2002/4641 A61F2220/0033
A61F2230/0067

European class: A61B17/80H A61F2/30B K61B17/80D6 K61F2/00P K61F2/00T1C K61F2/30A2Y2F
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K61F2/30A5T K61F2/30L2A K61F2/36C4 K61F2/46F K61F2/46F22 K61F220/00T1
K61F230/00Y2

US class: 606/319 606/319P 606/69

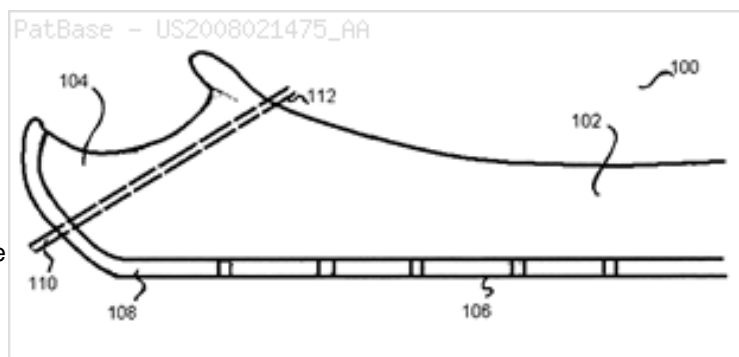
[Classification Explorer](#)

Cited documents: US7207993 BA, US7104995 BB, US6478518 BA, US5665089 A, US5591169 A, US5300076 A,

Forward Citations: US9545276, US2014277176, US2011208247,

Abstract:

Source: US2008021475A Provided is a bone plate for the olecranon of the proximal ulna using a combination of screws and K wires. The plate is curved to fit the shape of the olecranon and is screwed in place. The plate has a locking section located in the curved section. A fastener is pushed over the ends of the K wires and locks in to the locking section of the plate. The fastener has a tapered wedge that secures the K wires and resists their withdrawal. A femoral stem cap is used during hip replacement surgery and protects the Morse taper of the femoral stein once the ball of the hip joint is removed. The femoral stem cap has an air vent to allow air to pass when being applied and removed.



Priority: DE19900014274U 19901015

Family:

Publication number	Publication date	Application number	Application date
<u>DE9014274 U1</u>	19910314	DE19900014274U	19901015

Probable Assignee: SCHUEMANN UWE 2080 PINNEBERG DE

Assignee(s): SCHUEMANN UWE 2080 PINNEBERG DE ; WOLTER DIETMAR PROF DR MED 2071 HOISDORF DE

International class A61B17/62 (Advanced/Invention);
(IPC 8-9): A61B17/60 (Core/Invention)

International class A61B17/60
(IPC 1-7):

CPC: A61B17/62

European class: A61B17/62

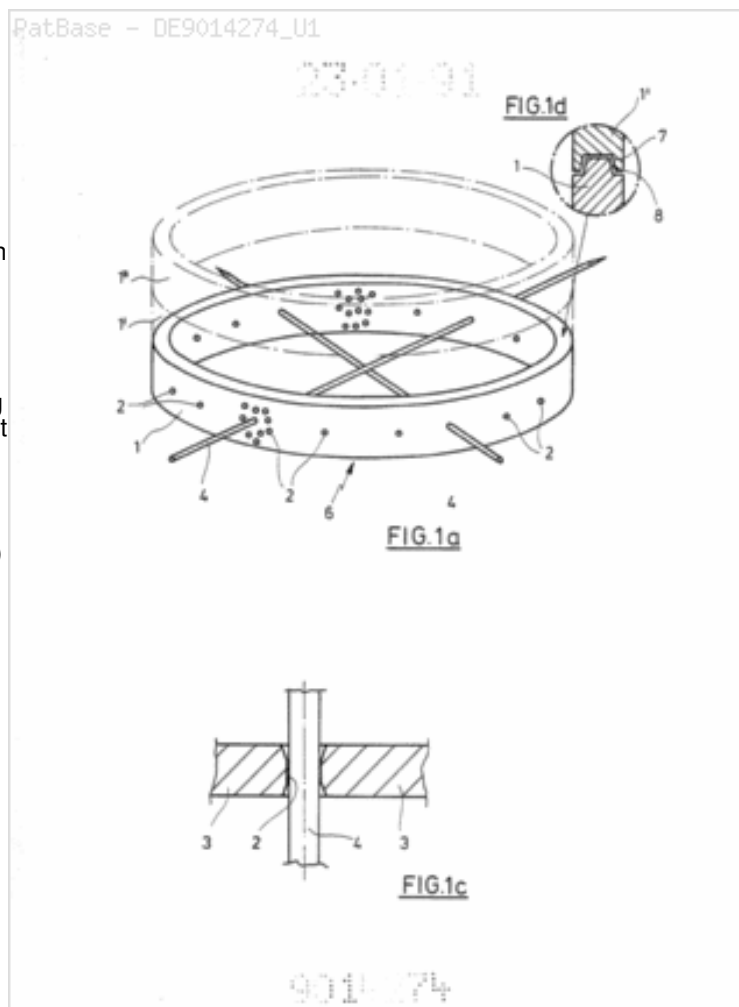
[Classification Explorer](#)

Forward Citations: FR2680966,

Abstract:

Source: DE9014274U1 (Claim 1) 1. Fixationsring zur Reposition von Knochenfragmenten mit mindestens zwei Fixationsringen (1, 1'), die durch ein Gestaenge in festem Abstand zueinander gehalten sind und zwischen denen Knochendraehte (4, 4') gespannt werden, dadurch gekennzeichnet, dass die Fixationsringe (1, 1') Rohrsegmente sind, deren Wand (3) eine Vielzahl von matrixartigen Loechern (2) fuer die Durchfuehrung der Knochendraehte (4, 4') aufweisen, die die Wand (3) radial durchsetzen.

Machine translation: (Claim 1) 1 Fixation ring to the reduction of bone fragments with at least two fixation rings (1, 1'), which are connected by a rod in a fixed distance from each other held and between which Knochendraehte (4, 4') are excited, characterized in that the fixation rings (1, 1') pipe segments, the wall (3) a variety of matrix-like holes (2) for the implementation of Knochendraehte (4, 4 have '), which pass through the wall (3) radially.



- List: SS2 1–50 (FT=external and fixat* and bone and fracture and (ball or sphere) and arm) (Results 32)

0) US2005131409A – LINKED BILATERAL SPINAL FACET IMPLANTS AND METH...

1) Family number: 33397877 (US2005131409A)

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Title: LINKED BILATERAL SPINAL FACET IMPLANTS AND METHODS OF USE

Priority:

EP20060739716	20060327	EP20080705833	20080110	US20030528726P	20031210
US20030687856	20031017	US20040545094P	20040217	US20040860487	20040602
US20040860495	20040602	US20040545101P	20040217	US20040860543	20040602
US20040860778	20040602	US20040990191	20041115	US20040989971	20041115
US20050063941	20050222	US20050312323	20051219	US20050666201P	20050328
US20060760863P	20060119	US20060463513	20060809	US20060757592P	20060109
US20070734502	20070412	US20060350179	20060207	US20060388389	20060324
US20050666209P	20050328	US20070014344	20071217	US20070015876	20071221
US20070015866	20071221	US20070015840	20071221	US20070015886	20071221
US20070014344P	20071217	US20070015840P	20071221	US20070015866P	20071221
US20070015876P	20071221	US20070015886P	20071221	US20070884233P	20070110
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Family:

Publication number	Publication date	Application number	Application date
<u>AU2005214933 AA</u>	20050901	AU20050214933	20050217
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<u>AU2006230077 AA</u>	20061005	AU20060230077	20060327
<u>AU2007206072 AA</u>	20070726	AU20070206072	20070108
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<u>DE602008028536 D1</u>	20140102	DE200860028536T	20080110

<u>EP1715820 A2</u>	20061102	EP20050723164	20050217
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<u>EP1850807 A4</u>	20120104	EP20060735569	20060221
<u>EP1863412 A2</u>	20071212	EP20060739716	20060327
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<u>EP1863412 B1</u>	20150812	EP20060739716	20060327
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<u>EP1973484 A4</u>	20150812	EP20070709987	20070108
<u>EP2114273 A2</u>	20091111	EP20080705833	20080110
<u>EP2114273 A4</u>	20120725	EP20080705833	20080110
<u>EP2114273 B1</u>	20131106	EP20080705833	20080110
<u>EP2203122 A1</u>	20100707	EP20080833983	20080829
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<u>JP2007535973 T2</u>	20071213	JP20060554189T	20050217
<u>JP2008531121 T2</u>	20080814	JP20070557091T	20060221
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<u>JP2010515543 T2</u>	20100513	JP20090545681T	20080110
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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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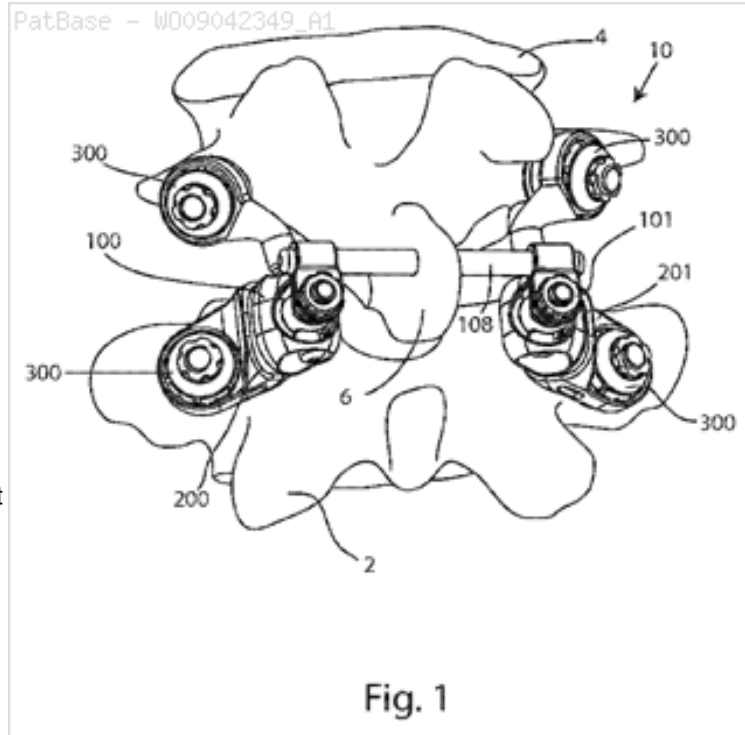
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Abstract:

Source: US2005131409A Superior and/or inferior facets of one or more facet joints may be replaced by superior and/or inferior facet joint prostheses. In one embodiment, a kit of superior or inferior prostheses is provided, in which the prostheses have at least two dimensions that vary among members of the kit independently of each other. Each prosthesis may have a bone engaging surface having a surface that is polyaxially rotatable against a corresponding resection of a vertebra. Each prosthesis may also have an articulating surface shaped such that, after attachment to the spine, the replaced or partially replaced facet joints provide a larger medial-lateral range of motion when the spine is flexed than when the spine is extended. Crosslinks may be used to connect left and right prosthesis together in such a manner that they are stabilized in a position in which they are seated directly against the vertebra.



2) Family number: 32843968 (US2006084982A)

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Title: SYSTEMS AND METHODS FOR POSTERIOR DYNAMIC STABILIZATION OF THE SPINE

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<u>WO10019791 A3</u>	20100514	WO2009US53740	20090813

Probable Assignee: EXACTECH INC

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/00 A61B17/04 A61B17/08 A61B17/14 A61B17/32 A61B17/34 A61B17/56 A61B17/58 A61B17/68 A61B17/70 A61B17/84 A61B17/86 A61B17/88 A61B17/90 A61B19/00 A61F2/30 A61F2/44 (Advanced/Invention);
A61B17/70 (Advanced/Non-invention);
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A61B A61F (Subclass/Invention)

CPC: A61B17/686 A61B17/70 A61B17/7007 A61B17/7011 A61B17/7026 A61B17/7031 A61B17/7041 A61B17/8685 A61F2/4405 A61F2/442 A61F2002/30624 A61F2002/30884 A61F2002/448 A61B17/7043 A61B17/7047 A61B17/7056 A61B17/7052 A61B17/7002 A61B17/6491 A61B17/7086 A61B17/7013 A61B17/7025 A61B17/320016 A61B17/1617 A61B17/320036 A61B17/7019 A61B2090/061 A61B17/7023 A61B17/025 A61B17/3421 A61B17/7005 A61B17/7017 A61B17/7028 A61B17/7032 A61B17/7037 A61B17/7038 A61B17/7044 A61B17/708 A61B17/7082 A61B17/7085 A61B17/7091 A61B2017/00261 A61B2017/0256 A61B17/1655 A61B17/7004 A61B17/701 A61B17/7014 A61B17/704 A61B17/8897 A61B17/7035

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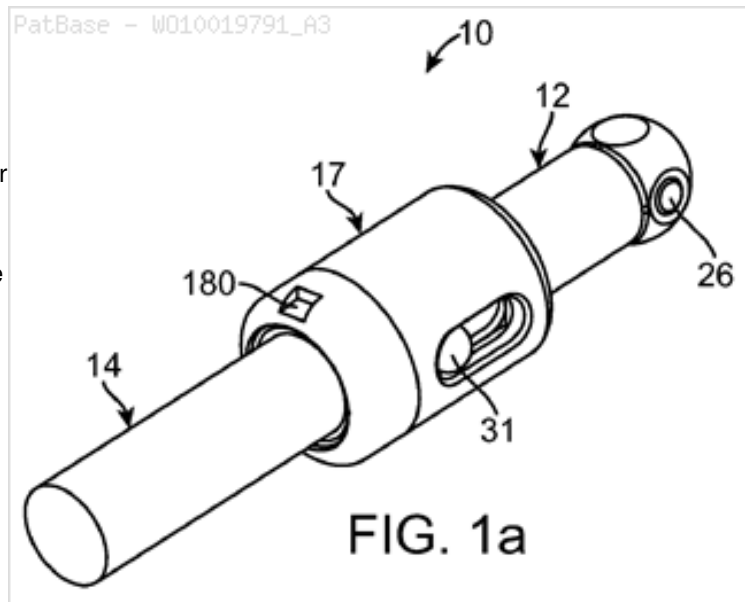
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Abstract:

Source: US2006084982A Systems and devices for dynamically stabilizing the spine are provided. The systems include a superior component for attachment to a superior vertebra of a spinal motion segment and an inferior component for attachment to an inferior vertebral of a spinal motion segment. The interconnection between the two components enables the spinal motion segment to move in a manner that mimics the natural motion of the spinal motion segment. Methods are also provided for stabilizing the spine and for implanting the subject systems.



0) US2009118768A – ELBOW FRACTURE FIXATION SYSTEM

3) Family number: 43215633 (US2009118768A)

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Title: ELBOW FRACTURE FIXATION SYSTEM

Priority:

AU20080318648 20081030	AU20140201773 20140325	EP20080846017 20081030
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: BIOMET CV

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Inventor(s):^(std): FRANCESE JOSE LUIS ; AVUTHU SRAVANTHI ; KORTENBACH JUERGEN A ; LUIS FRANCESE JOSE ; MICHAEL WICH ; ROBERT SIXTO JR ; ROY SANDERS ; SANDERS ROY ; SCOTT STEINMANN ; SIXTO JR ; SIXTO JR ROBERT ; SIXTO ROBERT JR ; SRAVANTHI AVUTHU ; STEINMANN SCOTT ; THOMAS KYLE B ; WICH MICHAEL ; SIXTO ROBERT ; SANDERS ROY W ; KORTENBACH JUERGEN

Inventor(s): THOMAS KYLE B DENVER ; STEINMANN SCOTT ROCHESTER ; SIXTO ROBERT JR MIAMI ; SANDERS ROY TAMPA ; KORTENBACH JUERGEN A MIAMI SPRINGS ; KYLE B THOMAS ; AVUTHU SRAVANTHI SAN JOSE ; FRANCESE JOSE LUIS MIAMI SPRINGS ; JOSE LUIS FRANCESE ; JUERGEN A KORTENBACH

Agent(s): CALLINANS; FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; BOEHMERT AND BOEHMERT ANWALTSPARTNERSCHAFT MBB PATENTANWALTE RECHTSANWALTE; HASELTINE LAKE LLP; VENNER SHIPLEY LLP; BELCHER SIMON JAMES; GILES ASHLEY SIMON; CARVAJAL Y ISABEL; GORDON AND JACOBSON PC; JOHNSON PHILIP S ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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A61B17/04 A61B17/68 A61B17/70 A61B19/00 (Core/Invention)

CPC:

A61B17/17 A61B17/8863 A61B17/80 A61B17/1739 A61B17/1728 A61B17/8061
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European class: A61B17/80D6 A61B17/80F A61B17/80H A61B17/80P B25B27/02C B25B27/06C
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US class: 128/898 128/898S 606/101 606/280 606/280P 606/280P 606/280P 606/280S 606/281
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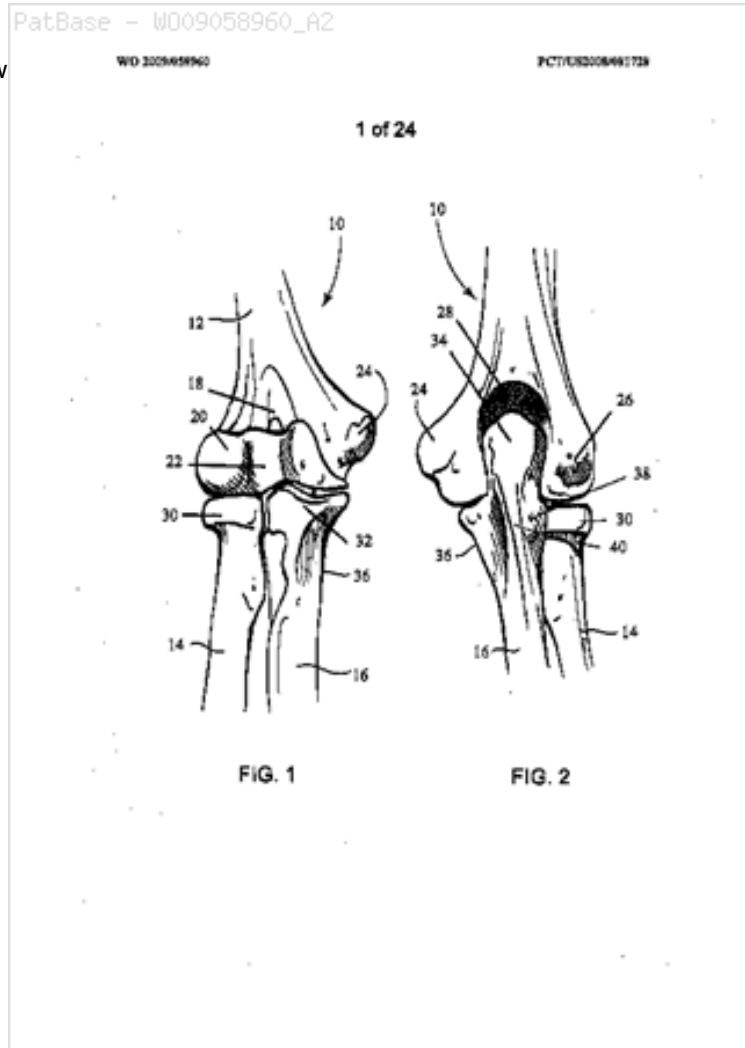
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Abstract:

Source: US2009118768A A system for the internal fixation of a fractured bone of an elbow joint of a patient includes at least one bone plate, each bone plate having a plurality of holes and generally configured to fit an anatomical surface of the fractured bone. The at least one plate is adapted to be customized to the shape of a patient's bone. The system also includes a plurality of fasteners including at least one locking fastener for attaching the bone plate to the bone. At least one of the holes is a threaded hole. Guides for plate benders, drills, and/or K-wires can be pre-assembled to the threaded holes, and the locking fastener can lock into any of the threaded holes after the guides are removed.



0) US2006173459A – ORTHOPEDIC PLATE FOR USE IN SMALL BONE REPAIR

4) Family number: 33178039 (US2006173459A)

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Title: ORTHOPEDIC PLATE FOR USE IN SMALL BONE REPAIR

Priority: EP20060733971 20060127 US20050648209P 20050128 US20050648348P 20050128
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 US20160379693 20161215

Family:

Publication number	Publication date	Application number	Application date
<u>AU2006208072 AA</u>	20060803	AU20060208072	20060127
<u>AU2006208072 BB</u>	20091029	AU20060208072	20060127
<u>BRPI0607192 A2</u>	20090825	BR2006PI07192	20060127
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WO10098820 A1	20100902	WO2010US00437	20100216

Probable Assignee: ORTHOHELIX SURGICAL DESIGNS

Assignee(s):^(std): BELL ROBERT H ; DELIBERTO REBECCA F ; DEN HARTOG BRYAN D ; DILIBERTO REBECCA F ; DUCHARME DUSTIN ; DUCHARRME DUSTIN ; KAY DAVID B ; ORTHOHELIX SURGICAL DESIGNS IN ; LEWIS DEREK S ; LEITHER ANDREW J ; EDWARDS THOMAS B ; DUTTA ANIL K ; ORTHOHELIX SURGICAL DESIGNS INC ; ORTHOHELIX SURGICAL DES INC ; EDWARDS THOMAS BRADLEY ; ORTHOHELIX SURGICAL DESIGNS ; KOCHER REBECCA F ; STRNAD LEE A ; WYNKOOP G M ; WYNKOOP G MARTIN

Assignee(s): ORTHOHELIX SURGICAL DESIGNS INC MEDINA ; MIDCAP FINANCIAL TRUST AGENT AS ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; ORTHOHELIX SURGICAL DESIGN INC

Inventor(s):^(std): DEN HARTOG BRYAN D ; DENHARTOG BRYAN D ; DILIBERTO REBECCA F ; DUCHARME DUSTIN ; BELL ROBERT H ; DUCHARRME DUSTIN ; DUTTA ANIL K ; EDWARDS THOMAS BRADLEY ; HARTOG BRYAN D DEN ; KAY DAVID B ; LEITHER ANDREW J ; LEWIS DEREK S ; STRAND LEE A ; STRNAD LEE A ; WYNKOOP G M ; WYNKOOP G MARTIN ; KOCHER REBECCA F ; EDWARDS THOMAS B ; DELIBERTO REBECCA F

Inventor(s): WYNKOOP G MARTIN GAINSVILLE ; STRNAD LEE A BROADVIEW HTS ; WYNKOOP G ; STRNAD LEE ; MARTIN G WYNKOOP ; KAY DAVID B AKRON ; LEE A STRAND ; LEE A STRNAD ; LEE ASTRAND ; LEE ASTRNAD ; KAY DAVID ; G MARTIN WYNKOOP ; DUSTIN DUCHARME ; DAVID B KAY ; DUCHARME DUSTIN AKRON

Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; RIDOUT AND MAYBEE LLP; LAVOIX MUNICH; GRAND GUILLAUME; SANFORD TCOLB AND CO; HUDAK SHUNK AND FARINE CO LPA; DUANE MORRIS LLP; SHUNK LAURA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [A61B17/56](#) [A61B17/58](#) [A61B17/80](#) [A61B17/86](#) [A61B17/88](#) [A61F2/30](#) (Advanced/Invention);
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[A61F2/08](#) (Core/Non-invention);
[A61B](#) (Subclass/Invention)

International class
(IPC 1-7): [A61F2/30](#)

CPC: [A61B17/8066](#) [A61B17/8085](#) [A61B17/8605](#) [A61B17/863](#) [A61B17/8635](#) [A61B2017/00004](#)
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[A61B17/8014](#) [A61B17/885](#)

European class: [A61B17/80H](#) [A61B17/86A](#) [A61B17/86B](#) [A61B17/86B2](#) [A61B17/86B4](#) [K61B17/00A](#)
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US class: [1/1](#) [606/280](#) [606/280P](#) [606/280S](#) [606/281](#) [606/281P](#) [606/281S](#) [606/282](#) [606/282S](#) [606/283](#)
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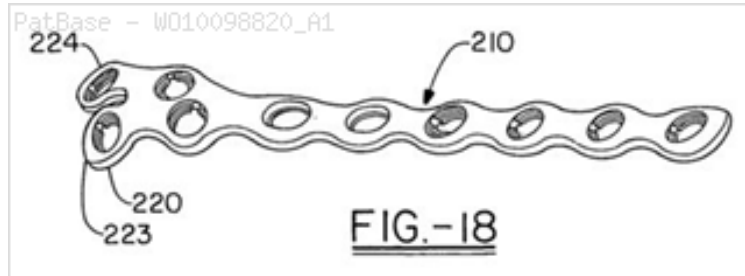
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Forward Citations: WO16172536, WO15131106, WO13045713, WO11062896, WO11041624, WO11041624, WO10098820, WO10059497, WO10033172, WO09105201, WO09105196, USD780922, USD766434, USD765844, USD754347, USD745162, USD740943, USD623745, USD623744, USD623743, US9649141, US9642657, US9622805, US9615874, US9603643, US9585706, US9579134, US9572607, US9545278, US9545276, US9545274, US9510880, US9504582, US9504504, US9498273, US9498266, US9486262, US9486261, US9474561, US9468479, US9433499, US9433454, US9421103, US9370387, US9370376, US9351776, US9333013, US9320554, US9314286, US9314284, US9295506, US9295505, US9289220, US9259253, US9259252, US9259251, US9220515, US9173690, US9161795, US9155569, US9149312, US9144443, US9107715, US9107713, US9107712, US9078713, US9072556, US9066766, US9044287, US9044282, US9017329, US9011505, US8998903, US8968370, US8951295, US8951289, US8945232, US8940026, US8920476, US8920453, US8906070, US8900274, US8894650, US8876873, US8858562, US8852245, US8845698, US8834537, US8828063, US8821546, US8808339, US8758346, US8740955, US8668725, US8603148, US8603147, US8591554, US8579898, US8574268, US8568462, US8556946, US8545540, US8535355, US8529608, US8518088, US8518042, US8512384, US8496694, US8496690, US8454665, US8449581, US8439955, US8435265, US8419776, US8419745, US8398690, US8394132, US8343199, US8328806, US8317846, US8313487, US8303589, US8292898, US8267977, US8257407, US8257406, US8257403, US8246664, US8246663, US8241338, US8231663, US8197523, US8197521, US8192472, US8182517, US8172886, US8167918, US8118848, US8118846, US8100954, US8057521, US8021402, US7935126, US7828828, US7799061, US7771457, US7641697, US7325470, US7306605, US2016278823, US2015201980, US2014336761, US2014309703, US2014309701, US2014296924, US2014296923, US2014277178, US2014228894, US2014180343, US2014066998, US2013211459, US2013172948, US2013158553, US2013066378, US2012203227, US2012197254, US2012184959, US2012095466, US2012059424, US2011230884, US2011224671, US2011184414, US2011178522, US2011172669, US2011166607,

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Abstract:

Source: US2006173459A The present invention relates to an orthopedic plate and screw system and instruments for surgical fixation of a small bone or bones. The plate facilitates three dimensional contouring to provide for a variety of applications and to accommodate individual variation in bone shape. The plate has a modified x shape including a central trunk portion including one or more screw holes along a longitudinal axis and a set of divergent upper and an oppositely extending set of divergent lower arms, each arm including screw holes which are placed at a radially equal distance but which diverging asymmetrically from the longitudinal axis relative to its paired upper or lower mate. The screws of the system are self-starting, self-tapping screws including the option of partial or full cannulation.



5) Family number: 50018229 (US2012071802A)

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Title: SYSTEMS, DEVICES, AND METHODS FOR MECHANICALLY REDUCING AND FIXING BONE FRACTURES

Priority: US20100396562P 20100528 US20110051774 20110318 US20110443080P 20110215
 US20110292548 20111109 US20110292653 20111109 US20110292707 20111109
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Family:	Publication number	Publication date	Application number	Application date
	<u>EP2575653 A1</u>	20130410	EP20110787241	20110524
	<u>JP2013528438 T2</u>	20130711	JP20130512156T	20110524
	<u>US2012071802 AA</u>	20120322	US20110051774	20110318
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	<u>US2012303030 AA</u>	20121129	US20110292707	20111109
	<u>US2013184627 AA</u>	20130718	US20130770797	20130219
	<u>US8632483 BB</u>	20140121	US20110292653	20111109
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	<u>US8870803 BB</u>	20141028	US20110292548	20111109
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	<u>WO11149932 A1</u>	20111201	WO2011US37732	20110524
	<u>WO13070919 A1</u>	20130516	WO2012US64155	20121108

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Assignee(s): FIXES 4 KIDS

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Agent(s): DEE IAN MARK; RYAN KROMHOLZ AND MANION SC; RYAN KRUMHOLZ AND MANION SC; KROMHOLZ RYAN ET AL; FLEIS PATRICK J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): A61B17/60 A61B17/66 A61B17/88 A61B17/90 A61F5/00 A61F5/01 A61F5/04 A61F5/058 A61G15/00 (Advanced/Invention)

CPC: A61F5/05841 A61F5/05858 A61B17/848 A61F5/04 A61B17/1782 A61B17/1739

European class: A61B17/17S A61F5/04 K61B17/84N2

US class: 128/845 128/870 602/1 602/16 602/1P 602/20 602/23 602/27 602/32 602/39 606/57 606/57S 606/96 606/96S

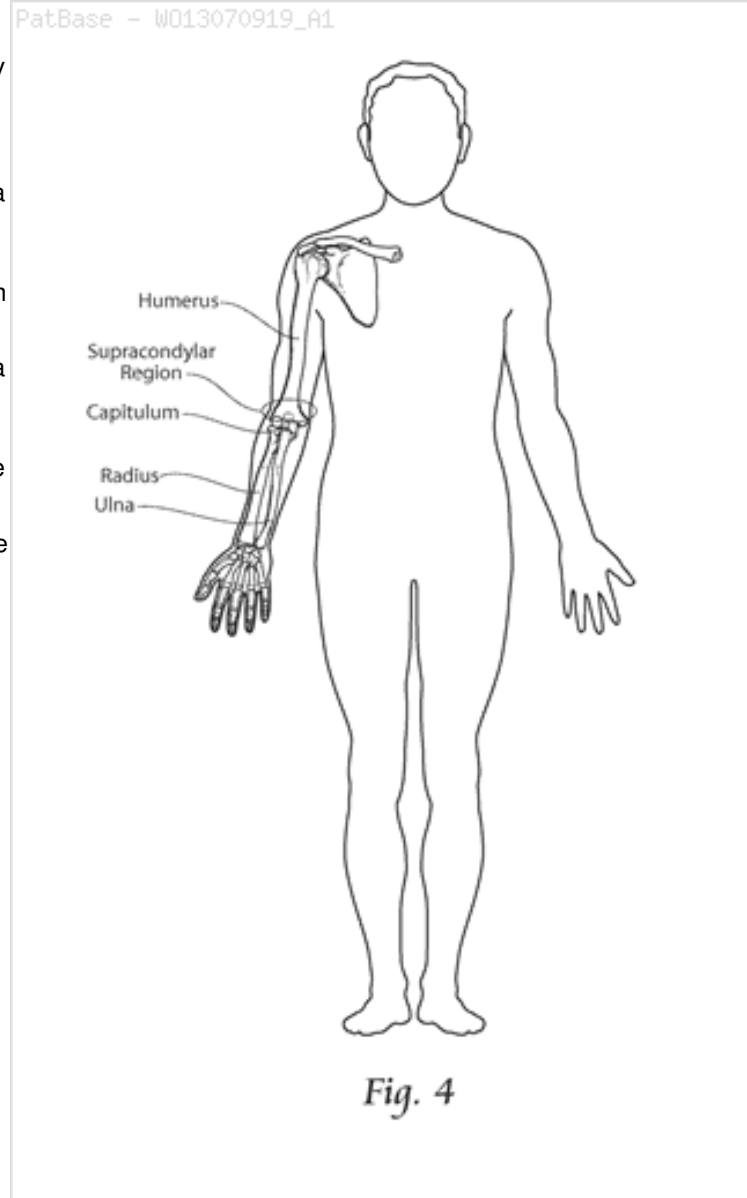
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Forward Citations: WO13052434, US9427333, US9055975, US8870799, US2016331552, US2015341615, US2015250635, US2015238326, US2014208490, US2014094925, CN103705292, CN102670290,

Abstract:

Source: US2012071802A A fracture reduction is mechanically achieved by supporting a body region having the bone fracture on a frame. A first reduction mechanism on the frame is operated to apply to the bone fracture a first predefined force reduction vector that returns the bone fracture to a corrective alignment in a first anatomic orientation, while also mechanically maintaining the corrective alignment in the first anatomic orientation. Independently, a second reduction mechanism on the frame is operated to apply a second predefined force reduction vector that returns the bone fracture to a corrective alignment in a second anatomic orientation different than the first anatomic orientation without altering the corrective alignment in the first anatomic orientation, while mechanically maintaining the corrective alignment in the second anatomic orientation. The fracture reduction is mechanically fixed by mechanically guiding the placement at least one bone fixing device into the reduced bone fracture.



6) Family number: 10362222 (US4945914A)

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Title: METHOD AND APPARATUS FOR PROVIDING RELATED IMAGES OVER TIME OF A PORTION OF THE ANATOMY USING AT LEAST FOUR FIDUCIAL IMPLANTS

Priority: AU19880024593 19881102 AU19900065907 19901108 AU19920019414 19920702
 CA19880581885 19881101 CA19880616562 19881101 CA19902029401 19901106
 EP19900250267 19901019 US19890433347 19891108 GB19880024928 19881023
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Family:

Publication number	Publication date	Application number	Application date
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<u>US5230338 A</u>	19930727	US19920873535	19920422
<u>US5397329 A</u>	19950314	US19930026223	19930226

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European class: A61B19/20 A61B19/22 A61B19/52 A61B19/52H12 A61B6/12 K61B19/00Q6 K61B19/50D K61B19/52H12F K61B19/52J K61B19/52L2 K61B19/54 K61B19/54L K61N5/10E1

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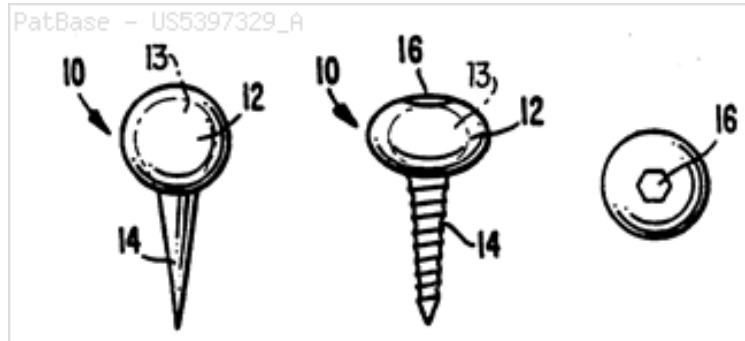
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AT399272,

Abstract:

Source: US4945914A The present invention pertains to a fiducial implant for the human body that is detectable by an imaging system. The invention is comprised of a first portion and a second portion. The first portion is configured to be detected by an imaging system when placed beneath the skin. The second portion is configured for fixed attachment to a bone beneath the skin without penetrating entirely through the bone and without fracturing the bone. The first portion is of detectable size and comprised of a material for detection by an imaging system, and

sufficiently small to avoid the distortion of the skin when placed at an interface between the skin and the bone. The first portion also has at least a portion which is spherical and defines a surface for cooperating with a tool for securing the second portion to the bone. Additionally, the placement of n fiducial implants, where $n \geq 4$ and is an integer, into a portion of anatomy of the human body allows for the recreation of a particular image slice of the portion of the anatomy taken by an imaging system with respect to a first time period, at subsequent imaging sessions and also with different scan modalities. This provides a doctor with the ability to accurately follow the progress of the portion of the anatomy of interest. Moreover, the existence of n fiducial implants allows a target to be identified without the portion of anatomy relative to an external coordinate system. The portion of anatomy with the target may then be operated on, for instance, robotically, or precisely irradiated.



7) Family number: 51909830 (US2012253410A)

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Title: APPARATUS AND METHODS FOR BONE REPAIR PREPARATION**Priority:** AU20120225496 20120307 AU20160277681 20161222 US20110450112P 20110307
US20120414695 20120307 JP20130557842T 20120307 JP20160137272 20160712
WO2012US28145 20120307 US20160056918 20160229

Family:	Publication number	Publication date	Application number	Application date
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	<u>US2012253410 AA</u>	20121004	US20120414695	20120307
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C12P19/14 (Advanced/Invention);
A61B17/72 (Advanced/Non-invention)

CPC: A61B17/17 A61B17/1717 A61B17/6441 A61B17/6458 A61B17/66 A61B17/72
A61B2017/681 A61B2017/1782 A61F5/3761 A61B17/1782 A61B17/68

US class: 606/105 606/329 606/86R 606/96

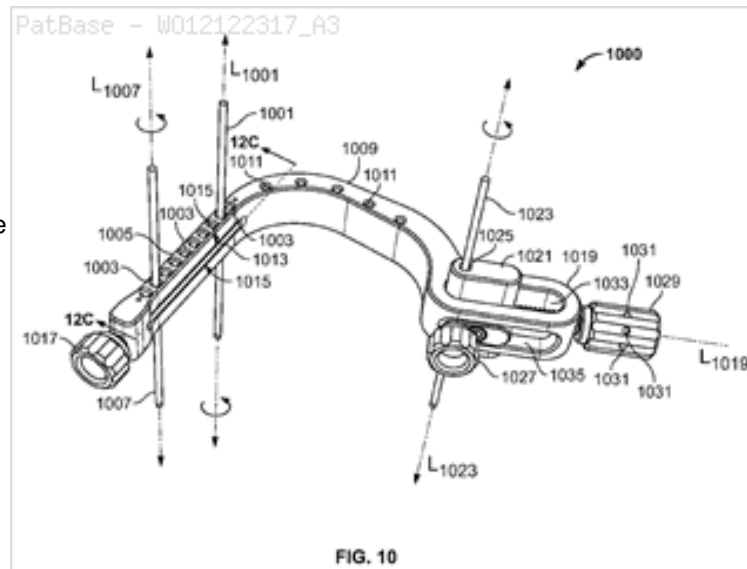
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Abstract:

Source: US2012253410A Apparatus and methods for preparing a fractured bone for repair. Preparing the bone may include fracture reduction. Preparing the bone may include holding a fracture in reduction. Preparing the bone may include identifying locations for obtaining access to an interior region of the bone. The apparatus may include structures outside the bone that interact with fragments of the bone. The structures may participate in the reduction. The structures may participate in holding the reduction. The structures may participate in identifying the locations.



0) US2003014054A – SYSTEM FOR FUSING JOINTS

8) Family number: 24271992 (US2003014054A)

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Title: SYSTEM FOR FUSING JOINTS

Priority:

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CONRAD LYLE ; STEVEN P HORST ; SMITH HARRY CJR ; RANDALL JOSEPH HUEBNER ; JENSEN GLENN

Agent(s): KOLISCH HARTWELL PC

Designated states: AT AU BE CH DE DK ES FR GB GR IE IT JP KR LI LU MC NL PT SE US

International class
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International class
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US class: 1/1 411/115 411/263 411/307 411/395 411/413 411/415 411/423 411/426 470/10 470/10P 606/101 606/102 606/103 606/105 606/232 606/280 606/281 606/283 606/284 606/300 606/300P 606/304 606/305 606/316 606/317 606/317P 606/317S 606/318 606/321 606/328 606/329 606/54 606/57 606/59 606/60 606/62 606/64 606/64S 606/65 606/67 606/70 606/71 606/72 606/73 606/74 606/75 606/76 606/77 606/86 606/86 606/86.00R 606/86B 606/86R 606/87 606/87S 606/916 623/16 623/16.11 623/16.110P 623/19 623/19.11 623/19.110P 623/19.12 623/19.120S 623/19.14 623/19.140S 623/21 623/21.15 623/23.5 623/908 623/908S 623/909 D24/145

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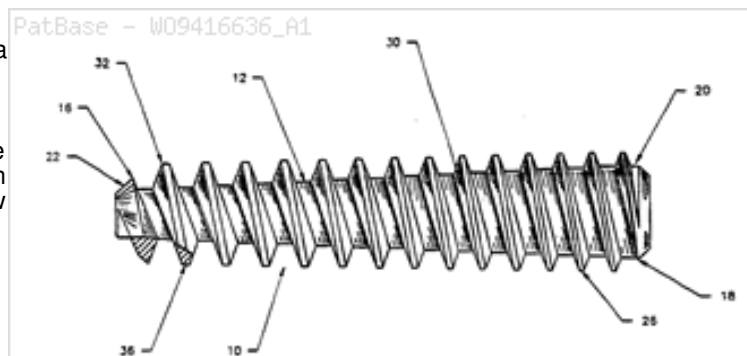
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Abstract:

Source: US2003014054A A method of fusing a joint between two bones, comprising boring a hole through one of the bones across the joint therebetween and into the other bone, placing the leading end of a screw into the hole, where the screw has a threaded region having a pitch that is larger toward a leading end of the screw and smaller toward a trailing end of the screw, and driving the screw into the bone until the threaded region spans the joint.



9) Family number: 30726788 (US2004138659A)

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Title: EXTERNAL FIXATION APPARATUS AND METHOD

Priority: US20030439195P 20030110 US20030607010 20030626 US20070823178 20070627
WO2003US39307 20031210

Family:	Publication number	Publication date	Application number	Application date
	AU2003296463 AA	20040810	AU20030296463	20031210
	AU2003296463 BB	20090903	AU20030296463	20031210
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International class [A61B17/00](#) [A61B17/56](#) [A61B17/60](#) [A61B17/64](#) ^(Advanced/Invention);
^(IPC 8-9) [A61B17/00](#) [A61B17/56](#) [A61B17/60](#) ^(Core/Invention)

International class [A61B17/60](#) [A61B17/64](#)
^(IPC 1-7)

CPC: [A61B17/6416](#) [A61B17/6425](#)

European class: [A61B17/64C](#) [A61B17/64D](#)

US class: [606/54](#) [606/54P](#)

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Abstract:

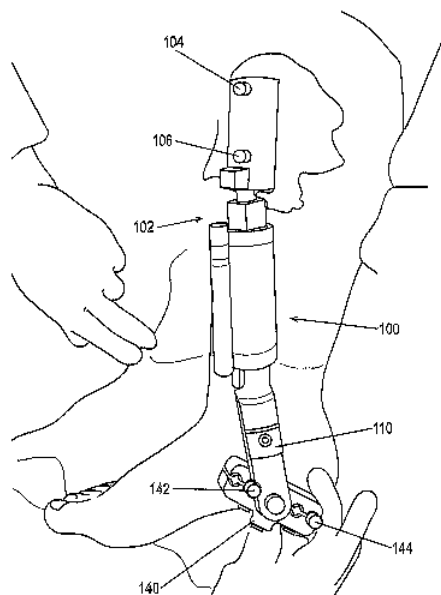
Source: US2004138659A Apparatuses and methods for externally fixing and precisely adjusting fractures, such as fractures near the ankle, are disclosed. In one embodiment, an external fixation apparatus includes a first member attachable to a first bone segment through pins, a second member coupled to the first member through a lockable ball joint, wherein first and second ends of the second member may be translated transversely relative to a longitudinal axis of the second member, and a pin clamp coupled to and rotatable about the second member through a lockable joint and attachable to a second bone segment. The pin clamp and the second member may be releasably coupled.

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0) US2001016675A – STRESS REDUCTION APPARATUS AND METHOD

10) Family number: 29993406 (US2001016675A)

© PatBase

Title: Stress reduction apparatus and method

Priority:

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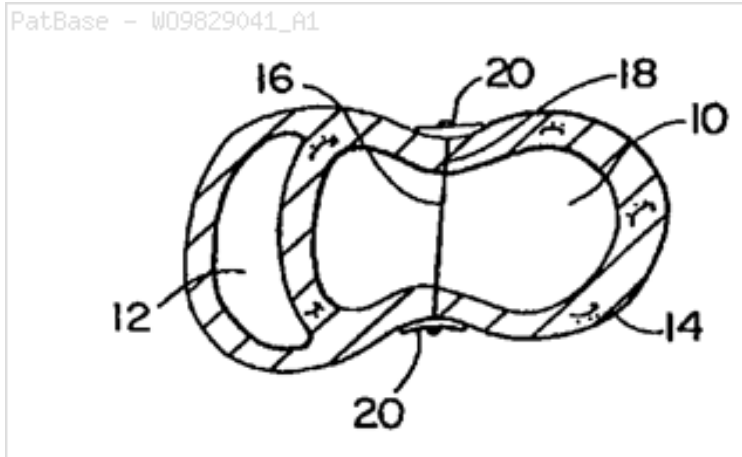
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Abstract:

Source: US2001016675A The device and method for reducing heart wall stress. The device can be one which reduces wall stress throughout the cardiac cycle or only a portion of the cardiac cycle. The device can be configured to begin to engage, to reduce wall stress during diastolic filling, or begin to engage to reduce wall stress during systolic contraction. Furthermore, the device can be configured to include at least two elements, one of which engages full cycle and the other which engages only during a portion of the cardiac cycle.



11) Family number: 32069866 (US2008200855A)

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Title: FIXATOR OR SPLINT**Priority:** GB20050009613 20050512 WO2006GB50102 20060512**Family:**

Publication number	Publication date	Application number	Application date
AU2006245521 AA	20061116	AU20060245521	20060512
AU2006245521 BB	20111222	AU20060245521	20060512
CA2608141 AA	20071109	CA20062608141	20060512
CA2608141 C	20140225	CA20062608141	20060512
CN101198283 A	20080611	CN200680021473	20060512
CN101198283 B	20100519	CN200680021473	20060512
EP1890618 A1	20080227	EP20060727197	20060512
EP1890618 B1	20161228	EP20060727197	20060512
GB200509613 A0	20050615	GB20050009613	20050512
GB2425960 A1	20061115	GB20050009613	20050512
IN09545DN2007 A	20080627	IN2007DN09545	20071211
IN281264 B	20170317	IN2007DN09545	20071211
JP2008539925 T2	20081120	JP20080510649T	20060512
JP4938002 B2	20120523	JP20080510649T	20060512
US2008200855 AA	20080821	US20060914191	20060512
US7841998 BB	20101130	US20060914191	20060512
WO06120482 A1	20061116	WO2006GB50102	20060512

Probable Assignee: BAJWA ALI**Assignee(s):**^(std) ALI BAJWA ; BAJWA ALI ; LINDA POMEROY ; POMEROY LINDA**Inventor(s):**^(std) ALI BAJWA ; BAJWA ALI ; LINDA POMEROY ; POMEROY LINDA**Agent(s):** GRIFFITH HACK; MARKS AND CLERK; FLECK BARBARA ET AL; BAILEY JENNIFER ANN; TAROLLI SUNDHEIM COVELL AND TUMMINO LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
 (IPC 8-9): [A61B17/00](#) [A61B17/60](#) [A61B17/64](#) [A61F5/00](#) [A61F5/01](#) [A61F5/058](#)
[A61F5/34](#) (Advanced/Invention);
[A61B17/60](#) [A61F5/00](#) [A61F5/01](#) [A61F5/04](#) (Core/Invention)

International class
 (IPC 1-7): [A61B17/64](#)

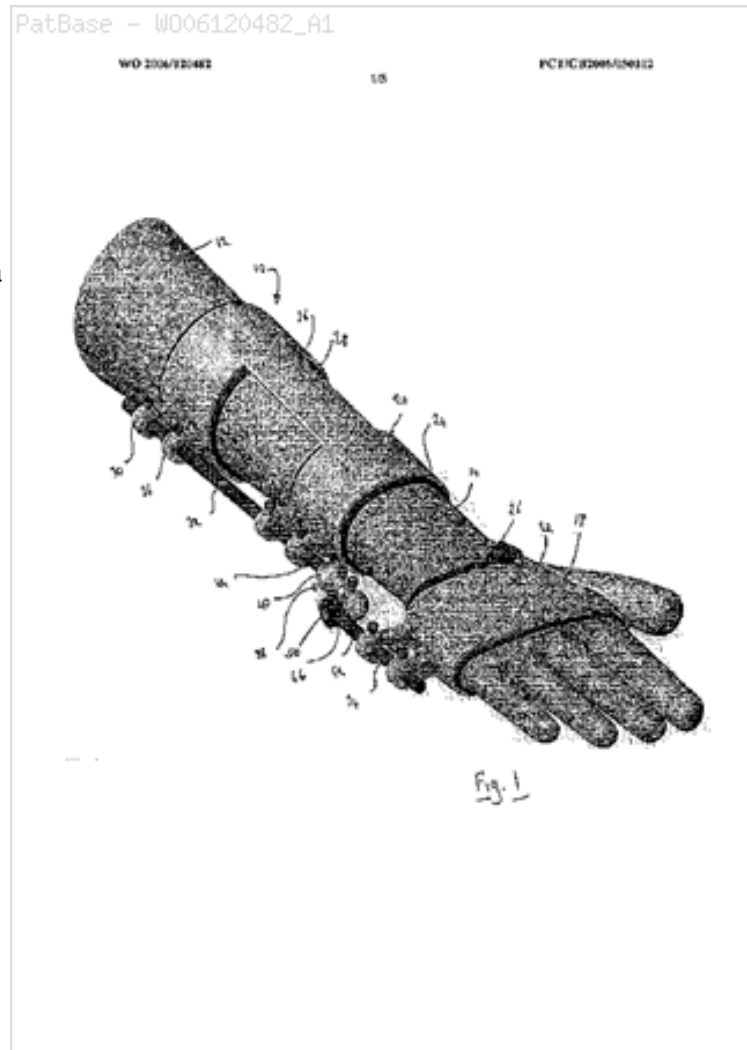
CPC: [A61B17/6425](#) [A61B17/6416](#) [A61B2017/00915](#) [A61F5/013](#) [A61F5/05866](#) [A61F5/05841](#)**European class:** [A61B17/64D](#) [A61F5/01D7](#) [A61F5/058H](#) [A61F5/058H4B](#) [K61B17/00S25R](#) [K61B17/64C](#)**US class:** [602/16](#) [602/16P](#) [602/20](#) [602/20S](#) [602/21](#) [602/21S](#) [602/5](#) [606/54](#)[Classification Explorer](#)

Cited documents: WO9423662 A2, US7476207 BB, US7416537 BA, US6676619 BB, US6589195 BA, US6179799 BA, US6179799 B1, US6019769 A, US5916184 A, US5846245 A, US5707370 A, US5683353 A, US5545162 A, US5514081 A, US5437619 A, US5421810 A, US5385536 A, US5316547 A, US5002044 A, US4977890 A, US4834057 A, US4677971 A, US4583600 A, US4538600 A, US4497315 A, US4180870 A, US2002035342 AA, US1789060 A, JP3092151 A2, JP2002537936 T2, FR2609887 A1, EP1382317 A1, DE82161 A,

Forward Citations: WO14200366, WO10138528, WO10138528, WO10094971, WO10094971, US9579230, US9539134, US9375325, US9320638, US8998833, US8562550, US7993294, US2016128397, US2015119998, US2011313331, US2010305486, US2010280516, US2008208093, JP2012518450, GB2530229, DE102008022952, CN104688307, CN104510553, CN104510552, CN104510552, CN104323837, CN103989546, CN103989546, CN102949259, CN102368981, CN102368981, AU2010215276,

Abstract:

Source: US2008200855A The present invention relates to a non-invasive external fixator particularly suitable for fracture fixation. In particular, the fixator of the invention comprises proximal and distal portions for mounting on a limb either side of a fracture, each of the proximal and distal portions including a rigid member; and an articulation member connecting the proximal and distal portions, the articulation member comprising a universal joint for allowing relative movement between the proximal and distal portions, wherein the articulation member connects the rigid members.



12) Family number: 20414933 (US5493788A)

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Title: SYSTEM FOR MEASURING STIFFNESS OF A FRACTURED BONE

Priority: CA19952149177 19950511 GB19940012344 19940620 US19940346615 19941130
WO1995GB01437 19950619

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199527444 A1</u>	19960115	AU19950027444	19950619
	<u>CA2149177 AA</u>	19951221	CA19952149177	19950511
	<u>CA2193499 AA</u>	19961219	CA19952193499	19950619
	<u>EP0766528 A2</u>	19970409	EP19950922611	19950619
	<u>GB2290616 A1</u>	19960103	GB19940012344	19940620
	<u>GB2290616 B2</u>	19980624	GB19940012344	19940620
	GB9412344 A0	19940810	GB19940012344	19940620
	<u>JP10503670 T2</u>	19980407	JP19960501830T	19950619
	<u>US5493788 A</u>	19960227	US19940346615	19941130
	<u>WO9535061 A2</u>	19951228	WO1995GB01437	19950619
	<u>WO9535061 A3</u>	19960208	WO1995GB01437	19950619

Probable Assignee: RICHARDSON JAMES BRUCE

Assignee(s):^(std): JAMES BRUCE RICHARDSON ; RICHARDSON JAMES B ; RICHARDSON JAMES BRUCE

Inventor(s):^(std): JAMES BRUCE RICHARDSON ; RICHARDSON JAMES B ; RICHARDSON JAMES BRUCE

Agent(s): SMART AND BIGGAR

Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LI LK LR LT LU LV MC MD MG ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TT UA UG US UZ VN

International class
(IPC 8-9): A61B17/60 A61B5/103 A61B5/107 A61B5/117 G01N3/00 G01N3/20 (Advanced/Invention);
A61B5/107 A61B5/117 G01N3/00 (Advanced/Non-Invention);
A61B5/103 A61B5/107 A61B5/117 G01N3/00 (Core/Invention)

International class
(IPC 1-7): A61B17/60 A61B5/103 A61B5/107 A61B5/117

CPC: A61B5/6878 A61B5/4504 A61B5/103 G01N3/20 G01N2203/0041 G01N2203/0089

European class: A61B5/103 A61B5/45B G01N3/20 S01N203/00G1M S01N203/00P6 S01N3/00G1M S01N3/00P9B

US class: 128/782 33/512 335/120 600/595

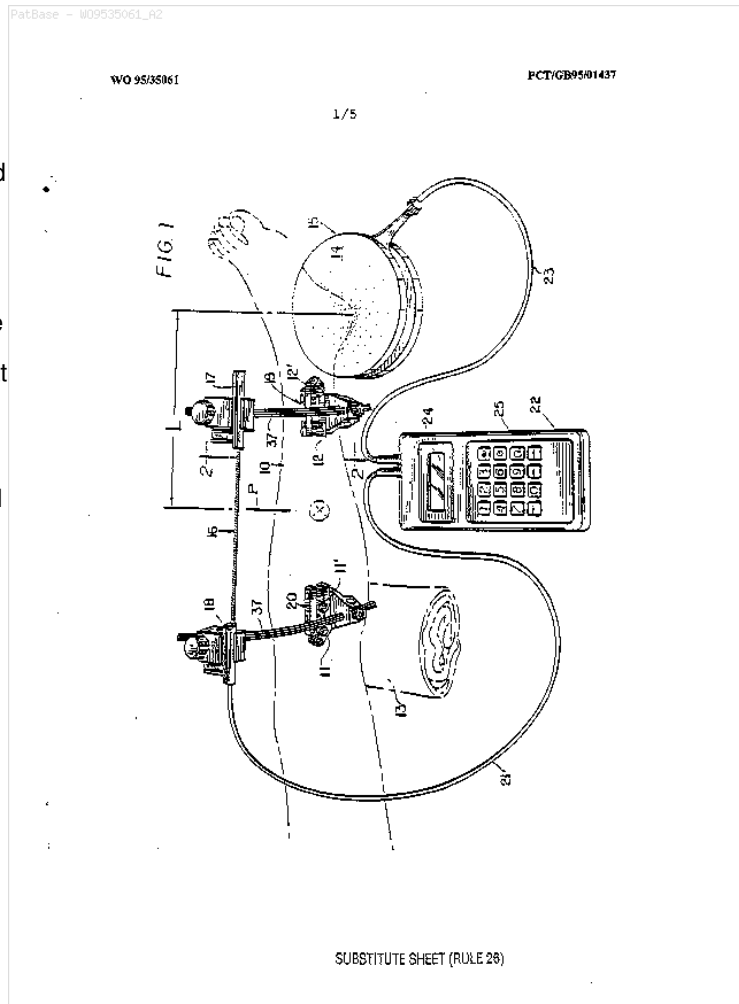
[Classification Explorer](#)

Cited documents: WO8601588 A1, US5339533 A, US5329933 A, US5163228 A, US5148606 A, US5121753 A, US5082003 A, US4989337 A, US4693240 A, US4620533 A, US4033043 A, US3229372 A, US2333033 A, EP0519568 A1, EP0458486 A1, EP0431441 A1, EP0420430 A1, EP0324279 A1, EP0177270 A2,

Forward Citations: WO9700643, US9307951, US8123688, US6877239, US5895364, US5792077, US5697165, US2012298820, US2009043196, US2008086055, US2003056385, EP1911403,

Abstract:

Source: US5493788A A bone-stiffness measuring instrument comprises a set or kit of readily assembled and adjusted components, namely a goniometer, a light-weight load cell, and a small computer package, adapted to continuously respond to the outputs of the load cell and goniometer and to display and/or record (i.e., store) measured stiffness data; plus hardware in duplicate, namely, a bone-screw clamp and bracket for fixed reference to bone-screws that are externally exposed on each of the respective sides of the fracture (following removal of an external fixator), a stiff arcuate arm member of radius at least twice the diameter of the fractured bone, and a goniometer-end mount. The arcuate arm member is adjustably fixed to the bracket for bone-screw reference, and the goniometer-end mount is also adjustably fixed to the arcuate arm member, with a releasably lockable ball-joint connection for adjusted orientation of an end mounting to the goniometer.



13) Family number: 30781353 (US2004158254A)

© PatBase

Title: INSTRUMENT AND METHOD FOR MILLING A PATH INTO BONE

Priority: EP20040710623 20040212 EP20040710692 20040212 EP20040710704 20040212
 US20040752724 20040107 US20040752725 20040107 US20020378568P 20020506
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Family:

Publication number	Publication date	Application number	Application date
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<u>EP1599155 A1</u>	20051130	EP20040710623	20040212
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CENTER/TOWER; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP
BANK ONE CENTER TOWER; MEDTRONIC ATTN NOREEN C JOHNSON IP LEGAL
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GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV
LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL
PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US
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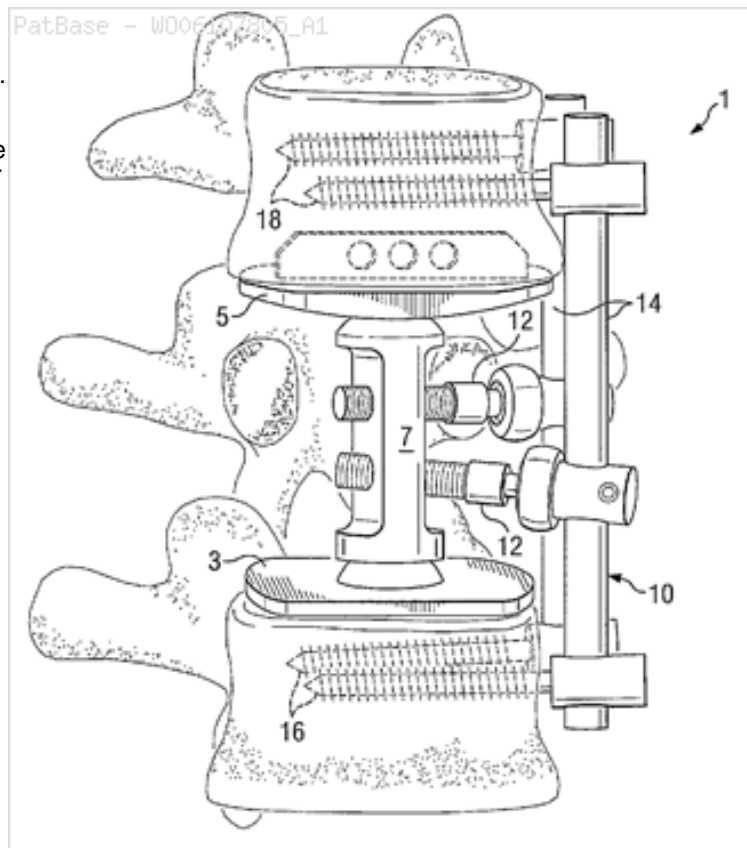
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Abstract:

Source: US2004158254A An instrument and method for cutting a path in bone are provided. The instrument includes a curved guide member defining a curved opening extending therein, and a bit member positioned within the opening of the guide member. The bit member is adapted to move within the opening of the guide member to cut a path in bone.



14) Family number: 3310707 (US4584995A)

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Title: External fixation device

Priority: US19840604047 19840426 US19850791222 19851025 WO1988US04070 19881115
US19860828051 19860210 US19870122397 19871119

Family:	Publication number	Publication date	Application number	Application date
	<u>AU198927957 A1</u>	19890705	AU19890027957	19881115
	<u>US4584995 A</u>	19860429	US19840604047	19840426
	<u>US4747400 A</u>	19880531	US19850791222	19851025
	<u>US4757809 A</u>	19880719	US19860828051	19860210
	<u>US4895141 A</u>	19900123	US19870122397	19871119
	<u>WO8905126 A1</u>	19890615	WO1988US04070	19881115

Probable Assignee: HARRINGTON ARTHRITIS RES

Assignee(s):^(std): HARRINGTON ARTHRITIS RES ; ORTHOTIC LIMITED PARTNERSHIP ; ORTHOTIC PARTNERSHIP LTD

Assignee(s): ORTHOTIC LTD ; ORTHOTIC PARTNERSHIP A PARTNERSHIP OF AZ LTD ; HARRINGTON ARTHRITIS RESEARCH CENTER ; HARRINGTON ARTHRITIS RESEARCH CENTER 1800 EAST VAN

Inventor(s):^(std): HANSEN THOMAS M ; KOENEMAN JAMES B ; PHILLIPS MARK ; WEINSTEIN ALLAN M

Inventor(s): ALLAN M WEINSTEIN ; THOMAS M HANSEN ; MARK PHILLIPS ; JAMES B KOENEMAN

Designated states: AT AU BB BE BG BJ BR CF CG CH CM DE DK FI FR GA GB HU IT JP KP KR LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG

International class A61B17/64 A61B17/66 (Advanced/Invention) ;
(IPC 8-9) : A61B17/60 (Core/Invention)

International class A61B17/60 A61F5/04
(IPC 1-7) :

CPC: A61B17/6416 A61B17/66 A61B17/645 Y10T24/3978 Y10T403/7016 Y10T403/7069

European class: A61B17/64C A61B17/64H A61B17/66 K61B17/66

US class: 128/84B 128/92A 128/92R 128/92Z 128/92ZW 24/136B 248/316.2 403/354 403/374 403/374.4 606/54 606/57 606/59

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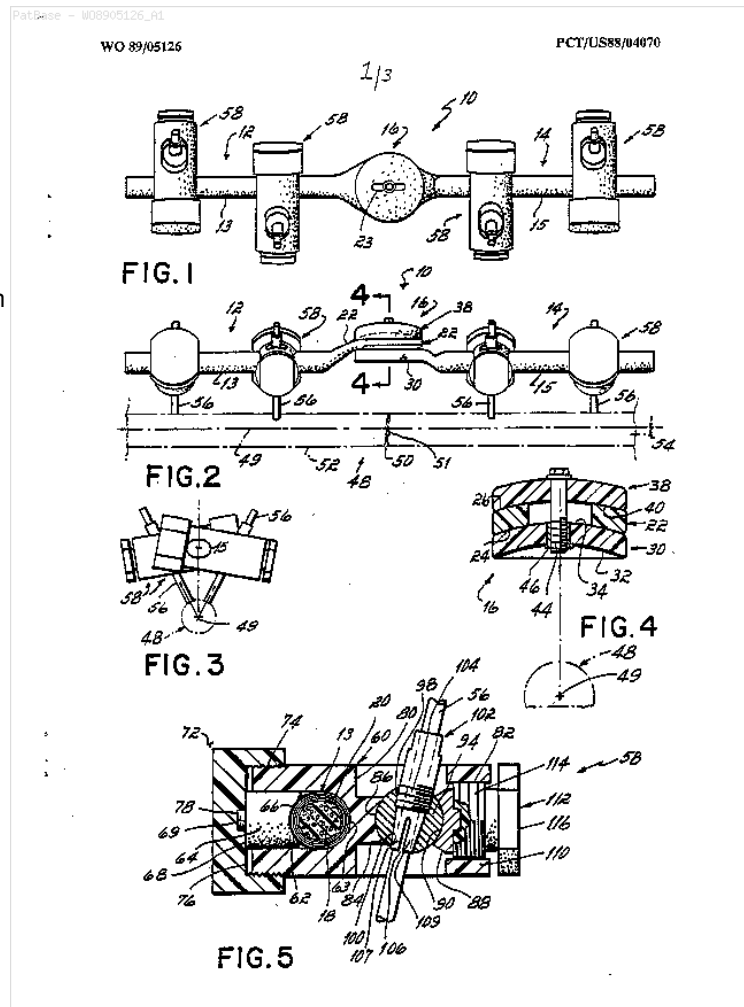
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Forward Citations: WO9949792, WO9901071, WO8905126, WO8810099, WO8808281, WO12051312, WO10036440, WO09023751, WO07122385, WO07122385, WO06102166, WO06102166, WO04045389, WO02069827, WO0156486, US9622781, US9597117, US9597116, US9532805, US9526523, US9510859, US9408635, US9371624, US9351764, US9308033, US9277937, US9273715, US9249551, US9247997, US9186179, US9155561, US9149296, US9138260, US9084631, US9084630, US8888777, US8840611, US8828056, US8808291, US8771319, US8763719, US8758343, US8734446, US8728078, US8696668, US8496072, US8486069, US8434969, US8425574, US8419732, US8388619, US8382757, US8377061, US8366710, US8361073, US8277448, US8262657, US8241285, US7931650, US7881770,

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Abstract:

Source: US4584995A An external fixation device for the reduction of severely compounded or infected long bone fractures with substantial soft tissue involvement comprises at least two sets of retaining pins, each set including at least one retaining pin adapted to secure the bone portion distally or proximally of the fracture, a frame having a center section disposed between spaced end sections, and a pair of coupling elements mounted to the end sections of the frame each connecting one set of retaining pins to the frame. One of the coupling elements is adapted to move longitudinally, parallel to the longitudinal axis of the frame so as to properly position and secure one set of retaining pins and the bone portion connected thereto. The other coupling element is connected to a second set of retaining pins and is adapted to translate and pivot such pins, and the bone portion attached thereto, about three mutually orthogonal axes independently of the first coupling element. The frame and coupling elements of the fixation device are preassembled to simplify installation of the device during a surgical procedure and to facilitate post-operative distraction or compression of the fracture site.



0) US4620533A – EXTERNAL BONE FIXATION APPARATUS

15) Family number: 23434775 (US4620533A)

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Title: External bone fixation apparatus

Priority: CA19860518047 19860912 EP19860306947 19860909 EP19860306947 19860909
US19850776259 19850916

Family:

Publication number	Publication date	Application number	Application date
<u>AT64083 E</u>	19910615	AT19860306947T	19860909
<u>AU198662698 A1</u>	19870319	AU19860062698	19860915
<u>AU569664 B2</u>	19880211	AU19860062698	19860915
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<u>DE3679624 D1</u>	19910711	DE19863679624	19860909
<u>DK169511 B1</u>	19941114	DK19860004399	19860915
<u>DK439986 A</u>	19870317	DK19860004399	19860915
<u>DK439986 A0</u>	19860915	DK19860004399	19860915
<u>EP0216563 A1</u>	19870401	EP19860306947	19860909
<u>EP0216563 B1</u>	19910605	EP19860306947	19860909
<u>ES2002332 AF</u>	19880801	ES19860001855	19860912
<u>FI863727 A</u>	19870317	FI19860003727	19860915
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<u>FI93606 C</u>	19950510	FI19860003727	19860915
<u>GR862340 B</u>	19870119	GR19860102340	19860912
<u>IE59031 B</u>	19931215	IE19860002431	19860911
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<u>JP1871126 C3</u>	19940906	JP19860215584	19860912
<u>JP5079338 B4</u>	19931102	JP19860215584	19860912
<u>JP62066850 A2</u>	19870326	JP19860215584	19860912
<u>KR890003070 B1</u>	19890821	KR19860007790	19860916
<u>MX164699 B</u>	19920918	MX19860003718	19860911
<u>NO175962 B</u>	19941003	NO19860003669	19860915
<u>NO175962 C</u>	19950111	NO19860003669	19860915
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<u>NO863669 A0</u>	19860915	NO19860003669	19860915
<u>NZ217569 A</u>	19891128	NZ19860217569	19860912
<u>PT83377 A</u>	19870506	PT19860083377	19860915
<u>PT83377 B</u>	19930531	PT19860083377	19860915
<u>US4620533 A</u>	19861104	US19850776259	19850916
<u>ZA8606992 A</u>	19880427	ZA19860006992	19860915

Probable Assignee: HOWMEDICA OSTEONICS CORP

Assignee(s):^(std): HOWMEDICA ; PFIZER HOSPITAL PROD ; PFIZER HOSPITAL PRODUCTS GROUP INC

Assignee(s): STRYKER INT INC ; PFIZER HOSPITAL PRODUCTS GROUP INC NEW YORK N Y US ; BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIA ; MTG DIVESTITURES INC ; HOWMEDICA INC ; HOWMEDICA OSTEONICS CORP ; HOWMEDICAL LEIBINGER INC ; PFIZER HOSPITAL PROD GROUP INC ; MEARS

DANA C ; STRYKER TECHNOLOGIES CORP ; STRYKER CORP ; STRYKER FAR EAST INC ; STRYKER INT ; PHYSIOTHERAPY ASSOCIATES INC ; STRYKER PUERTO RICO INC ; STRYKER SALES CORP ; STRYKER FOREIGN HOLDCO INC ; SMD CORP

Inventor(s):^(std): MEARS DANA CHRISTOPHE ; MEARS DANA C ; MEARS D C ; DANA KURISUTOFUAA MEAZU ; DANA CHRISTOPHER MEARS ; CHRISTOPHER MEARS DANA ; MEARS DANA CHRISTOPHER

Inventor(s): MEARS DANA CHRISTOPHER OAKMONT PENNSYLVANIA US

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR; LUZZATTO AND LUZZATTO

Designated states: AT BE CH DE FR GB IT LI LU NL SE

International class
(IPC 8-9): A61B17/56 A61B17/60 A61B17/64 A61B17/86 A61B19/00 A61F2/28 A61F5/00 A61F5/04 (Advanced/Invention);
A61B17/60 A61B17/86 A61B19/00 A61F2/28 (Advanced/Non-invention);
A61B17/56 A61B17/60 A61F2/28 A61F5/04 (Core/Invention);
A61B17/68 A61B19/00 (Core/Non-invention)

International class
(IPC 1-7): A61B17/56 A61B17/60 A61F17/58 A61F5/00 A61F5/04

CPC: A61B17/645 A61B17/6466 A61B17/8695 A61B2017/00902

European class: A61B17/64H A61B17/64M K61B17/00S25 K61B17/86W

US class: 128/92Z 606/54

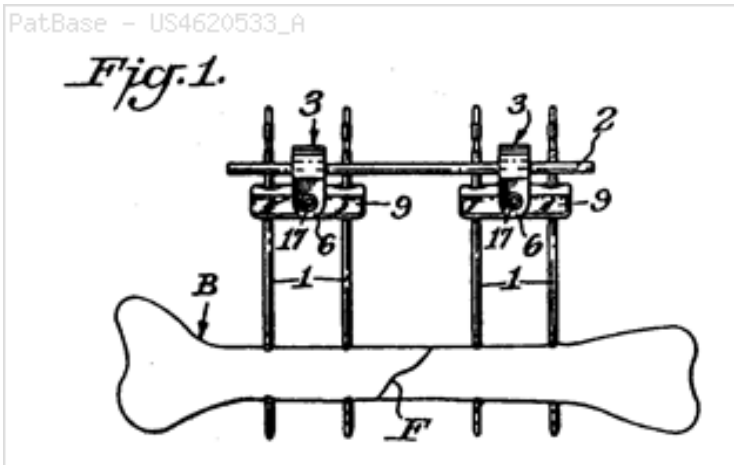
[Classification Explorer](#)

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Forward Citations: WO9922661, WO9815231, WO9626680, WO9626679, WO9626678, WO9412113, WO9400066, WO9214426, WO8905126, WO8807357, WO8801152, WO16138220, WO15014441, WO07045702, WO0217802, WO0038585, USRE40914, USD720853, USD704840, USD683461, USD682426, USD663030, USD633208, US9642649, US9622780, US9579131, US9554837, US9549762, US9545266, US9539030, US9532805, US9517089, US9510859, US9498370, US9439679, US9408635, US9402651, US9370380, US9351764, US9301783, US9277937, US9259242, US9186179, US9155577, US9149296, US9138260, US9089368, US9084631, US9084630, US9060815, US9050135, US9039706, US8992579, US8945129, US8888777, US8864763, US8840653, US8840611, US8827999, US8827998, US8808291, US8758343, US8734446, US8728078, US8696668, US8685023, US8657857, US8657819, US8523923, US8523858, US8506602, US8486069, US8382757, US8382755, US8372073, US8366710, US8361073, US8303587, US8277448, US8241285, US8235994, US8147490, US8123747, US8034085, US7938829, US7931650, US7887537, US7758582, US7736380, US7731738, US7717916, US7708736, US7699848, US7608074, US7588571, US7575575, US7572277, US7507240, US7261713, US7241074, US7147640, US7147640, US7048735, US7041103, US7004943, US6793655, US6702814, US6652523, US6616664, US6565564, US6514254, US6491694, US6248104, US6221072, US6206879, US6171309, US6171308, US6162224, US6159210, US6129727, US6001097, US5976136, US5976125, US5971984, US5961515, US5797908, US5776134, US5769851, US5743898, US5728095, US5702389, US5662650, US5653707, US5601551, US5591164, US5562661, US5501684, US5496319, US5443464, US5393161, US5358504, US5222954, US5152280, US5098432, US5074866, US5062844, US5062415, US5047029, US4978348, US4941481, US4920959, US4895141, US2016278813, US2016192964, US2016157891, US2015351800, US2014303622, US2014303621, US2014276815, US2013158551, US2013116692, US2013006244, US2012089142, US2012004659, US2011245883, US2011172663, US2011098707, US2011098706, US2011087226, US2010234845, US2010160972, US2010100096, US2010087819, US2010076436, US2009299368, US2009287212, US2009254086, US2009088751, US2009048599, US2009036891, US2008275510, US2008247818, US2008221571, US2008200952, US2007293860, US2007249979, US2007233061, US2007231059, US2006155276, US2006079892, US2006039750, US2005277920, US2005240181, US2005154388, US2004044344, US2003191468, US2003181911, US2003109879, JP6165788, JP4226654, JP3380589, JP3330383, GB2290616, GB2290616, GB2255284, GB2213733, FR2831792, FR2725613, FR2698534, FR2674120, FR2665353, ES2246744, ES2059272, ES2056027, EP2526196, EP2526196, EP2030583, EP2030583, EP1987792, EP1229846, EP1184000, EP0784962, EP0707832, EP0578320, EP0567423,

Abstract:

Source: US4620533A An apparatus for the external fixation and stabilization of a bone fracture comprising fixation pins attached to at least one rigid bar through adjustable clamps which are translatable along said rigid bar wherein the attachment of the pins and bar to the clamps is through articulating balls which allow universal rotational adjustment of each pin or bar. A method for the external fixation and stabilization of a bone fracture utilizing said apparatus is also disclosed.



16) Family number: 30953273 (US2004181221A)

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Title: EXTERNAL FIXATOR**Priority:** US20030454217P 20030312 US20030734017 20031210 WO2004US07505 20040311**Family:**

Publication number	Publication date	Application number	Application date
<u>EP1608276 A2</u>	20051228	EP20040719826	20040311
GB200520730 A0	20051123	GB20050020730	20040311
<u>GB2415911 A1</u>	20060111	GB20050020730	20040311
<u>GB2415911 B2</u>	20060823	GB20050020730	20040311
<u>JP2006519662 T2</u>	20060831	JP20060507100T	20040311
<u>JP4205750 B2</u>	20090107	JP20060507100T	20040311
<u>US2004181221 AA</u>	20040916	US20030734017	20031210
<u>US7147640 BB</u>	20061212	US20030734017	20031210
<u>WO04080344 A2</u>	20040923	WO2004US07505	20040311
<u>WO04080344 A3</u>	20050414	WO2004US07505	20040311

Probable Assignee: ACUMED LLC**Assignee(s):**^(std) ACUMED LLC ; HORST STEVEN P ; HUEBNER RANDALL J**Inventor(s):**^(std) HORST STEVEN P ; HUEBNER RANDALL J ; HUEBNER RANDALL JOSEPH**Inventor(s):** RANDALL JOSEPH HUEBNER ; STEVEN P HORST**Agent(s):** KOLISCH HARTWELL PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class A61B17/58 A61B17/60 A61B17/64 ^{(Advanced/Invention);}
^{(IPC 8-9):} A61B17/58 A61B17/60 ^(Core/Invention)

International class A61B17/56 A61F
^{(IPC 1-7):}

CPC: A61B17/6425**European class:** A61B17/64D**US class:** 606/59[Classification Explorer](#)

Cited documents: WO9635385, US6203548 BA, US6171309 BA, US6162224 A, US6162223 A, US5941877 A, US5897555 A, US583455 A, US583455, US5743898 A, US5718669 A, US5709681 A, US5624440 A, US5620442 A, US5601551 A, US5593405 A, US5437667 A, US5407241 A, US5383844 A, US5380322 A, US5376067 A, US5352228 A, US5342360 A, US5342288 A, US5334202 A, US5330474 A, US5320623 A, US5320622 A, US5314426 A, US5304177 A, US5300072 A, US5295958 A, US5292322 A, US5288286 A, US5286249 A, US5284468 A, US5281224 A, US5275599 A, US5267951 A, US5254078 A, US5209750 A, US5207676 A, US5203783 A, US5171310 A, US5167661 A, US5167628 A, US5160335 A, US5152771 A, US5152280 A, US5133342 A, US5125400 A, US5122140 A, US5108404 A, US5108396 A, US5108394 A, US5108393 A, US5102411 A, US5100403 A, US5098432 A, US5089015 A, US5080660 A, US5047041 A, US5042508 A, US5033457 A, US5032128 A, US5026372 A, US5026366 A, US5024618 A, US5019077 A, US5014681 A, US5011488 A, US5007896 A, US5003969 A, US4998935 A, US4994077 A, US4988349 A, US4979939 A, US4978348 A, US4976712 A, US496604 A, US496604, US4942872 A, US4941481 A, US4936843 A, US4923458 A, US4922896 A, US4913137 A, US4895141 A, US4883458 A, US4875495 A, US4869242 A, US4862879 A, US4859516 A, US4848368 A, US4823781 A, US4799629 A, US478899 A, US478899, US478495 A, US478495, US4777951 A,

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Forward Citations:

WO12024078, WO12024078, US9517093, US9414871, US9351763, US9259250, US9220533, US9155574, US9101398, US9060820, US8961518, US8961516, US8945128, US8906022, US8906020, US8870742, US8858555, US8834467, US8758343, US8591532, US8591395, US8506607, US8439917, US8382755, US8377079, US8337389, US8287541, US8287539, US8287538, US8233995, US8221439, US8192350, US8187163, US8187162, US8152710, US8142452, US8128559, US8114345, US8100870, US8066629, US8057492, US8034065, US8016745, US8016744, US7942875, US7927270, US7914533, US7909825, US7846162, US7844342, US7775966, US7775215, US7658196, US7396360, US2015283680, US2011015642, US2009018588, US2008200952, US2008039850, US2007012372, US2006085010, US2006084977, JP2011517998,

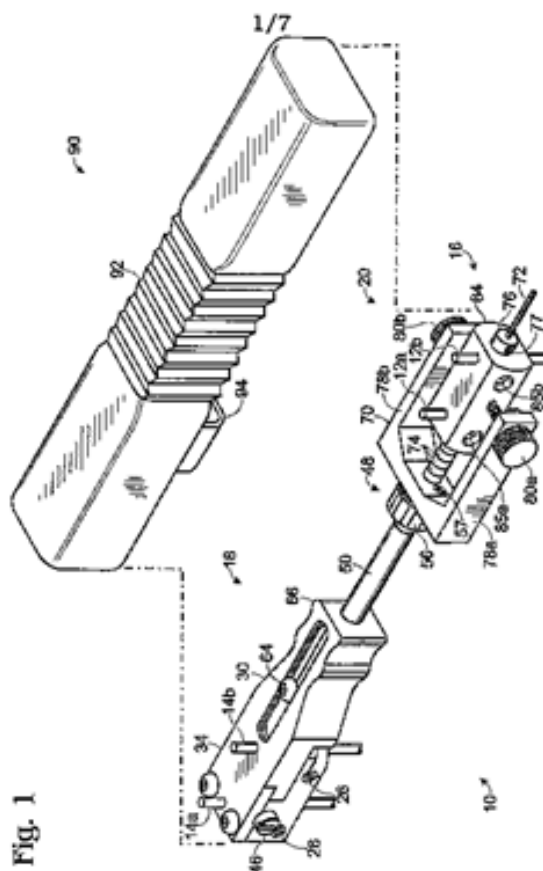
Abstract:

Source: US2004181221A Bone fixators for securing and/or repairing fractures and/or other defects of a distal radius and wrist. The bone fixators may include, among others, (1) a distal mounting element configured to be mounted in a metacarpal bone, or other hand bone, (2) a proximal mounting element configured to be mounted in the radius, the ulna, or other arm bone, (3) a distal member configured to be secured to the distal mounting element, (4) a proximal member configured to be secured to the proximal mounting element, and/or (5) a coupling, connecting the proximal member and the distal member, configured to allow immobilization, as well as adjustable flexion, rotation, and/or translation of the distal member relative to the proximal member.

PatBase - W004080344_A2

WO 2004/080344

PC/T/US2004/07565



17) Family number: 1859858 (US4628919A)

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Title: Dynamic external fixator and method of use
Priority: CA19840462535 19840906 US19830530608 19830909
Family:

Publication number	Publication date	Application number	Application date
BRPI8404487 A	19850730	BR1984PI04487	19840906
CA1232804 A1	19880216	CA19840462535	19840906
ES535749 A1	19860401	ES19840535749	19840907
ES8605968 A1	19861001	ES19840535749	19840907
FR2551650 A1	19850315	FR19840013791	19840907
GB2146533 A1	19850424	GB19840022534	19840906
GB2146533 B2	19860917	GB19840022534	19840906
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IT1176675 A	19870818	IT19840022567	19840907
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JP5047214 B4	19930716	JP19840188771	19840908
JP60077747 A2	19850502	JP19840188771	19840908
US4628919 A	19861216	US19830530608	19830909

Probable Assignee: ZIMMER TECHNOLOGY INC

Assignee(s):^(std): TERII EI KURAIBAAN ; CLYBURN T A ; CLYBURN TERRY

Assignee(s): CLYBURN TERRY A ; A CLYBURN TERRY ; TERRY A CLYBURN ; ZIMMER TECHNOLOGY INC

Inventor(s):^(std): CLYBURN TERRY A ; TERII EI KURAIBAAN

Inventor(s): TERRY A CLYBURN

Agent(s): GOWLING LAFLEUR HENDERSON LLP

International class [A61B17/58 A61B17/60 A61B17/64 A61F13/10 A61F2/30](#) (Advanced/Invention);
^{(IPC 8-9):} [A61B17/58 A61B17/60 A61F2/30](#) (Core/Invention)

International class [A61B17/58 A61B17/60 A61B19/00 A61F13/10 A61F2/30 A61F5/04](#)
^{(IPC 1-7):}

CPC: [A61B17/6425 A61B17/6491](#)

European class: [A61B17/64D A61B17/64P](#)

US class: [128/92 128/92ZK 128/92ZZ 606/55 606/57](#)

[Classification Explorer](#)

Cited documents: US4554915 A, US4548199 A, US4312336 A, JP55081650 A2, GB2077847 A1, GB2001533 A1, GB1582133 A, EP0011258 B1, DE2718515 A1,

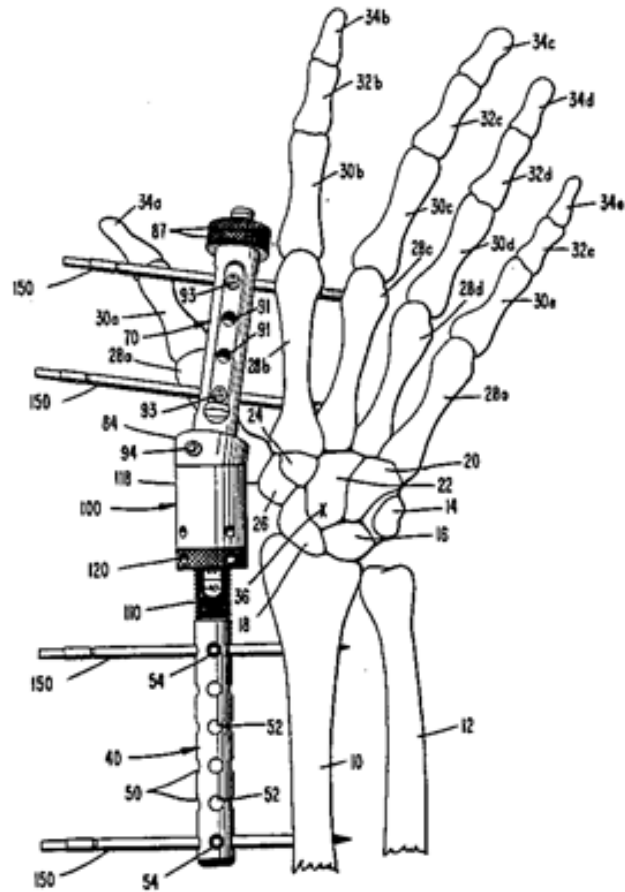
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Abstract:

Source: US4628919A A dynamic external fixator is disclosed which is designed to be applied externally along side the wrist by way of elongated bone fixation pins. The fixator includes two elongated legs connected by a universal joint. The proximal leg includes a series of holes for receipt of the bone fixation pins and associated threaded retainers to retain the bone fixation pins in the desired orientations. The distal leg includes a pistoning device which allows adjustability of the length thereof and further includes at least one set screw which reciprocates in a slot formed in the leg to enable the adjustment of the extension of the pistoning device thereof. The distal leg further includes a series of holes which receive the elongated bone fixation pins and further includes threaded members usable to maintain the bone fixation pins in a desired orientation. The universal joint includes means associated therewith which enables adjustment of the degree of movement of the proximal leg with respect to the distal leg and may also include means for indicating the degree of range of movement allowed in various adjusted positions thereof.

PatBase - US4628919_A



18) Family number: 30545142 (US2001053911A)

© PatBase

Title: REPOSITIONING INSTRUMENT TO FIXATE BONE–FRACTURES**Priority:** BR1998PI16017 19980917 DE19982004268U 19980311 DE19995013861 19990216
WO1999CH00074 19990216 WO1998CH00399 19980917 EP19980942440 19980917**Family:**

Publication number	Publication date	Application number	Application date
AR018571 AA	20011128	AR1999P100898	19990303
AR020438 AA	20020515	AR1999P104598	19990914
AT268144 E	20040615	AT19980942440T	19980917
AT339925 E	20061015	AT19990902495T	19990216
AU199890594 A1	20000410	AU19980090594	19980917
AU199890594 A5	20000410	AU19980090594	19980917
AU746008 B2	20020411	AU19980090594	19980917
BRPI9816017 A	20010605	BR1998PI16017	19980917
BRPI9908591 A	20001114	BR1999PI08591	19990216
CA2326393 AA	20000928	CA19992326393	19990216
CA2326393 C	20070918	CA19992326393	19990216
CA2344270 AA	20010316	CA19982344270	19980917
DE29804268 U1	19980514	DE19982004268U	19980311
DE59811523 D1	20040708	DE19985011523	19980917
DE59913861 D1	20061102	DE19995013861	19990216
DK1113757 T3	20040726	DK19980942440T	19980917
EP1061861 A1	20001227	EP19990902495	19990216
EP1061861 B1	20060920	EP19990902495	19990216
EP1061861 B8	20061025	EP19990902495	19990216
EP1113757 A1	20010711	EP19980942440	19980917
EP1113757 B1	20040602	EP19980942440	19980917
ES2221192 T3	20041216	ES19980942440T	19980917
ES2274615 T3	20070516	ES19990902495T	19990216
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Probable Assignee: SYNTHES USA**Assignee(s):^(std):** ACKERET ROMAN ; AMBUEHL RUEDI ; AMBUHL RUEDI ; DELL OCA ALBERTO FERNANDEZ ; HEHLI MARCUS ; HEHLI MARKUS ; HUNGERBUEHLER RUTH ; SYNTHES USA ; SYNTHES AG ; SENN PETER ; SYNTHES AG CHUR ; SYNTHES U S A ; SYNTHES GMBH**Assignee(s):** SYNTHES AG CHUR CHUR ; SYNTHES AG CHUR CHUR GRAUBUENDEN CH ; SYNTHES AKTIENGESELLSCHAFT ; SYNTHES USA LLC ; SYNTHES ; SYNTHES (USA) ; SYNTHES CHUR CHUR AG ; SYNTHES CHUR CHUR GRAUBUENDEN CH AG ; SYNTHES CHUR AG ; SYNTHES U SA ; HUNGERBUEHLER RUTH**Inventor(s):^(std):** ACKERET ROMAN ; ALBERTO FERNANDEZ DELL OCA ; AMBUEHL RUEDI ; AMBUHL RUEDI ; DELL OCA ALBERTO FERNANDEZ ; DELL OCA FERNANDEZ ; FERNANDEZ

DELL OCA ALBERTO ; HEHLI MARCUS ; HEHLI MARKUS ; HL RUEDI AMB ;
HUNGERBUEHLER RUTH ; HUNGERBUHLER RUTH ; MARKUS HEHLI ; OCA
ALBERTO FERNANDEZ DELL ; RUEDI AMBUHL ; SENN PETER

Inventor(s): RUTH HUNGERBUEHLER ; PETER SENN ; ROMAN ACKERET ; RUEDI AMB HL
Agent(s): PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP
Designated states: AT AU BE BR CA CH CY DE DK ES FI FR GB GR IE IT JP LI LU MC MX NL PT SE US
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(IPC 8-9): A61B17/17 A61B17/56 A61B17/58 A61B17/60 A61B17/64 A61B17/88
A61B17/90 (Advanced/Invention);
A61B17/58 A61B17/60 A61B17/64 A61B17/78 (Advanced/Non-invention);
A61B17/58 A61B17/60 A61B17/88 (Core/Invention);
A61B17/60 (Core/Non-invention)
International class
(IPC 1-7): A61B A61B17/17 A61B17/28 A61B17/56 A61B17/58 A61B17/60 A61B17/68 A61B17/72
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CPC: A61B17/6466 A61B17/8866 A61B17/1725 A61B17/744
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US class: 606/205 606/208 606/53 606/54 606/60 606/67

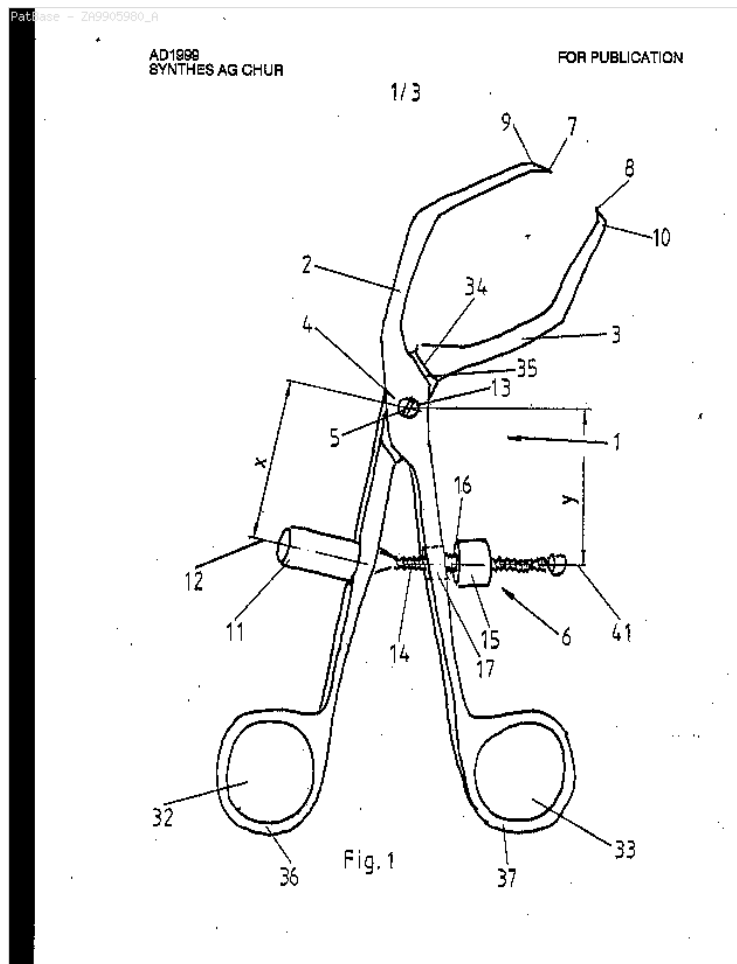
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Forward Citations: WO15068434, WO12012625, WO04026155, US9622760, US9545266, US9480509,
US9451971, US9259250, US9237949, US9226783, US9161793, US9155574,
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US2004102787, RU2474389, KR20150138424, KR101731143, KR101709585,
KR101672159, JP2015134186, JP2014155634, JP2013532523, ITUD20090097,
EP1779798, EP1779798, CN103976773, CN103976773, CN103462676,

Abstract:

Source: US2001053911A The present invention discloses bone grasping tongs for seizing bones or bone fragments. The tongs comprise two mutually pivotable tongs levers fitted with clamping tips at the ends of the tongs levers for seizing the bone. The tongs further comprise a locking element to detachably lock the relative position of the tongs levers and a connecting member to connect with an additional component within an external fixation device. The locking element is located at a distance from the axis of rotation and the longitudinal axis of the connecting member is situated in the plane of pivoting of the tongs lever. The present invention also discloses an external fixation device for externally fixing bone fractures. The device comprises at least one bone grasping tongs, one elongated support, and at least one clamp which detachably connects the connecting member of a bone grasping tongs and an elongated support in a mutually rotatable manner.



19) Family number: 11140691 (US6245071B)

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Title: External fixation device for bone**Priority:** KR20017011362 20010907 US19990265584 19990310 WO2000CH00109 20000228
WO2000CH00109 20010907**Family:**

Publication number	Publication date	Application number	Application date
<u>AT336951 E</u>	20060915	AT20000904786T	20000228
<u>AU200026558 A5</u>	20000928	AU20000026558D	20000228
<u>AU746215 B2</u>	20020418	AU20000026558	20000228
<u>CA2364112 AA</u>	20010906	CA20002364112	20000228
<u>CA2364112 C</u>	20050906	CA20002364112	20000228
<u>CN1157158 C</u>	20040714	CN20008004754	20000228
<u>CN1343108 A</u>	20020403	CN20008004754	20000228
<u>DE60030256 D1</u>	20061005	DE20006030256	20000228
<u>DE60030256 T2</u>	20070719	DE20006030256T	20000228
<u>EP1158914 A1</u>	20011205	EP20000904786	20000228
<u>EP1158914 B1</u>	20060823	EP20000904786	20000228
<u>JP2002537936 T2</u>	20021112	JP20000603600T	20000228
<u>JP4286458 B2</u>	20090701	JP20000603600T	20000228
<u>KR100663903 B1</u>	20070130	KR20017011362	20000228
<u>KR20010102529 A</u>	20011115	KR20017011362	20010907
<u>NZ513646 A</u>	20010928	NZ20000513646	20000228
<u>TW493982 B</u>	20020711	TW20000104034	20000307
<u>US6245071 BA</u>	20010612	US19990265584	19990310
<u>WO0053109 A1</u>	20000914	WO2000CH00109	20000228
<u>ZA200105915 A</u>	20020131	ZA20010005915	20010718

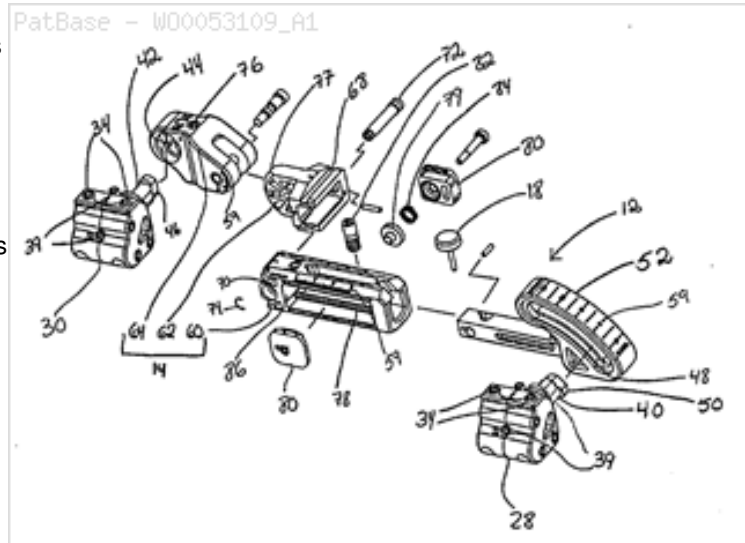
Probable Assignee: SYNTHES USA LLC**Assignee(s):**^(std): SYNTHES AG ; PIERSON GLEN J ; SYNTHES USA ; SYNTHES GMBH ; SYNTHES HOLDING AG**Assignee(s):** SYNTHES U S A ; SYNTHES USA LLC ; SYNTHES CHUR AG ; SYNTHES ; SYNTHES AG CHUR ; SYNTHES AG CHUR CHUR ; SYNTHES AKTIENGESELLSCHAFT**Inventor(s):**^(std): PIERSON GLEN J ; PIERSON J**Inventor(s):** GLEN J PIERSON ; J.**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP**Designated states:** AT AU BE CA CH CN CY DE DK ES FI FR GB GR IE IT JP KR LI LU MC NL NZ PT SE
US ZA**International class**
^{(IPC 8-9):} A61B17/60 A61B17/64 A61B17/66 A61F5/05 (Advanced/Invention);
A61B17/64 A61B17/66 (Advanced/Non-invention);
A61B17/60 (Core/Invention)**International class**
^{(IPC 1-7):} A61B A61B17/60 A61B17/66 A61F5/05**CPC:** A61B17/6425 A61B17/66**European class:** A61B17/66 K61B17/64D**US class:** 606/57 606/58[Classification Explorer](#)**Cited documents:** USRE34985 E, US6033412 A, US5843081 A, US5743898 A, US5683389 A, US5662649 A, US5601551 A, US5545162 A, US5437667 A, US5376091 A, US5320622 A,

US5304177 A, US5207676 A, US5152280 A, US5122140 A, US4988349 A, US4978348 A, US4922896 A, US4919119 A, US4782842 A, US4662365 A, US4628919 A, US4611586 A, US4554915 A, US4040129 A, NL8802462 A,

Forward Citations: WO14153008, WO14129995, WO14129995, WO13165589, WO02094112, US9474552, US9463045, US9398925, US9393045, US9351763, US9301782, US9220533, US9101398, US9078710, US9060809, US9028534, US8945128, US8906020, US8858555, US8834467, US8828067, US8758343, US8702768, US8679167, US8419732, US8388619, US8382757, US8382755, US8343166, US8109936, US7901412, US7731738, US7588571, US7575575, US7507240, US7291148, US7282052, US7261713, US6942664, US2016038185, US2016022315, US2014371796, US2014276816, US2011103676, US2011082458, US2010268285, US2009254129, US2009254089, US2009177199, US2009171403, US2009131991, US2009131990, US2009125068, US2009048606, US2008243191, US2008243132, US2007282338, US2007162028, US2006247629, US2006247622, US2006229605, US2006229604, US2006229603, US2006229602, US2006155276, US2004249375, US2004097922, US2004059331, US2003069580, KR101662668, JP2008539925, JP2007532209, EP1545350, CN103126755, CN102283732,

Abstract:

Source: US6245071B The present invention is directed to a device for fixation of a bone fracture. The device comprises at least one distal pin having a mounting end for insertion on a distal side of the fracture, at least one proximal pin having a mounting end for insertion on a proximal side of the fracture, a distal member attached to the distal pins, a proximal member attached to the proximal pins and slideably connected to the distal member for reducing or distracting the bone fracture, a distraction assembly for controlling the movement between the proximal and distal members, and a removable engagement element. The distraction assembly has two modes of operation: an active configuration and an inactive configuration. In the active configuration, incremental relative sliding movement between the proximal and distal members is allowed, and, in the inactive configuration, free relative sliding movement between the proximal and distal members is allowed. The engagement element operatively engages the distraction assembly in the inactive configuration. Removal of the engagement element places the distraction assembly in the active configuration.



20) Family number: 55108930 (US2013296857A)

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Title: RATCHETING STRUT**Priority:** US20120464502 20120504 WO2013US31539 20130314

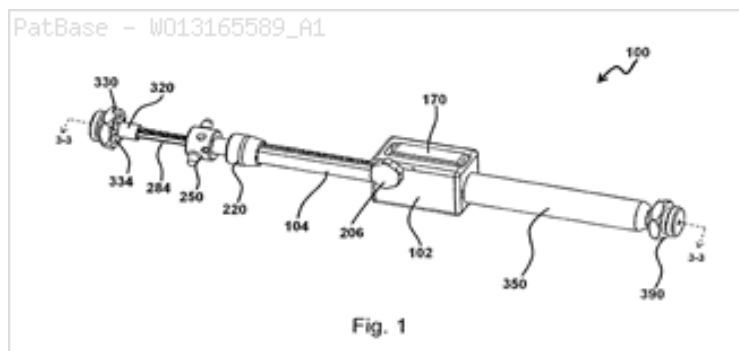
Family:	Publication number	Publication date	Application number	Application date
	<u>EP2844166 A1</u>	20150311	EP20130714106	20130314
	<u>US2013296857 AA</u>	20131107	US20120464502	20120504
	<u>US9474552 BB</u>	20161025	US20120464502	20120504
	<u>WO13165589 A1</u>	20131107	WO2013US31539	20130314

Probable Assignee: BIOMET MFG LLC**Assignee(s):^(std):** BRINKER MARK R ; SLAGLE PAUL ; LESTER MARK ; FRANK PHILIP H ; BARNETT GARY D ; BIOMET MFG LLC**Assignee(s):** BIOMET TRAUMA LLC**Inventor(s):^(std):** BARNETT GARY D ; BRINKER MARK R ; CRESINA JEFFERY T ; FRANK PHILIP H ; LESTER MARK ; SLAGLE PAUL**Agent(s):** KILLOUGH KIERAN PAUL; SCHWEGMAN LUNDBERG AND WOESSNER PA; WILLIS RYAN L ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/00 A61B17/62 A61B17/64 A61B17/66 A61B17/70 (Advanced/Invention)
(IPC 8-9):**CPC:** A61B17/6416 A61B17/64 A61B17/66 A61B17/7014**US class:** 1/1 606/57[Classification Explorer](#)**Cited documents:** WO09102904 A1, WO06126167 A2, WO0053109 A1, US8439914 BB, US4308863 A, US2012203225 AA, US2011208187 AA, US2011137347 AA, US2009216231 AA, US2006217735 AA, US2006195087 AA,**Forward Citations:** WO16149470, WO14140879, WO14140855, WO14140844, WO14140831, US9427261, US2016338746, US2016030088, US2016022314, US2013338713, CN105286969,**Abstract:**

Source: US2013296857A A ratcheting strut comprising: (a) a ratchet box including a through passage; (b) a first tube sized to extend at least partially through the passage, the first tube including ratchet teeth that engage corresponding ratchet teeth of the ratchet box; (c) a second tube mounted to the ratchet box in parallel with the first tube, the second tube operatively coupled to a second fixation adapter; and (d) a threaded rod operatively coupled to a nut and a first fixation adapter, the threaded rod repositionably mounted to the first tube, where the nut is operatively coupled and repositionable with respect to the first tube.



21) Family number: 42135849 (US2008287970A)

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Title: REPAIR OF DEFECT IN INGUINAL CANAL AND OTHER MUSCULAR STRUCTURES

Priority: US20070013619P 20071213 US20070895039P 20070315 US20070934897 20071105
 US20080030439P 20080221 US20080204806 20080905 US20080183930 20080731
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 WO2008US55220 20080228 WO2008US79106 20081007 WO2009US32326 20090129
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Family:

Publication number	Publication date	Application number	Application date
AU2013219907 AA	20130822	AU20130219907	20130110
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WO09097380 A1	20090806	WO2009US32326	20090129	
WO13122700 A1	20130822	WO2013US20984	20130110	
WO13176896 A1	20131128	WO2013US40282	20130509	

Probable Assignee: INSIGHTRA MEDICAL INC

Assignee(s):^(std): ADZICH VASO ; AMATO GIUSEPPE ; BELL STEPHEN G ; BELL STEPHEN GRAHAM ; D AFIERO ALESSANDRO ; INSIGHTRA MEDICAL INC ; INSIGHTRA MEDICAL INC ; INSIGHTRA MEDICAL ; NODA WAYNE ; NODA WAYNE A

Assignee(s): INSIGHTRA MEDICAL INC200 – 9200 IRVINE CENTER DRIVEIRVINECA92618US ; GPB LIFE SCIENCE HOLDINGS LLC

Inventor(s):^(std): ADZICH VASO ; AMATO GIUSEPPE ; BELL STEPHEN G ; BELL STEPHEN GRAHAM ; D AFIERO ALESSANDRO ; NODA WAYNE ; NODA WAYNE A

Inventor(s): STEPHEN GRAHAM BELL ; D'AFIERO ALESSANDRO ; GIUSEPPE AMATO ; BELL STEPHEN GRAHAMIT ; AMATO GIUSEPPEIT

Agent(s): BALDWIN INTELLECTUAL PROPERTY; SMART AND BIGGAR; O NEILL AOIFE; KOHLER SCHMID MOEBUS; SCHUETTE GEAROID; DEVILE JONATHAN MARK; SHOBAYASHI MASAYUKI; ROGITZ AND ASSOCIATES; SCOTT EVANS; JOHN L; JOHN M; ROGITZ JOHN L; HACKLER WALTER A

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A61B A61B17/00 A61B17/03 A61B17/04 A61B17/08 A61B17/10 A61B17/34 A61B17/58 A61B19/00 A61B19/08 A61F13/00 A61F13/36 A61F2/00 A61F2/02 A61F2/04 A61F2/08 A61M29/02 A61M39/02 A61M39/06](#) (Advanced/Invention); [A61B17/00 A61B17/02 A61B17/06 A61B17/062 A61B17/34](#) (Advanced/Non-invention); [A61B17/00 A61B17/03 A61B17/58 A61B19/00 A61F2/00 A61F2/02 A61F2/04 A61M29/02 E21B49/00 G01V1/40 G01V3/38](#) (Core/Invention); [A61B](#) (Subclass/Invention)

CPC: [A61B17/0218 A61B2017/00557 A61B2017/00637 A61B2017/00659 A61F2250/006 A61B2017/00592 A61B2017/00623 A61B2017/00641 A61B2017/00654 A61M2005/31508 A61M39/02 A61B2017/3419 A61M2039/066 A61M39/0613 A61B17/3468 A61B2017/00889 A61B2017/00951 A61B2017/3466 A61F2002/0072 A61M2039/0673 A61B17/0485 A61B17/06109 A61B2017/00349 A61B2017/00632 A61B46/30 A61B2090/309 A61B2017/00358 A61B2017/00362 A61F2/0045 A61B17/0293 A61B17/06066 A61B17/0625 A61B17/3423 A61B2017/003 A61B2017/00438 A61B2017/00477 A61B2017/00805 A61B17/00234 A61B17/0057 A61B17/0401 A61B17/0487 A61F2/0063 A61B19/5202 F04C2270/0421 A61B90/30](#)

European class: [A61B17/00E A61B17/00P A61B17/02E A61B19/08G A61F2/00B6B4 A61F2/00H K61B17/00E3G K61B17/00E9 K61B17/00G6 K61B17/00K K61B17/00N8 K61B17/00P11G K61B17/00P11J K61B17/00P5E K61B17/00P5R K61B17/00P7 K61B17/00P9 K61B17/00R9 K61B17/02R K61B17/04A K61B17/04K K61B17/062N K61B17/06N K61B17/34G4A K61F2/00H6](#)

US class: [1/1 128/834 128/898 600/37 600/37P 604/256 606/151 606/151P 606/153 606/153P 606/191 606/191S 606/213 606/230 606/99 623/23.72](#)

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WO9800069 A1, WO9800068 A1, WO9206639 A2, WO10141321 A1, WO10039249 A1, WO09075933 A1, WO07149348 A2, WO07109508 A1, WO07016698 A2, WO06110274 A1, WO06108145 A1, WO06009925 A2, WO05110274 A2, WO04012579 A2, WO03096929 A1, WO0007520 A1, USD567942 S1, US93489707, US9050416 BB, US8734526 BB, US8585750 BB, US8241251 BB, US8123817 BB, US8047983 BB, US7785334 BB, US7608082 BB, US7410482 BB, US7404819 BA, US7338502 BB, US7229453 BB, US7131943 BB, US7105009 BB, US7101381 BB, US6991637 BB, US6984237 BB, US6946003 BA, US6939296 BB, US6936054 BB, US6911003 BB, US6755867 BB, US6712791 BB, US6676673 BB, US6669735 BA, US6616685 BB, US6589262 BA, US6551356 BB, US6547806 BA, US6475135 BA, US6451032 BA, US6425916 BA, US6391060 BA, US6383201 BA, US6382214 BA, US6332888 BA, US6242247 BA, US5972022 A, US5899909 A, US5853395 A, US5810721 A, US5766246 A, US5741297 A, US5741233 A, US5716367 A, US5640977 A, US5545178 A, US5458609 A, US5431323 A, US5397332 A, US5397331 A, US539733 A, US5366460 A, US5354292 A, US5337736 A, US5333624 A, US5263969 A, US5258609 A, US5258000 A, US5219358 A, US5217442 A, US5180362 A, US5147374 A, US5116357 A, US4943282 A, US4723943 A, US4723547 A, US4653513 A, US4188945 A, US3196876 A, US2738790 A, US2012116425 AA, US2012004501 AA, US2011295283 AA, US2011276090 AA, US2011276054 AA, US2011184429 AA, US2011144667 AA, US2011130774 AA, US2011112560 AA, US2011087271 AA, US2010274074 AA, US2010125278 AA, US2009281635 AA, US2009254103 AA, US2009240267 AA, US2009216253 AA, US2009198260 AA, US2009192530 AA, US2009171142 AA, US2009082792 AA, US2009024147 AA, US2008287970 AA, US2008269896 AA, US2008262518 AA, US2008249562 AA, US2008200751 AA, US2008147200 AA, US2008135753 AA, US2008132753 AA, US2008109015 AA, US2008081945 AA, US2008065229 AA, US2007270890 AA, US2007265710 AA, US2007260179 AA, US2007250147 AA, US2007239208 AA, US2007225759 AA, US2007167981 AA, US2007066980 AA, US2007027358 AA, US2007027357 AA, US2006282105 AA, US2006276908 AA, US2006265004 AA, US2006258898 AA, US2006205995 AA, US2006122646 AA, US2006106418 AA, US2006083767 AA, US2006058575 AA, US2005288787 AA, US2005288786 AA, US2005288706 AA, US2005277942 AA, US2005273135 AA, US2005267523 AA, US2005261782 AA, US2005250977 AA, US2005177182 AA, US2005165447 AA, US2005004576 AA, US2004221431 AA, US2004220610 AA, US2004176799 AA, US2004144395 AA, US2004068159 AA, US2004054353 AA, US2004039453 AA, US2004015155 AA, US2003212460 AA, US2003192553 AA, US2003176762 AA, US2002169475 AA, US2002151762 AA, US2002147457 AA, US2002133236 AA, US2002103494 AA, US2002052612 AA, US2002028980 AA, US2001031972 AA, US2001027347 AA, JP2005534404 T2, GB2397240 A1, FR2872024 A1, EP1336391 A1, EP1145693 A2, EP0614650 A2, CN101530353 A, CN101077310 A,

Forward Citations:

WO17013320, WO16187081, WO13176896, WO13122700, WO12170471, WO12129391, WO11095176, WO11095176, WO11042553, USRE45426, USD772410, USD734458, USD673677, US9642690, US9622844, US9622843, US9592109, US9554887, US9554885, US9510927, US9498893, US9492261, US9439746, US9439643, US9414902, US9402986, US9398944, US9398943, US9393093, US9393007, US9393002, US9364310, US9345563, US9301826, US9282994, US9248580, US9247932, US9216075, US9186053, US9179994, US9149352, US9125716, US9125647, US9107726, US9078648, US9044235, US9044225, US9039721, US9034002, US9005308, US9005241, US8961560, US8940017, US8932621, US8932328, US8916077, US8915943, US8906045, US8888811, US8876865, US8876693, US8875607, US8852232, US8821540, US8808314, US8795332, US8793863, US8790356, US8777988, US8777987, US8771313, US8764776, US8758373, US8758220, US8753359, US8747437, US8734485, US8734473, US8721681, US8721664, US8641732, US8615856, US8585581, US8579924, US8480558, US8398659, US8317808, US8257366, US8226686, US2014350580, US2014276996, US2014187854, US2014128891, US2014094830, US2014025094, US2013296898, US2013296657, US2013245650, US2013190572, US2012215237, US2011263930, US2011224698, US2011224697, US2011130774, US2011105836, US2011077598, US2011054249, US2010268018, US2010262020, US2010191046, US2010191045, US2010191044, US2009216253, US2009192530, US2009012560, US2008177132, US2008082105, JP6122943, JP6088525, JP5842036, JP5703300, JP2015512304, JP2014531938, JP2014223452, JP2013507161, ITMI20122192, FR3039057, FR2951069, EP2839808, EP2830532, EP2763600, EP2688524, EP2688524, EP2666440, CN104755044, CN104203123, CN103476364, CN102481185,

Abstract:

Source: US2008287970A A space in a muscle wall such as the inguinal canal is dilated to break up fibrotic bands by divulsion. While the space is dilated a dynamic plug is advanced into it, with the plug expanding and contracting with the space. Shields may be placed against opposite sides of the wall surrounding the space.

PatBase - W013176896_A1

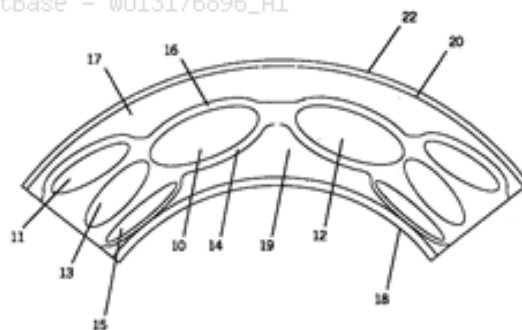


FIG. 1A

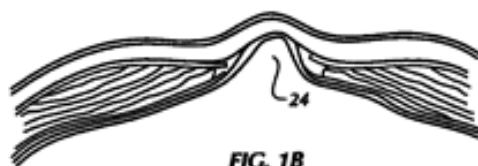


FIG. 1B

22) Family number: 30051875 (US2003225407A)

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Title: APPARATUS FOR DYNAMIC EXTERNAL FIXATION OF DISTAL RADIUS AND WRIST FRACTURES

Priority: US20020360443P 20020228 US20030377094 20030228 US20080115073 20080505

Family:

Publication number	Publication date	Application number	Application date
<u>US2003225407 AA</u>	20031204	US20030377094	20030228
<u>US2009125068 AA</u>	20090514	US20080115073	20080505
<u>US7367977 BB</u>	20080506	US20030377094	20030228

Probable Assignee: ESTRADA JR HECTOR MARK

Assignee(s):^(std): ESTRADA JR HECTOR MARK

Assignee(s): ESTRADA HECTOR MARK

Inventor(s):^(std): ESTRADA HECTOR MARK ; ESTRADA JR HECTOR MARK

Agent(s): GREG GOSHORN PC; GOSHORN GREGORY K; GREGORY K

International class
(IPC 8-9): A61B17/64 A61B17/70 A61F2/42 (Advanced/Invention);
A61B19/00 (Advanced/Non-invention);
A61B17/60 A61B17/70 A61F2/42 (Core/Invention);
A61B19/00 (Core/Non-invention)

International class
(IPC 1-7): A61B17/56

CPC: A61B2090/067 A61B17/6416 A61B17/6425 A61B17/6491

European class: A61B17/64C A61B17/64D K61B17/64P K61B19/46J

US class: 606/280 606/280P 606/286 606/286S 606/53 606/54 606/54P 606/55 606/56 606/57 606/58 606/59

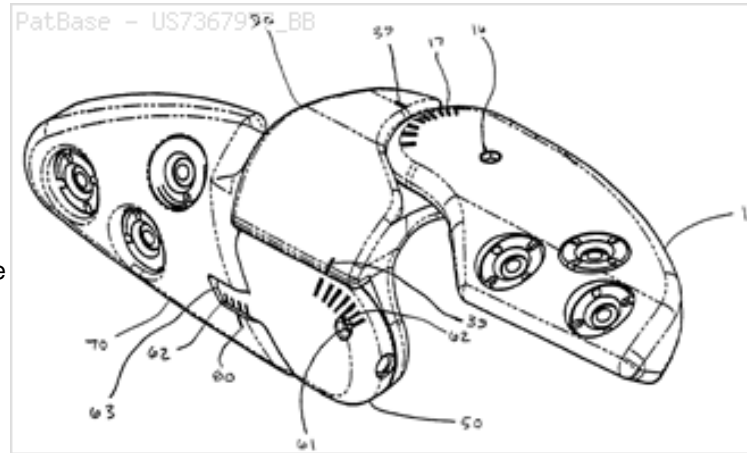
[Classification Explorer](#)

Cited documents: US6709433 BA, US6652524 BA, US6613049 BB, US6491694 BA, US6482206 BB, US6245071 BA, US6217577 BA, US6171309 BA, US6171309 B1, US6171308 BA, US6019769 A, US6001097 A, US5976136 A, US5976134 A, US5976125 A, US5973125 A, US5728095 A, US5725526 A, US5683389 A, US5676664 A, US5630815 A, US5443464 A, US5437667 A, US5429637 A, US5152280 A, US5122140 A, US4988349 A, US4919119 A, US4893618 A, US4782842 A, US4730608 A, US4714076 A, US4611586 A, US4548199 A, US2391537 A, US2006155276 AA, US2004133200 AA,

Forward Citations: WO11019367, WO10077309, WO10077309, US9649141, US9642582, US9517093, US9351742, US9295506, US9066766, US9066757, US8961605, US8961518, US8915924, US8906022, US8628530, US8603148, US8591554, US8439956, US8419733, US8382755, US8377061, US8287538, US8282636, US8262657, US8123747, US7717916, US2016022315, US2015313654, US2015073425, US2014147803, US2012071979, US2011144647, US2010318084, US2010082028, US2010076436, US2009048599, US2007293865, US2007225819, US2007055233, US2006155276, JP5788406, JP2013513424, CN103445888, CN102652002, CN102652002,

Abstract:

Source: US2003225407A The fixator is an apparatus for repairing fractures of the distal radius and wrist. Distal, pivot, distraction, and radial members provide an anatomically contoured, radiolucent apparatus that permits the wrist to move through a substantially normal range of motion. A means for distraction of the bones by the fixator is also provided. The fixator may be affixed to the lower arm and hand by spaced-apart elongate distal mounting pins with lower ends adapted or mounting in the metacarpal bone and by spaced-apart elongate radial mounting pins with lower ends adapted for mounting in the radius.



23) Family number: 11657656 (US5339533A)

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Title: SYSTEM FOR MEASURING STIFFNESS OF A FRACTURED BONE**Priority:** US19930086147 19930701 US19930163426 19931208

Family:	Publication number	Publication date	Application number	Application date
	<u>US5339533 A</u>	19940823	US19930163426	19931208

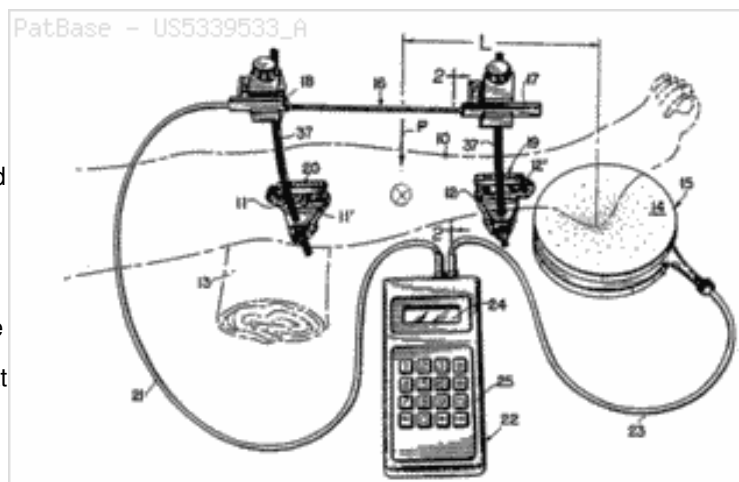
Probable Assignee: RICHARDSON JAMES B**Assignee(s):^(std):** RICHARDSON JAMES B**Inventor(s):^(std):** RICHARDSON JAMES B

International class A61B19/00 A61B5/103 (Advanced/Invention);
 (IPC 8-9): A61B17/60 (Advanced/Non-invention);
A61B19/00 A61B5/103 (Core/Invention);
A61B17/60 (Core/Non-invention)

International class A61B5/103
 (IPC 1-7):

CPC: A61B5/4504 A61B17/60 A61B90/06**European class:** A61B19/46 A61B5/45B K61B17/60**US class:** 128/782 33/512 600/595[Classification Explorer](#)**Cited documents:** WO8601588 A1, US5171248 A, US5163228 A, US5121753 A, US5082003 A, US4033043 A, US3229372 A, US2333033 A, EP0324279 A1,**Forward Citations:** WO9535062, WO9535062, WO9535061, WO9535061, WO06119322, WO06119322, WO06038822, US7661309, US5697165, US5493788, US2009216126, US2008186793, US2005251066, US2005056075, JP2008539879, GB2290616, GB2290616,**Abstract:**

Source: US5339533A A bone-stiffness measuring instrument comprises a set or kit of readily assembled and adjusted components, namely a goniometer, a light-weight load cell, and a small computer package, adapted to continuously respond to the outputs of the load cell and goniometer and to display and/or record (i.e., store) measured stiffness data; plus hardware in duplicate, namely, a bone-screw clamp and bracket for fixed reference to bone-screws that are externally exposed on each of the respective sides of the fracture (following removal of an external fixator), a stiff arcuate arm member of radius at least twice the diameter of the fractured bone, and a goniometer-end mount. The arcuate arm member is adjustably fixed to the bracket for bone-screw reference, and the goniometer-end mount is also adjustably fixed to the arcuate arm member, with a releasably lockable ball-joint connection for adjusted orientation of an end mounting to the goniometer.



24) Family number: 29471396 (US2003050704A)

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Title: PROSTHESIS

Priority: IL20000133873 20000103 IL20000133874 20000103 IL20010133873 20010101
 WO2001IL00001 20010101 WO2001IL00002 20010101

Family:	Publication number	Publication date	Application number	Application date
	<u>AU200120233 A5</u>	20010716	AU20010020233	20010101
	<u>AU200122170 A5</u>	20010716	AU20010022170	20010101
	<u>EP1278485 A2</u>	20030129	EP20010900007	20010101
	<u>IL133873 A0</u>	20010430	IL20000133873	20000103
	<u>IL133874 A0</u>	20010430	IL20000133874	20000103
	<u>US2003050704 AA</u>	20030313	US20020188122	20020702
	<u>US2003109932 AA</u>	20030612	US20020188125	20020702
	<u>US6755862 BB</u>	20040629	US20020188125	20020702
	<u>WO0149193 A1</u>	20010712	WO2001IL00002	20010101
	<u>WO0149218 A2</u>	20010712	WO2001IL00001	20010101
	<u>WO0149218 A3</u>	20020411	WO2001IL00001	20010101

Probable Assignee: ORTHOSCOPE LTD**Assignee(s):^(std):** KEYNAN ORY ; ORTHOSCOPE LTD**Assignee(s):** ORY KEYNAN ; ORTHOSCOPE LTD**Inventor(s):^(std):** KEYNAN ORY ; ORTHOSCOPE LTD**Inventor(s):** ORY KEYNAN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR
 CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE
 IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN
 MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM
 TR TT TZ UA UG US UZ VN YU ZA ZW

International class
 (IPC 8-9): A61B17/72 A61B17/74 A61B17/78 A61B17/86 A61B19/00 A61F2/00 A61F2/28 A61F2/30
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A61F2/34 A61F2/46 (Advanced/Non-invention);
A61B17/68 A61F2/30 A61F2/36 (Core/Invention);
A61B19/00 A61F2/00 A61F2/28 A61F2/32 A61F2/46 (Core/Non-invention);
A61F (Subclass/Invention)

International class
 (IPC 1-7): A61B17/14 A61B17/72 A61B17/74 A61F A61F2/28 A61F2/30 A61F2/32 A61F2/36
A61F2/40 A61F2/46

CPC: A61B90/30 A61B17/72 A61B17/7283 A61B17/744 A61B17/746 A61B17/86 A61F2/32
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US class: 606/170 606/63 606/63S 606/8 606/80 606/80S 623/16.11 623/22.12 623/22.120P 623/22.4 623/22.400S 623/23.18 623/23.180P 623/23.24 623/23.240S 623/23.26 623/23.260S

[Classification Explorer](#)

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Forward Citations: WO15106319, WO08064346, WO06125633, WO06049797, USD581538, US9615864, US9597128, US9522009, US9517093, US9504580, US9451971, US9433450, US9427289, US9421045, US9408644, US9398928, US9393059, US9265549, US9259250, US9254195, US9254156, US9237949, US9179959, US9155574, US9144442, US9125706, US9060820, US9005254, US8974540, US8961518, US8961516, US8945233, US8939977, US8936644, US8936382, US8915966, US8911857, US8906031, US8906030, US8906022, US8870965, US8834468, US8795381, US8777947, US8771283, US8734460, US8684965, US8672982, US8672940, US8668701, US8579985, US8574233, US8512338, US8496658, US8480738, US8439917, US8430879, US8419801, US8403968, US8372074, US8366711, US8348956, US8328402, US8287541, US8287539, US8287538, US8246628, US8241287, US8211458, US8211183, US8210729, US8167881, US8162943, US8157871, US8157803, US8147492, US8128627, US8128626, US8105374, US8100982, US8100910, US8092499, US8092453, US8048134, US8034056, US8029573, US7964207, US7942875, US7922720, US7914584, US7914533, US7909825, US7879041, US7867282, US7854767, US7846162, US7811290, US7811284, US7806900, US7785325, US7753961, US7713271, US7648530, US7588577, US7559951, US7534271, US7488329, US7485119, US7481841, US7374576, US7294133, US7258692, US7247171, US7166132, US2016030191, US2015190233, US2015032168, US2014243827, US2014207138, US2014094855, US2014005730, US2012310283, US2012239037, US2012226361, US2012130502, US2012116526, US2012035734, US2011230883, US2011218626, US2011190832, US2011004319, US2010331992, US2010331842, US2010292722, US2010198352, US2010191240, US2010076503, US2009228008, US2009228007, US2009222008, US2009216335, US2009088833, US2009076619, US2009054900, US2008312749, US2008287951, US2008269776, US2008269750, US2008269748, US2008269747, US2008269746, US2008269745, US2008255560, US2008125784, US2008027451, US2007282450, US2007270855, US2007239164, US2007123995, US2007118230, US2007100438, US2007093844, US2006167560, US2006167555, US2006161262, US2006106463, US2006089642, US2006069447, US2006064164, US2006058809, US2006004459, US2005234448, US2005203508, US2005165493, US2004186579, US2004127563, US2003220646, US2003220644, US2003220641, JP4739351, JP2008540036, JP2008523906, JP2008523905, EP2419055, EP2139432, EP2139432, EP2114307, EP2002804, EP1881793, EP1344505, EP1240879, CN105213069, CN105105871, AU2006251341,

Abstract:

Source: US2003050704A A prosthetic device for an enarthrosis of an extremity, such as the hip joint of the shoulder joint of a human body. The prosthetic device has a ball prosthesis portion and an optional socket prosthesis portion. The ball prosthesis portion is non-inflatable, having a ball member joined to an axial end of a body member via a neck member, and is securable to the extremity. In particular, the ball prosthesis portion has a transverse profile that is adapted for enabling the same to be implanted in the enarthrosis via a suitable portal formed through the lateral cortex of the long bone of the enarthrosis.

PatBase - W00149218_A2

W00149218

PC151511/0001

1/5

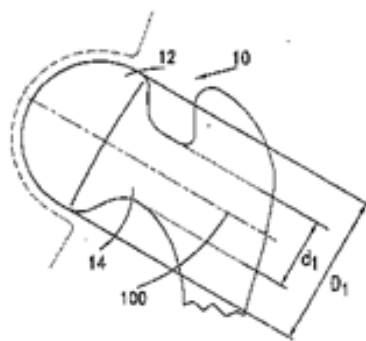


Fig. 1

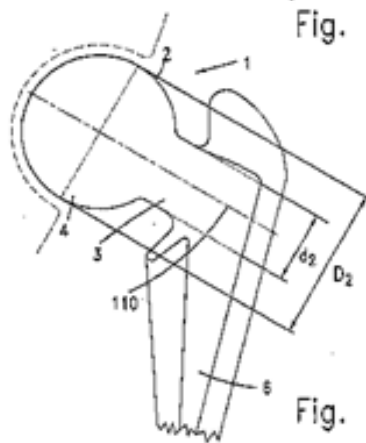


Fig. 2

25) Family number: 17173303 (WO9516401A1)

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Title: UNILATERAL FIXATION DEVICE
Priority: DE19930019433U 19931217 DE19945006897 19940620 WO1994EP02010 19940620
Family:

Publication number	Publication date	Application number	Application date
AT170728 E	19980915	AT19940919645T	19940620
DE59406897 D1	19981015	DE19945006897	19940620
DE9319433 U1	19940210	DE19930019433U	19931217
EP0734232 A1	19961002	EP19940919645	19940620
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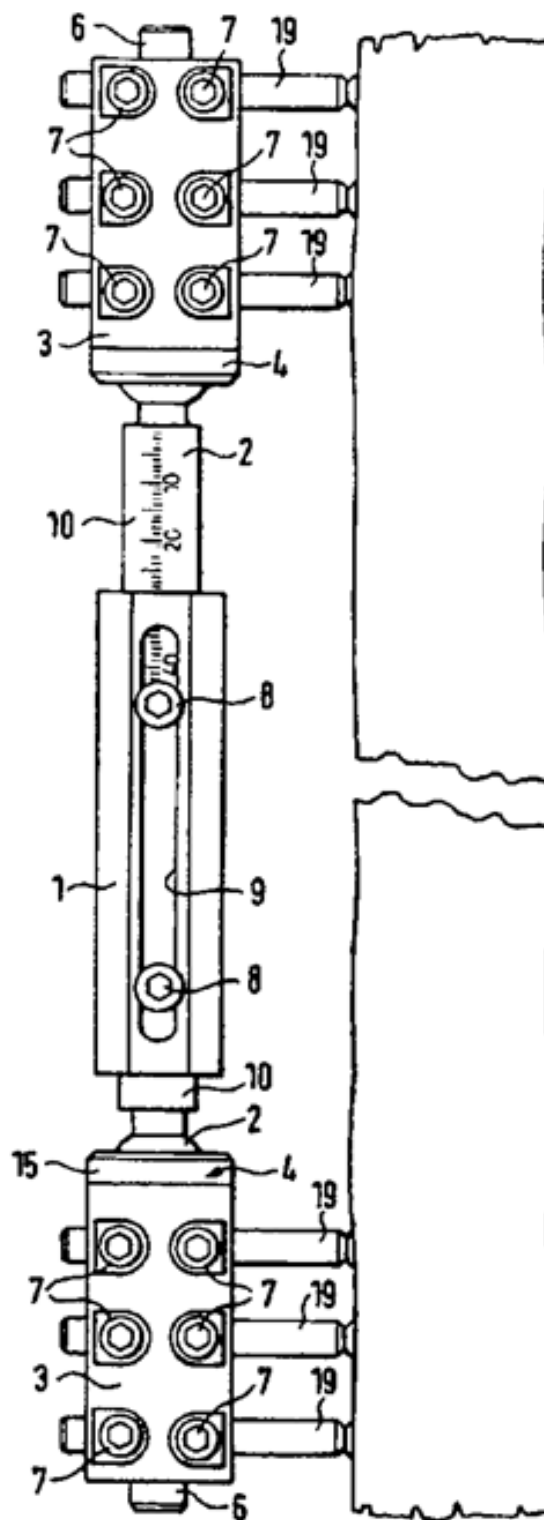
Probable Assignee: ENDOCARE AG
Assignee(s):^(std): ENDOCARE AG ; RECKERT LOTHAR
Assignee(s): RECKERT LOTHAR 29587 NATENDORF DE
Inventor(s):^(std): RECKERT LOTHAR
Inventor(s): RECKERT LOTHAR 29587 NATENDORF DE
Designated states: AT BE CH CN DE DK ES FI FR GB GR IE IT JP LI LU MC NL NO PT SE US
International class [A61B17/60 A61B17/64](#) ^(Advanced/Invention)
(IPC 8-9):
International class [A61B17/60 F16B2/00](#)
(IPC 1-7):
CPC: [A61B17/6458](#)
European class: [A61B17/64K](#)
[Classification Explorer](#)

Cited documents: WO9101201 A1, EP0424292 A2, EP0315215 A2, DE9319433 U, DE3807346 C1,
Forward Citations: WO9959489, WO9716128, WO9516401, WO14039205, WO12010933, WO0061020,
 US9301782, US8696668, US7931650, US7731738, US7588571, US7575575,
 US7507240, US6500177, EP2464297, EP2464297, EP0807419, DE102010032465,
 CN104619276, CN104619276,

Abstract:

An unilateral fixation device for repositioning and stabilising broken bones from the outside has a central part of variable length whose ends are each linked to a clamping jaw (3) by a socket joint. The clamping jaws (3) have several bores (7) that extend transversely to the longitudinal axis for receiving and fixing bone nails (19). The central part consists in a first embodiment of a hollow section, in particular an elongated sleeve (1) with an axial slot (9). A bar-shaped element, in particular a rounded bar (10), is mounted in the sleeve (1) in an axially movable manner at both ends. The outwardly protruding ends of the rounded bars comprise part of the socket joint, in particular its ball-shaped head (2). In addition, the rounded bars (10) may be blocked by screws (8) that extend through the slot (9). All parts of the fixation device, in particular the socket joint, preferably consist of a high strength titanium alloy.

PatBase - W09516401_A1



26) Family number: 40968377 (US2008312702A)

© PatBase

Title: REFERENCE PIN**Priority:** CH20050000195 20050406 EP20060705429 20060405 WO2005CH00195 20050406
WO2006CH00195 20060405**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2006230883 AA</u>	20061012	AU20060230883	20060405
<u>BRPI0608955 A2</u>	20100217	BR2006PI08955	20060405
<u>CA2603930 AA</u>	20071005	CA20062603930	20060405
<u>CA2603930 C</u>	20140311	CA20062603930	20060405
<u>CN101150991 A</u>	20080326	CN200680010207	20060405
<u>CN101150991 B</u>	20100915	CN200680010207	20060405
<u>DE602006029637 D1</u>	20120719	DE200660029637T	20060405
<u>EP1865856 A2</u>	20071219	EP20060705429	20060405
<u>EP1865856 B1</u>	20120523	EP20060705429	20060405
<u>JP2008534184 T2</u>	20080828	JP20080504600T	20060405
<u>JP4977687 B2</u>	20120718	JP20080504600T	20060405
<u>KR101292915 B1</u>	20130802	KR20077023114	20060405
<u>KR20080004490 A</u>	20080109	KR20077023114	20060405
<u>NZ561949 A</u>	20090925	NZ20060561949	20060405
<u>US2008312702 AA</u>	20081218	US20060910481	20060405
<u>US8257409 BB</u>	20120904	US20060910481	20060405
<u>WO06105673 A1</u>	20061012	WO2005CH00195	20050406
<u>WO06105685 A2</u>	20061012	WO2006CH00195	20060405
<u>WO06105685 A3</u>	20070308	WO2006CH00195	20060405
<u>ZA200708131 A</u>	20081231	ZA20070008131	20060921

Probable Assignee: SYNTHES USA LLC**Assignee(s):**^(std): BUETTLER MARKUS ; SYNTHES AG ; SENN PETER ; SCHLIENGER ANDRE ;
SYNTHES GMBH ; SYNTHES HOLDING AG ; SYNTHES USA ; SYNTHES USA LLC**Assignee(s):** SYNTHES (USA) ; SYNTHES CHUR AG ; SYNTHES ; SYNTHES AG CHUR ; SYNTHES
U S A ; DEPUY SPINE LLC ; DEPUY SYNTHES PRODUCTS LLC ; HAND
INNOVATIONS LLC**Inventor(s):**^(std): BUETTLER MARKUS ; SCHLIENGER ANDRE ; SENN PETER ; PETER SENN ;
MARKUS BUETTLER ; ANDRE SCHLIENGER**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; BCF LLP; SPARING ROEHL HENSELER;
LUSUARDI WERTHER; FAY KAPLUN AND MARCIN LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV
LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL
PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US
UZ VC VN YU ZA ZM ZW**International class**
^(IPC 8-9): A61B17/04 A61B17/17 A61B17/56 A61B17/58 A61B17/72 A61B19/00 (Advanced/Invention);
A61B17/56 A61B17/58 A61B17/72 A61B19/00 (Advanced/Non-invention);
A61B17/04 A61B17/16 A61B17/56 A61B17/58 A61B17/68 A61B19/00 (Core/Invention);
A61B19/00 (Core/Non-invention);
A61B (Subclass/Invention)**International class**
^(IPC 1-7): A61B17/17**CPC:** A61B2090/3925 A61B2090/397 A61B2090/3983 A61B17/1725 A61B17/1703
A61B17/1735 A61B17/60 A61B17/72

European class: A61B17/17B A61B17/17M A61B17/17R A61B17/60 K61B17/17B K61B17/72 K61B19/54F K61B19/54R K61B19/54T

US class: 606/326 606/326S 606/329 606/329P 606/96

Classification Explorer

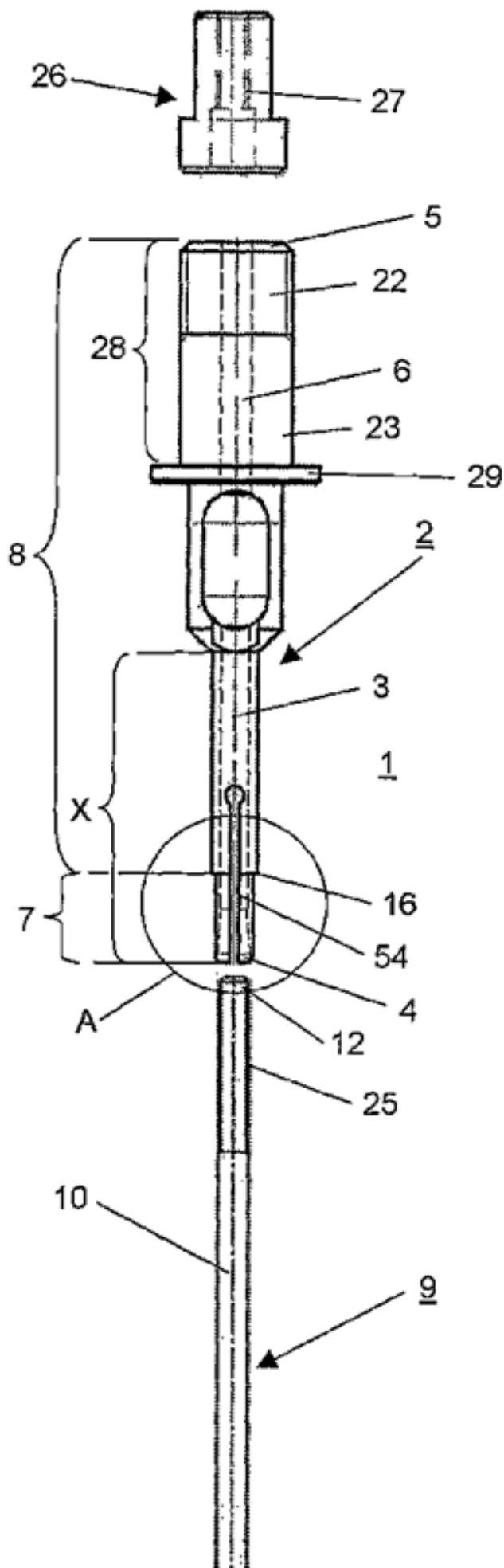
Cited documents: WO0219931 A1, WO0156487 A1, US7942875 BB, US7887545 BB, US7588577 BB, US7549994 BB, US6656189 BA, US6379364 BA, US6039742 A, US5766179 A, US5665086 A, US5478343 A, US5474561 A, US5411503 A, US5234434 A, US4621628 A, US4541424 A, US2044257 A, US2004260290 AA, US2003018335 AA, JP2004507332 T2, JP2000513603 T2, DE4238582 A1, DE19802751 A1,

Forward Citations: WO16083355, US9597129, US9517092, US9474557, US9155582, US8668695, US2014107708, DE102011001212, CN104997557, CN103705295,

Abstract:

Source: US2008312702A Described is a reference pin for use during a bone fracture treatment. The pin may include a longitudinal shaft and a spreading member. The longitudinal shaft with a longitudinal axis, a front end, a rear end and a through hole penetrating the shaft from the front end to the rear end. The shaft includes a rear portion adjoining the rear end and an expandable front portion adjoining the front end. The expandable front portion is insertable in a distal locking hole of an intramedullary nail and reversibly expandable transversely to the longitudinal axis. The spreading member is moveably located in the through hole and apt for reversibly expanding the expandable front end portion. The expandable front portion is reversibly expandable within a range between 0.3 mm and 0.5 mm.

PatBase - W006105685_A3



0) WO04026156A1 – STABLE DYNAMIC AXIAL FIXATOR–II (HOLYFIX) FIXAT...

27) Family number: 30492668 (WO04026156A1)

© PatBase

Title: STABLE DYNAMIC AXIAL FIXATOR–II (HOLYFIX)
Priority: TR20020002203 20020918 TR20030001347 20030819 WO2003TR00075 20030915
Family:

Publication number	Publication date	Application number	Application date
AU2003265217 AA	20040408	AU20030265217	20030915
TR200202203 A2	20040421	TR20020002203	20020918
TR200301347 A2	20050321	TR20030001347	20030819
WO04026156 A1	20040401	WO2003TR00075	20030915

Probable Assignee: KUTLU HACI

Assignee(s):^(std): KUTLU HACI

Assignee(s): HACI KUTLU

Inventor(s):^(std): KUTLU HACI

Inventor(s): HACI KUTLU

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
^(IPC 8–9): [A61B17/64 A61B17/66 A61F5/00](#) (Advanced/Invention);
[A61B17/60 A61F5/00](#) (Core/Invention);
[A61F](#) (Subclass/Invention)

International class
^(IPC 1–7): [A61B17/64 A61F A61F5/00](#)

CPC: [A61B17/6458 A61B17/6491 A61B17/66](#)

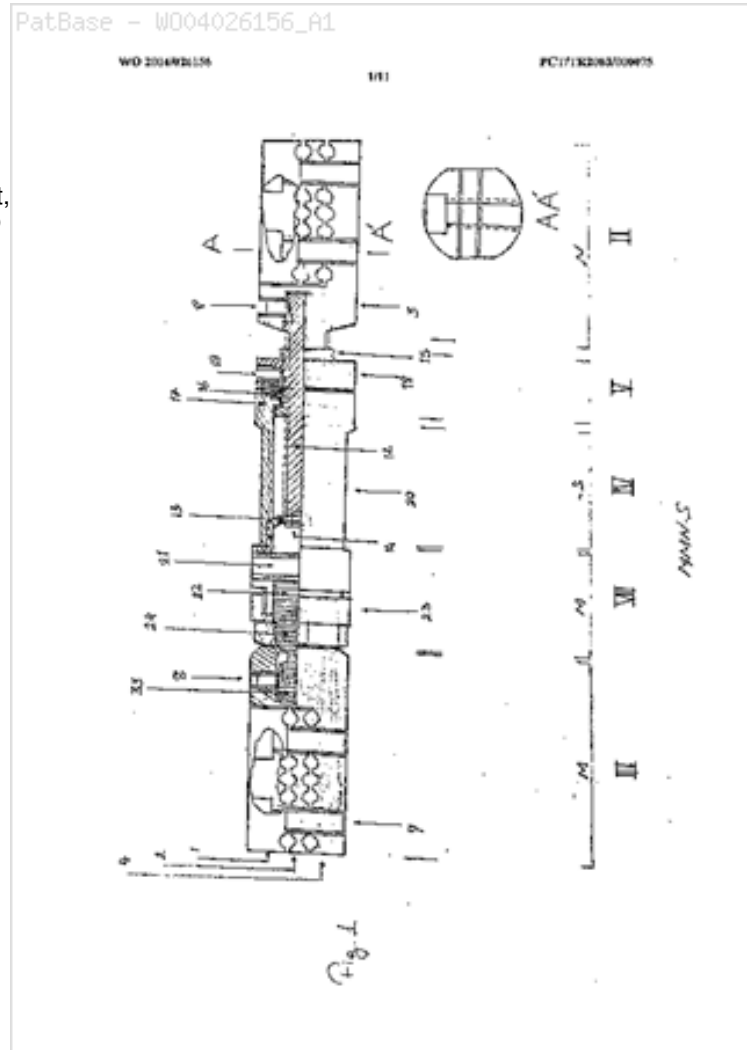
European class: [A61B17/64K A61B17/66 K61B17/64P](#)

[Classification Explorer](#)

Cited documents: WO9925265 A1, WO9402078 A1, WO0128441 A1, US6428540 BA, US5026372 A, US4488542 A, US4312336 A, TR199701377, FR2557933 A1, EP1021992 A2, EP0628289 A1, DE4139700 A1,

Abstract:

Holyfix is a highly modular system. By combination of the parts different types of monoaxial, hybrid, circular, bar and combinations of these types of fixator can be constructed specifically according to the pathology with different functions. The system is composed of a distraction-compression unit, body connectors and angled connector, clamp types that can be selected as required, a modular different types of cancelable ball-socket type and conic type of joint, holybar, ring and clips (holyring) system for ring fixation, pins with roughened surfaces (holypin) for soft tissue integration to prevent infection, and guide system (holyguid) for x-ray free pin insertion.



0) US2014276822A – RATCHETING STRUT

28) Family number: 57428755 (US2014276822A)

© PatBase

Title: RATCHETING STRUT
Priority: US20130826735 20130314

Family:	Publication number	Publication date	Application number	Application date
	<u>US2014276822 AA</u>	20140918	US20130826735	20130314

Probable Assignee: BIOMET MFG LLC

Assignee(s):^(std): CRESINA JEFFERY T ; LESTER MARK

Assignee(s): BIOMET MFG LLC

Inventor(s):^(std): CRESINA JEFFERY T ; LESTER MARK

International class A61B17/64 (Advanced/Invention)
(IPC 8-9):

CPC: A61B17/6416 A61B17/66

US class: 606/57

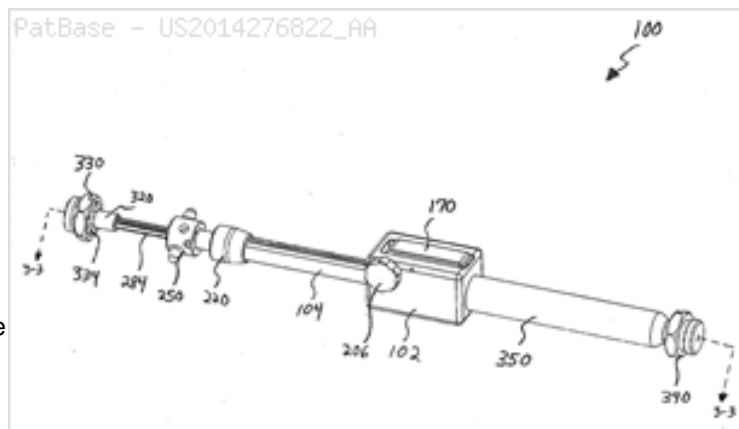
[Classification Explorer](#)

Cited documents: US6451019 BA, US5725526 A, US5601551 A, US4308863 A, US2238869 A, US2010312243 AA, US2003149378 AA, US2002193666 AA,

Forward Citations: US9463045, US9427261, US9393045, US2016338746, US2016030088, US2015080892, US2013338713,

Abstract:

Source: US2014276822A A ratcheting strut comprising: (a) a ratchet box including a through passage; (b) a first tube sized to extend at least partially through the passage, the first tube including teeth that engage corresponding teeth of the ratchet box; (c) a second tube mounted to the ratchet box in parallel with the first tube, the second tube operatively coupled to a second fixation adapter; and, (d) a threaded rod operatively coupled to a nut and a first fixation adapter, the threaded rod repositionably mounted to the first tube, where the nut is operatively coupled and repositionable with respect to the first tube.



29) Family number: 4648667 (US5026372A)

© PatBase

Title: Fixation device for the external adjusting of bone fragments

Priority: DE19873737617 19871105 DE19883837228 19881102 EP19880118531 19881107
EP19880118531 19881107 EP19880118531 19881107 DE19883878155 19881107

Family:	Publication number	Publication date	Application number	Application date
	<u>AT85200 E</u>	19930215	AT19880118531T	19881107
	<u>DE3737617 A1</u>	19890601	DE19873737617	19871105
	<u>DE3837228 A1</u>	19900503	DE19883837228	19881102
	<u>DE3878155 D1</u>	19930318	DE19883878155	19881107
	<u>EP0315215 A2</u>	19890510	EP19880118531	19881107
	<u>EP0315215 A3</u>	19891206	EP19880118531	19881107
	<u>EP0315215 B1</u>	19930203	EP19880118531	19881107
	<u>ES2037799 T3</u>	19930701	ES19880118531T	19881107
	<u>US5026372 A</u>	19910625	US19880266809	19881103

Probable Assignee: STURTZKOPF ROBERT

Assignee(s):^(std): STEDTFELD HANS WERNER ; STEDTFELD HANS WERNER DR ; STURTZKOPF ROBERT ; STURTZKOPF ROBERT DR

Assignee(s): STURTZKOPF ROBERT DR 8000 MUENCHEN DE ; STEDTFELD HANS WERNER DR 8500 NUERNBERG DE

Inventor(s):^(std): STEDTFELD HANS WERNER ; STEDTFELD HANS WERNER DR ; STURTZKOPF ROBERT ; STURTZKOPF ROBERT DR

Inventor(s): STURTZKOPF ROBERT DR 8000 MUENCHEN DE ; STEDTFELD HANS WERNER DR 8500 NUERNBERG DE

Designated states: AT CH DE ES FR GB IT LI NL SE

International class A61B17/60 A61B17/64 (Advanced/Invention);
(IPC 8-9): A61B17/66 (Advanced/Non-invention)

International class A61B17/60 A61F5/04
(IPC 1-7):

CPC: A61B17/6458 A61B17/6491 A61B17/66

European class: A61B17/64K A61B17/64P K61B17/66

US class: 606/105 606/54 606/59

[Classification Explorer](#)

Cited documents: WO8803395 A1, US4745913 A, US4714076 A, US4628922 A, US4621627 A, US4600000 A, US4523585 A, US4102339 A, US3709219 A, FR1569090 A, EP0011258 B1, DE3543042 A1, DE11258 A,

Forward Citations: WO9904714, WO9516401, WO9406364, WO9402078, WO04026156, US9655648, US9610103, US9468466, US9398957, US9278004, US9125746, US9114016, US9060867, US9044270, US9034049, US9005298, US8894714, US8845724, US8801795, US8758343, US8709090, US8679178, US8597362, US8523948, US8409281, US8382757, US8192449, US8123805, US8100967, US8088166, US7763020, US7678147, US7655041, US7611540, US7147640, US6171309, US6171308, US6162224, US6036691, US5976125, US5746763, US5743898, US5662650, US5405347, US5376090, US5358504, US5342360, US5320622, US5209750, US2014276819, US2011202138, US2011196371, US2011137415, US2011093080, US2010145449, US2010145336, US2010137996, US2010121457, US2010114322, US2010106248, US2010106247, US2009248026, US2008275567, US2008275565, US2008275561, US2008275560, US2008275559, US2008275558, US2008275557, US2008275556, US2008275555, US2007123916, US2005261680, TR27104, FR2679765, EP0880942,

Abstract:

Source: US5026372A The invention relates to a fixation device for externally adjusting bone fragments. A pair of members anchored to the bone fragments are connected to each other to allow a longitudinal displacement of the fixing unit. According to the invention the connection of the members is defined by a hinge configuration which allows guiding and aligning both members when the fixing unit is released for stimulating the healing process. A bracket is mounted on a parallelogram hinge to generate a pressure or, respectively, a tension force to move the bone fragments apart or draw them together. According to the invention the hinge configuration comprises telescopic members centered by spring means.

PatBase - US5026372_A

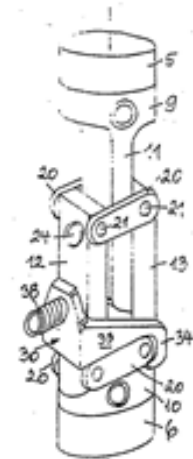
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FIG. 3

0) WO9619943A1 – MEDICAL INSTRUMENT FOR REDUCING OR RECONSTRUCTI...

30) Family number: 8675447 (WO9619943A1)

© PatBase

Title: MEDICAL INSTRUMENT FOR REDUCING OR RECONSTRUCTING FRACTURED OR DEFORMED FACIAL BONES

Priority: KR19940038155 19941228 WO1995KR00174 19951227

Family:	Publication number	Publication date	Application number	Application date
	AU199643168 A1	19960719	AU19960043168	19951227
	KR0139944 B1	19980615	KR19940038155	19941228
	KR19960020961 A	19960718	KR19940038155	19941228
	WO9619943 A1	19960704	WO1995KR00174	19951227

Probable Assignee: KIM YONG OOCK

Assignee(s):^(std) KIM YONG OOCK ; KIM YONG WOOK ; YONG OOCK KIM

Inventor(s):^(std) KIM YONG OOCK ; KIM YONG WOOK

Inventor(s): YONG OOCK KIM

Designated states: AT AU BE BR CA CH CN DE DK ES FR GB GR IE IT JP LU MC NL PT RU SE US

International class
(IPC 8-9): [A61B17/64](#) [A61B17/66](#) [A61F13/12](#) (Advanced/Invention);
[A61B17/66](#) [A61F13/12](#) (Advanced/Non-invention);
[A61B17/60](#) [A61F13/12](#) (Core/Invention)

International class
(IPC 1-7): [A61B17/60](#) [A61F13/12](#)

CPC: [A61B17/6433](#) [A61B17/66](#)

European class: [A61B17/64F](#) [K61B17/66](#)

[Classification Explorer](#)

Cited documents: US3072118 A, US2681058 A,

Forward Citations: US8382757, US7261713, EP1118309,

A medical instrument for reducing or reconstructing fractured or congenitally and posttraumatically deformed facial bones three dimensionally is disclosed. The above medical instrument tightly attaches to a human head outside the skin in order to reduce or reconstruct a fractured or deformed facial bone. The medical instrument thus neither requires complex surgical operations nor the use of foreign substances during the reduction or reconstruction of the fractured or deformed facial bones. Therefore, the medical instrument leaves no scar on the skin, causes neither infection nor ill effects due to the existence of foreign substances. The instrument comprises means (1) for tightly attaching the instrument to a cranial bone (51) said attaching means (1) being screwed to a mastoid area of temporal bone (52) of cranium; means (3) for holding displaced bone segments of a fractured or deformed facial bone thus reducing or reconstructing the facial bone, said holding means (3) being screwed to the displaced bone segments in order to hold the bone segments in their original places thus reducing or reconstructing the facial bone three dimensionally; and means (2) for connecting the attaching and holding means (1, 3) together and adjusting the position of said holding means (3) in order to arrange the holding means (3) on the skin above the bone segments of the facial bone.



31) Family number: 1861916 (GB2101488A)

© PatBase

Title: External fixation frames and fixing pins therefor

Priority: GB19810016918 19810603 GB19820015658 19820528

Family:	Publication number	Publication date	Application number	Application date
	GB2101488 A1	19830119	GB19820015658	19820528
	GB2101488 B2	19841010	GB19820015658	19820528

Probable Assignee: RIZK SHOUKRY ABDEL MASSEIH

Assignee(s):^(std): RIZK SHOUKRY ABDEL MASSEIH

Assignee(s): SHOUKRY ABDEL MASSEIH RIZK

Inventor(s):^(std): RIZK SHOUKRY ABDEL MASSEIH

Inventor(s): SHOUKRY ABDEL MASSEIH RIZK

International class
(IPC 8-9): [A61B17/64](#) (Advanced/Invention);
[A61B17/60](#) (Core/Invention)

International class
(IPC 1-7): [A61B17/18](#) [A61F5/04](#)

CPC: [A61B17/6433](#) [A61B17/645](#)

European class: [A61B17/64F](#) [A61B17/64H](#)

[Classification Explorer](#)

Forward Citations: WO9748347, WO9406363, WO9309726, WO16193154, WO14122264, US6159210, US5797908, US5643268, US5443465, US5443464, GB2454961, AU673004,

Abstract:

Source: GB2101488A A fixation frame (12) and associated pins (22) for use in fracture surgery, are arranged so that the pins do not transfix the bone. The ends of the pins have a tip which is located in a previously drilled opening in the bone cortex, and a shoulder engages the bone outer wall to prevent penetration of the pin into the central bone tissue. The pins are secured in pin holders 20 which are also used to locate drill guides, the drill guides being used to accurately drill and form the pin openings.

PatBase - GB2101488_A1

2101488

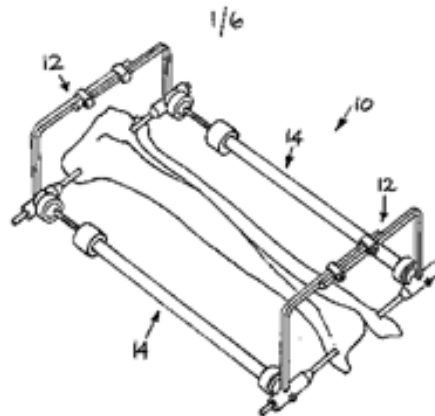


FIG. 1

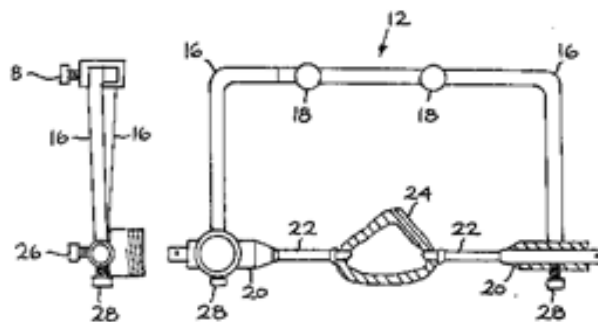


FIG. 2

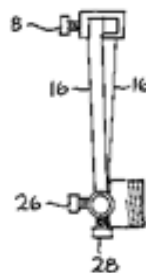


FIG. 3

32) Family number: 4907886 (US4554915A)

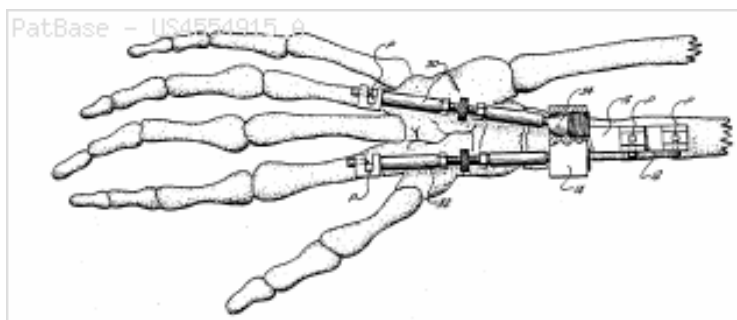
© PatBase

Title: Bone fixation frame**Priority:** US19830473199 19830308**Family:**

Publication number	Publication date	Application number	Application date
<u>US4554915 A</u>	19851126	US19830473199	19830308

Probable Assignee: SMITH AND NEPHEW RICHARDS INC**Assignee(s):^(std):** RICHARDS MEDICAL CO**Assignee(s):** RICHARDS MEDICAL COMPANY ; SMITH AND NEPHEW RICHARDS INC**Inventor(s):^(std):** BRUMFIELD DAVID L**International class** A61B17/64 (Advanced/Invention);
A61B17/66 (Advanced/Non-invention)**International class** A61F5/04
(IPC 1-7):**CPC:** A61B17/6425 A61B17/66**European class:** A61B17/64D K61B17/66**US class:** 128/92A 128/92R 606/54[Classification Explorer](#)**Cited documents:** US4312236 A, US4299212 A, US4135505 A, US4127119 A, US4106128 A, US3909853 A, US2702031 A, US2346346 A, US2238870 A, US2238869 A, US1789060 A, SU194247 T,**Forward Citations:** WO9716128, WO9111151, WO8905126, WO08075097, WO0053109, USRE40914, USRE34985, US9220533, US9101398, US9044271, US8945128, US8834467, US8628530, US8608741, US8377061, US8366710, US8333766, US8262657, US8192434, US8123747, US8057474, US7731738, US7717916, US7588571, US7575575, US7507240, US7291148, US6932086, US6585736, US6530925, US6428540, US6245071, US6197027, US6171308, US6123704, US6030386, US6024745, US6010501, US5976125, US5968043, US5951556, US5897555, US5766173, US5743898, US5741251, US5681309, US5662650, US5209750, US4998935, US4988349, US4978347, US4968316, US4936843, US4919119, US4895141, US4782842, US4628921, US4628919, US2016022315, US2015250502, US2012143191, US2011066153, US2010234844, US2010087819, US2010076436, US2009287212, US2009275944, US2009198234, US2004039394, GR88100814, GR880100814, FR2665353, EP0902657, EP0380674, CN104837422,**Abstract:**

Source: US4554915A One external fixation frame, for immobilizing bone segments adjacent a fracture or joint, includes a fixation block with a pair of arms extending from the block across the fracture or joint. Another embodiment has but a single arm while a third embodiment includes one or two arms projecting from each end of the block. A ball and socket joint connects each arm to the block for universal movement thereabout. Length adjustment is accomplished via a turnbuckle formed in each arm. The outer end of each arm includes a slot for connecting to pins inserted in the respective bone segments. Set screws are provided for tightening the ball and socket joints and for holding the pins in the slots.



- **search:** SS3 FT=external and fixat* and (bone or fracture) and (ball or sphere) (Results 805)
- **search:** SS4 FT=external and fixat* and (bone or fracture) and (ball or sphere) and arm (Results 144)

- List: SS4 1–50 (FT=external and fixat* and (bone or fracture) and (ball or sphere) and arm) (Results 144)

0) US2005131409A – LINKED BILATERAL SPINAL FACET IMPLANTS AND METH...

1) Family number: 33397877 (US2005131409A)

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Title: LINKED BILATERAL SPINAL FACET IMPLANTS AND METHODS OF USE

Priority:

EP20060739716	20060327	EP20080705833	20080110	US20030528726P	20031210
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Family:

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Probable Assignee: GLOBUS MEDICAL INC

Assignee(s):^(std): CHERVITZ ALAN ; CHORVITZ ALAN ; DEVER JOEL ; EMEDELAWARE 2 LLC ; FACET SOLUTIONS ; FACET SOLUTIONS INC ; FACET SOLUTIONS INC ; FALLIN T W ; FAUCET SOLUTIONS INC ; GMEDELAWARE 2 LLC ; FALLIN T WADE ; FAUTH ANDREW R ; GERBEC DANIEL E ; GME DELAWARE 2 LLC ; GLOBUS MEDICAL INC ; GMEDELWARE 2 LLC ; HOY ROBERT W ; JUSTIN DANIEL F ; MEIBOS DAVID W ;

HELGERSON JOEL R ; SKINLO DAVID M ; GOBLE E MARLOWE ; MARLOWE GOBLE E ; HEIGERSON JOEL R ; JUSTIN DANILE F ; TRIPLETT DANIEL J

Assignee(s): TRIPLEPOINT CAPITAL LLC ; FACET SOLUTIONS INC LOGAN ; FALLIN T

Inventor(s):^(std): CHERVITZ ALAN ; CHORVITZ ALAN ; FALLIN T W ; FALLIN T WADE ; FAUTH ANDREW R ; GERBEC DANIEL E ; HELGERSON JOEL R ; DEVER JOEL ; HELGERSON JOEL R ; HOY ROBERT W ; JUSTIN DANIEL F ; MEIBOS DAVID W ; TRIPLETT DANIEL J ; SKINLO DAVID M ; JUSTIN DANILE F ; GOBLE E MARLOWE

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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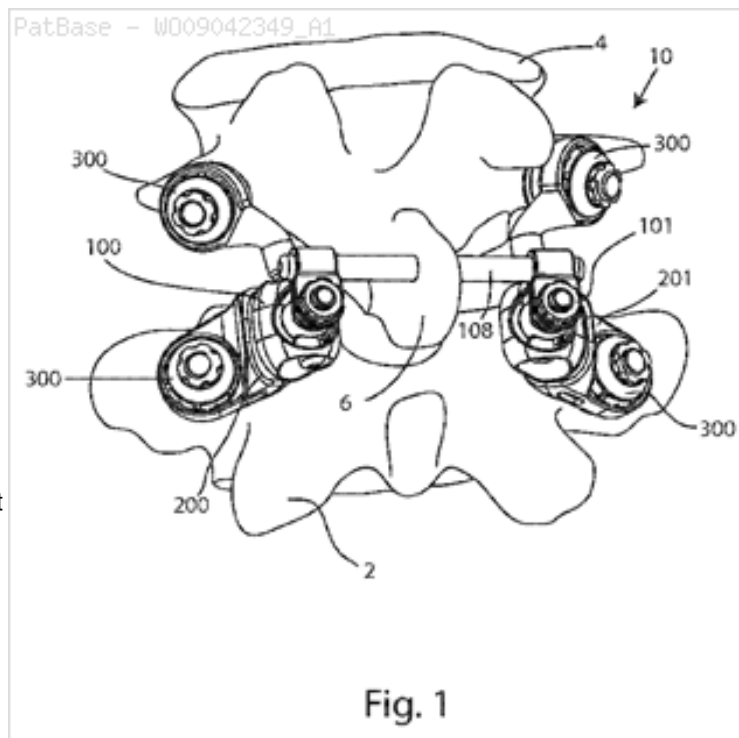
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Abstract:

Source: US2005131409A Superior and/or inferior facets of one or more facet joints may be replaced by superior and/or inferior facet joint prostheses. In one embodiment, a kit of superior or inferior prostheses is provided, in which the prostheses have at least two dimensions that vary among members of the kit independently of each other. Each prosthesis may have a bone engaging surface having a surface that is polyaxially rotatable against a corresponding resection of a vertebra. Each prosthesis may also have an articulating surface shaped such that, after attachment to the spine, the replaced or partially replaced facet joints provide a larger medial-lateral range of motion when the spine is flexed than when the spine is extended. Crosslinks may be used to connect left and right prosthesis together in such a manner that they are stabilized in a position in which they are seated directly against the vertebra.



0) US2005251147A – OPEN WEDGE OSTEOTOMY SYSTEM AND SURGICAL METHOD...

2) Family number: 32394592 (US2005251147A)

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Title: OPEN WEDGE OSTEOTOMY SYSTEM AND SURGICAL METHOD

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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A61F5/00

International class
(IPC 1-7):

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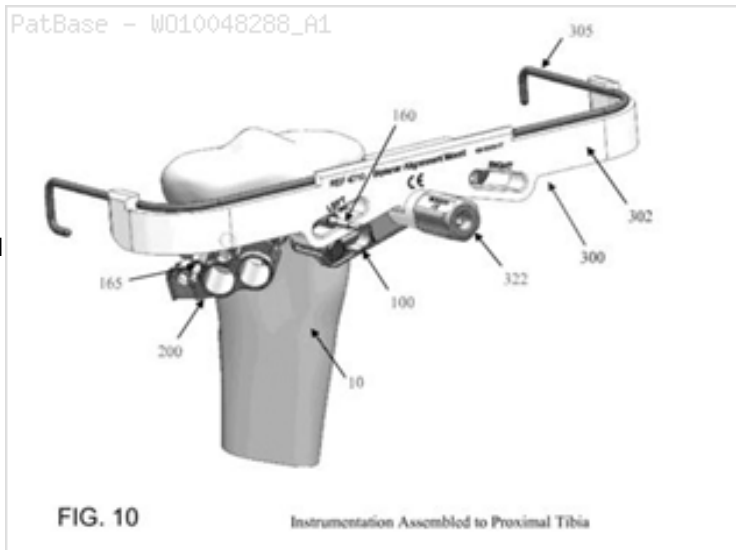
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Abstract:

Source: US2005251147A An osteotomy implant for supporting an open wedge osteotomy, the osteotomy implant comprising: a first component for disposition in a posterior portion of the open wedge osteotomy; a second component for disposition in an anterior portion of the open wedge osteotomy; and a connection device for selectively connecting the first component and the second component to one another.



3) Family number: 32099125 (US2003225344A)

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Title: APPARATUS AND METHOD TO ACCESS THE BONE MARROW FOR ONCOLOGY AND STEM CELL APPLICATIONS

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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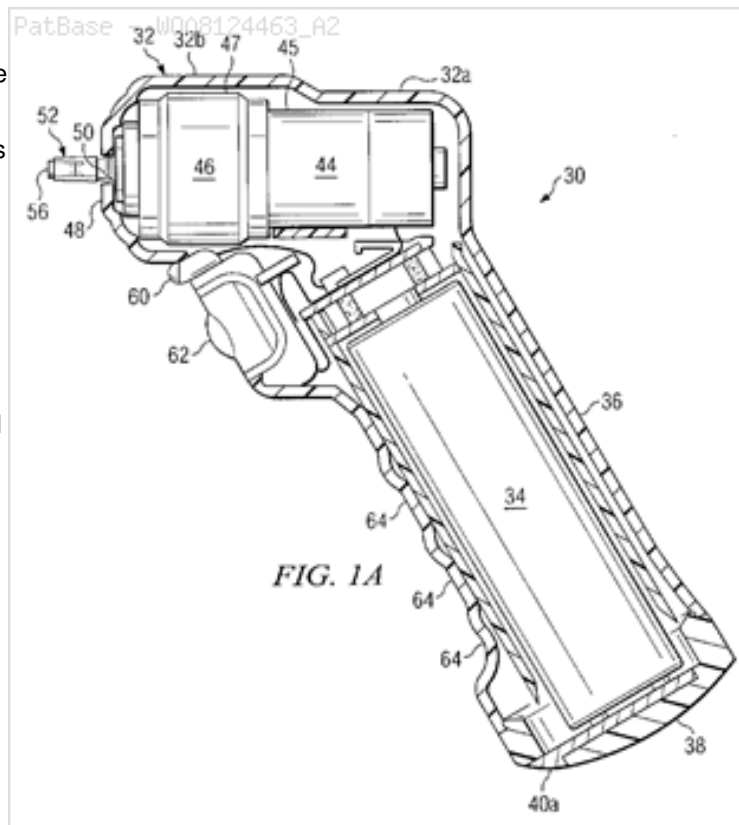
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Abstract:

Source: US2003225344A An apparatus for removing portions of bone marrow from a bone is provided. The apparatus includes a housing and a hollow drive shaft operable to engage a gear assembly. The hollow drive shaft includes a first end operable to penetrate the bone and a second end operable to allow retrieval of portions of bone and bone marrow. The apparatus also includes a removable trocar. The removable trocar includes an inner channel operable to convey portions of bone and bone marrow. The gear assembly is able to engage and rotate the hollow drive shaft. A motor operable to drive the hollow drive shaft into the bone marrow by rotation of the hollow drive shaft and a power supply and associated circuitry operable to power the motor are also included.



4) Family number: 59755891 (US2016091147A)

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Title: LED TUBE LAMP

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Probable Assignee: JIAXING SUPER LIGHTING ELECTRIC APPLIANCE CO LTD

Assignee(s):^(std): JIAXING SUPER LIGHTING ELECTRIC APPLIANCE CO LTD ; JIAXING SUPER LIGHTING ELECTRIC APPLIANCE CO ; JIAXING SUPER LIGHT ELECTRIC APPLIANCE CO LTD ; ZHEJIANG SUPER LIGHTING ELECTRIC APPLIANCE CO LTD ; JIAXING SUPER LIGHTING ELECTRIC APPLIANCE CO LTI ; JIAXING SUPER LIGHTING ELECTRIC APPLIANCE CO LTD

Assignee(s): JIAXING SUPER LIGHTING ELECTRIC APPLIANCE CO ; JIAXING SUPER LIGHTING ELECTRIC APPLIANCE COLTD ; ZHEJIANG SUPER LIGHTING ELECTRIC APPLIANCE CO ; XIONG AIMING ; SUN XIAO ; ZHANG YUEQIANG ; YE QIFENG ; LIU XINTONG ; YANG CHANG ; YAO WENTAO ; XU HONG ; JIAXING SUPER LIGHT ELECTRIC APPLIANCE CO ; CHEN SHAULIANG ; HU CHANGWEI ; HU HECHEN ; JIANG TAO ; JIANG WENJANG ; JIAXING SHAN PO LIGHTING CO LTD

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Inventor(s): YUEQIANG ZHANG ; CHEN ZHONG

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): B23K3/047 C09J11/04 C09J161/06 C09J193/02 C09J193/04 F21K9/23 F21K9/232 F21K9/237 F21K9/238 F21K9/27 F21K9/272 F21K9/275 F21K9/278 F21K9/60 F21K9/65 F21K9/66 F21K9/68 F21K99/00 F21S2/00 F21S4/00 F21S4/24 F21S4/28 F21S9/00 F21V11/00 F21V13/02 F21V15/00 F21V15/015 F21V15/02 F21V17/00 F21V17/08 F21V17/10 F21V17/12 F21V17/16 F21V19/00 F21V19/02 F21V21/00 F21V21/002 F21V21/096 F21V21/22 F21V21/34 F21V23/00 F21V23/02 F21V23/04 F21V23/06 F21V25/00 F21V25/02 F21V25/04 F21V25/10 F21V25/12 F21V29/00 F21V29/503 F21V29/508 F21V29/70 F21V29/71 F21V29/74 F21V29/83 F21V29/85 F21V29/87 F21V29/89 F21V29/90 F21V3/00 F21V3/02 F21V3/04 F21V31/00 F21V5/00 F21V5/08 F21V7/00 F21V7/10 F21V7/20 F21V7/22 F21V9/08 F21Y101/02 F21Y103/00 F21Y103/10 F21Y103/37 F21Y115/10 H01J13/46 H01J17/34 H01J19/78 H01J23/16 H01J29/96 H01J7/44 H01K1/62 H01L33/60 H02H3/16 H05B33/08 H05B37/00 H05B37/02 H05B39/00 H05B41/00 H05B41/14 H05K1/02 H05K1/11 H05K1/18 H05K3/34 (Advanced/Invention); F21K9/278 F21V17/10 F21V23/00 F21V23/02 F21V29/83 F21V7/00 F21Y101/00 F21Y101/02 F21Y103/00 F21Y103/10 F21Y103/37 F21Y115/10 H01L33/20 H01L33/48 H01R11/30 H01R13/62 (Advanced/Non-invention); F21S F21V (Subclass/Invention); F21Y (Subclass/Non-invention)

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US class: 1/1 315/119 315/121 315/123 315/127 315/200R 315/205 362/217.01 362/217.02 362/217.05 362/217.17 362/218 362/221 362/222 362/223

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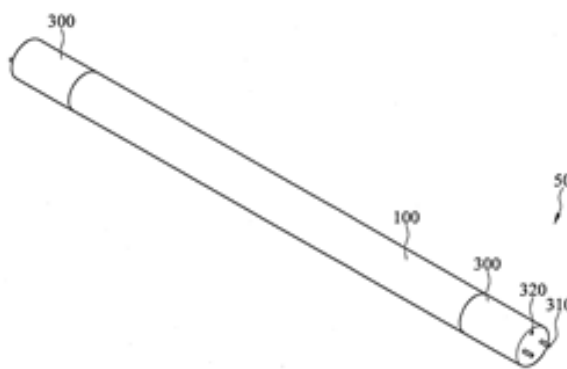
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Forward Citations: WO16086901, WO16070824, USD785820, US9629216, US9629211, US9625137, US9618168, US9618166, US9611984, US9609711, US9587817, US9466776, US2017094736, US2017067627, US2016309550, US2016270184, US2016270165, US2016270164, US2015382416, GB2544211, GB2542255, DE202015006667, DE202015006645, CN104832813,

Abstract:

Source: US2016091147A A light-emitting diode (LED) tube lamp comprises a lamp tube, a first rectifying circuit, a filtering circuit and an LED driving module. The lamp tube has a first pin and a second pin for receiving an external driving signal. The first rectifying circuit is coupled to the first and second pins, for rectifying the external driving signal to produce a rectified signal. The filtering circuit is coupled to the first rectifying circuit, for filtering the rectified signal to produce a filtered signal. The LED driving module is coupled to the filtering circuit to receive the filtered signal for emitting light. Wherein, the filtering circuit includes a capacitor and an inductor connected in parallel and between one of the first and second pins and the first rectifying circuit, and the parallel-connected capacitor and inductor are configured for presenting a peak equivalent impedance to the external driving signal at a specific frequency.

PatBase - W017016399_A1

**FIG.1**

5) Family number: 43784492 (US2009245553A)

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Title: ALTERNATIVE MASS ARRANGEMENTS FOR BONE CONDUCTION DEVICES

Priority:

US20080041185	20080331	US20080041185P	20080331	US20080167796	20080703
US20080167668	20080703	US20080167728	20080703	US20080167529	20080707
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: COCHLEAR LTD

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Assignee(s): COCHLEAR LIMITED

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Agent(s): GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIETAET; CONNOLLY BOVE LODGE AND HUTZ LLP; KILPATRICK TOWNSEND AND STOCKTON LLP; K AND L GATES LLP; HAUPTMAN HAM LLP; COCHLEAR LIMITED; VERGA MICHAEL G ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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US class: 128/898 128/898S 29/896.21 310/328 310/354 381/150 381/151 381/151P 381/173 381/312 381/326 381/326P 381/326S 381/328 381/380 381/418 600/25 600/25P 600/25S 606/280 606/280S 606/286 606/286S 606/300 606/300P 606/300S 606/60 606/60P 607/137 607/137S 607/55 607/55S 607/57 607/57P 623/10 623/10P

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Abstract:

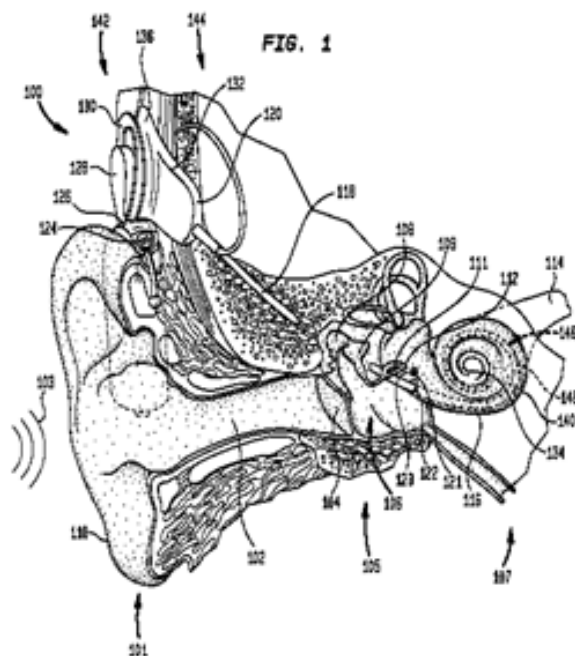
Source: US2009245553A A bone conduction device, comprising: a sound input element configured to receive an acoustic sound signal; one or more functional components, wherein at least one of said one or more functional components is an electronics module configured to generate an electrical signal representing said acoustic sound signal; and a transducer configured to generate motion of a mass component based on said electrical signal so as to generate one or more mechanical forces resulting in one or more of motion and vibration of a recipient's skull thereby causing sound perception, wherein said mass component comprises at least one of said one or more functional components.

PatBase - W009124042_A2

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6) Family number: 32843968 (US2006084982A)

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Title: SYSTEMS AND METHODS FOR POSTERIOR DYNAMIC STABILIZATION OF THE SPINE

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Family:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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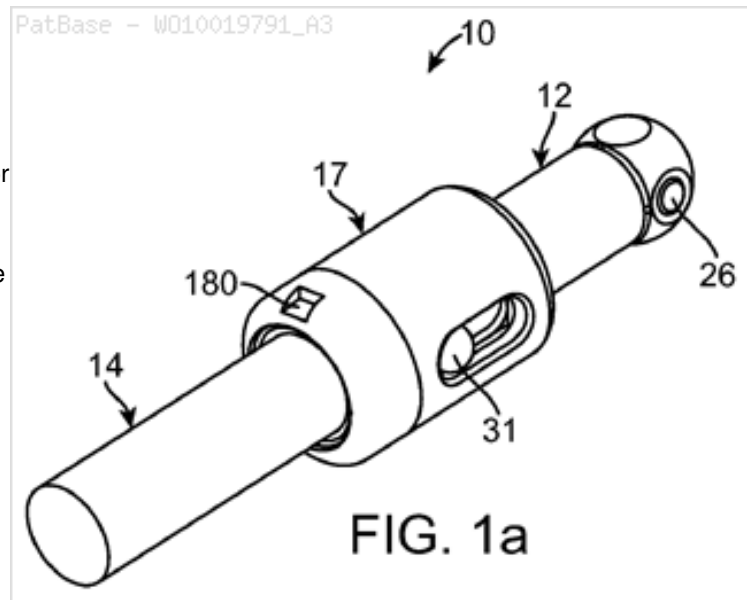
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Abstract:

Source: US2006084982A Systems and devices for dynamically stabilizing the spine are provided. The systems include a superior component for attachment to a superior vertebra of a spinal motion segment and an inferior component for attachment to an inferior vertebral of a spinal motion segment. The interconnection between the two components enables the spinal motion segment to move in a manner that mimics the natural motion of the spinal motion segment. Methods are also provided for stabilizing the spine and for implanting the subject systems.



0) US2009118768A – ELBOW FRACTURE FIXATION SYSTEM

7) Family number: 43215633 (US2009118768A)

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Title: ELBOW FRACTURE FIXATION SYSTEM

Priority:

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Family:

Publication number	Publication date	Application number	Application date
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<u>WO09058960 A3</u>	20090806	WO2008US81728	20081030

Probable Assignee: BIOMET CV

Assignee(s):^(std): AVUTHU SRAVANTHI ; BIOMET C V ; BIOMET CV ; DEPUY PRODUCTS ; DEPUY PRODUCTS INC ; SIXTO JR ROBERT ; STEINMANN SCOTT ; WICH MICHAEL ; KORTENBACH JUERGEN A ; THOMAS KYLE B ; FRANCESE JOSE LUIS ; SANDERS ROY

Assignee(s): SIXTO ROBERT JR ; DEPUY PRODUCTS INC WARSAW

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Agent(s): CALLINANS; FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; BOEHMERT AND BOEHMERT ANWALTSPARTNERSCHAFT MBB PATENTANWALTE RECHTSANWALTE; HASELTINE LAKE LLP; VENNEN SHIPLEY LLP; BELCHER SIMON JAMES; GILES ASHLEY SIMON; CARVAJAL Y ISABEL; GORDON AND JACOBSON PC; JOHNSON PHILIP S ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A61B17/04 A61B17/17 A61B17/58 A61B17/68 A61B17/70 A61B17/80 A61B17/86
A61B17/88 A61B19/00 B25B27/02 B25B27/06 (Advanced/Invention);
A61B17/04 A61B17/68 A61B17/70 A61B19/00 (Core/Invention)

CPC:

A61B17/17 A61B17/8863 A61B17/80 A61B17/1739 A61B17/1728 A61B17/8061
A61B17/8085 A61B17/809 A61B17/864 B25B27/026 B25B27/064 Y10S606/902

European class: A61B17/80D6 A61B17/80F A61B17/80H A61B17/80P B25B27/02C B25B27/06C
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K61B17/88F

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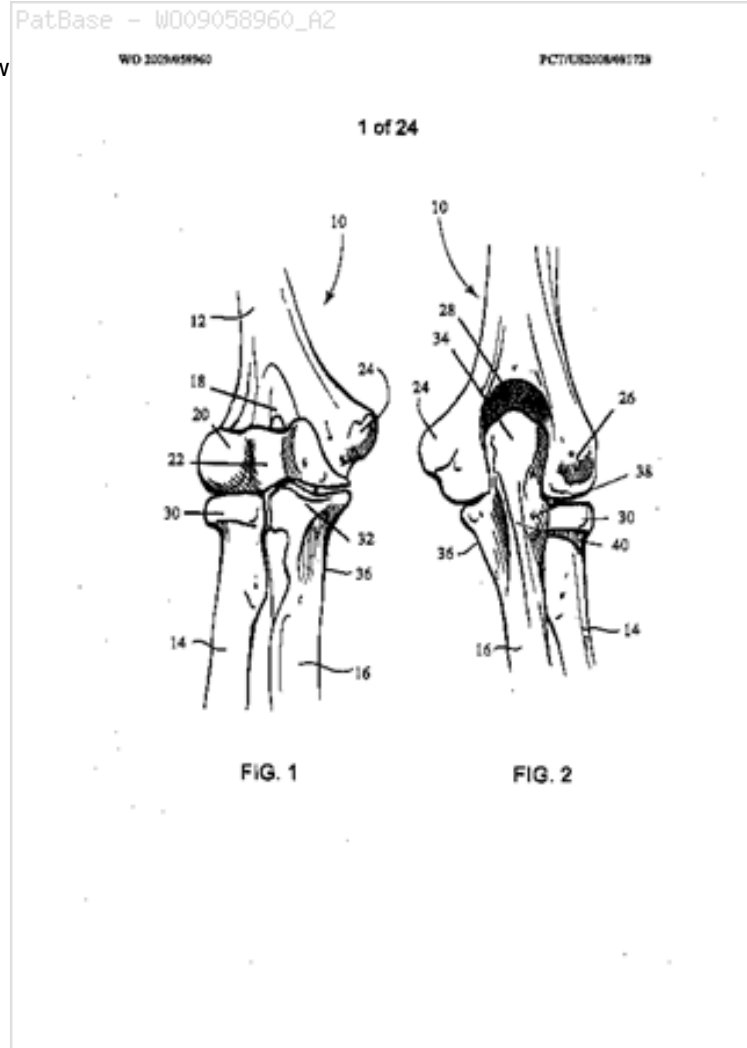
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Abstract:

Source: US2009118768A A system for the internal fixation of a fractured bone of an elbow joint of a patient includes at least one bone plate, each bone plate having a plurality of holes and generally configured to fit an anatomical surface of the fractured bone. The at least one plate is adapted to be customized to the shape of a patient's bone. The system also includes a plurality of fasteners including at least one locking fastener for attaching the bone plate to the bone. At least one of the holes is a threaded hole. Guides for plate benders, drills, and/or K-wires can be pre-assembled to the threaded holes, and the locking fastener can lock into any of the threaded holes after the guides are removed.



0) US2011264229A – SACROILIAC JOINT FIXATION SYSTEM

8) Family number: 49290149 (US2011264229A)

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Title: SACROILIAC JOINT FIXATION SYSTEM

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Inventor(s):^(std): DONNER CHRISTOPHER THOMAS ; DONNER EDWARD JEFFREY ; EDWARD JEFFREY DONNER ; JEFFREY DONNER EDWARD ; RAYMOND SPANKY ALLEN

Agent(s): SPRUSON AND FERGUSON; SMART AND BIGGAR; WILLIAMS GARETH OWEN; REINHOLD COHN AND PARTNERS; JOSHUA J; SAMUEL WADE; POLSINELLI PC; MILES CRAIG R; JOHNSON SAMUEL WADE ET AL; MCCAY MICHAEL ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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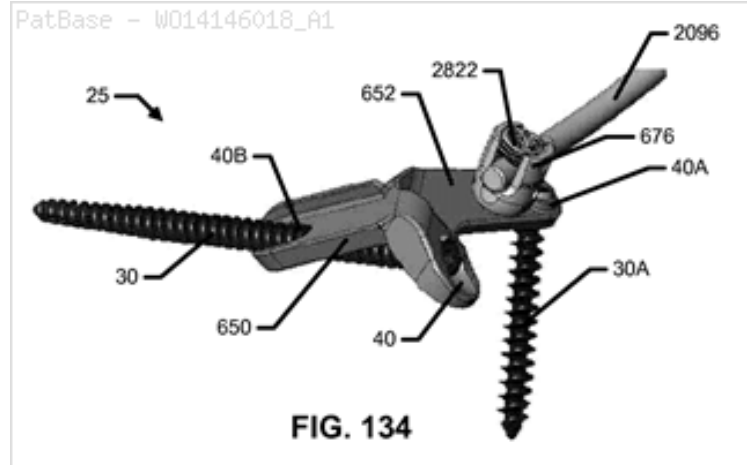
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Abstract:

Source: US2011264229A A sacroiliac joint fixation fusion system that provides a method of fixation and fusion of the sacroiliac joint and a sacroiliac joint implant which upon placement within the articular region of the sacroiliac joint facilitates stability and fusion of the sacroiliac joint.



0) US2006173459A – ORTHOPEDIC PLATE FOR USE IN SMALL BONE REPAIR

9) Family number: 33178039 (US2006173459A)

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Title: ORTHOPEDIC PLATE FOR USE IN SMALL BONE REPAIR

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Family:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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[A61B](#) (Subclass/Invention)

International class
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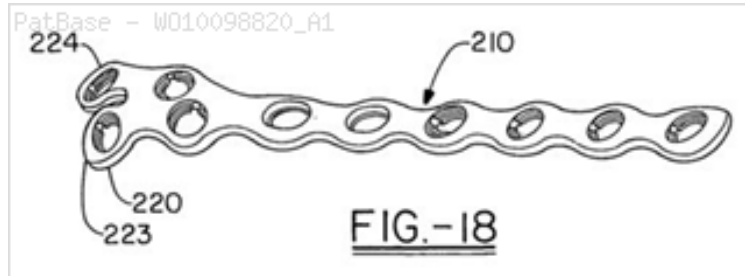
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Forward Citations: WO16172536, WO15131106, WO13045713, WO11062896, WO11041624, WO11041624, WO10098820, WO10059497, WO10033172, WO09105201, WO09105196, USD780922, USD766434, USD765844, USD754347, USD745162, USD740943, USD623745, USD623744, USD623743, US9649141, US9642657, US9622805, US9615874, US9603643, US9585706, US9579134, US9572607, US9545278, US9545276, US9545274, US9510880, US9504582, US9504504, US9498273, US9498266, US9486262, US9486261, US9474561, US9468479, US9433499, US9433454, US9421103, US9370387, US9370376, US9351776, US9333013, US9320554, US9314286, US9314284, US9295506, US9295505, US9289220, US9259253, US9259252, US9259251, US9220515, US9173690, US9161795, US9155569, US9149312, US9144443, US9107715, US9107713, US9107712, US9078713, US9072556, US9066766, US9044287, US9044282, US9017329, US9011505, US8998903, US8968370, US8951295, US8951289, US8945232, US8940026, US8920476, US8920453, US8906070, US8900274, US8894650, US8876873, US8858562, US8852245, US8845698, US8834537, US8828063, US8821546, US8808339, US8758346, US8740955, US8668725, US8603148, US8603147, US8591554, US8579898, US8574268, US8568462, US8556946, US8545540, US8535355, US8529608, US8518088, US8518042, US8512384, US8496694, US8496690, US8454665, US8449581, US8439955, US8435265, US8419776, US8419745, US8398690, US8394132, US8343199, US8328806, US8317846, US8313487, US8303589, US8292898, US8267977, US8257407, US8257406, US8257403, US8246664, US8246663, US8241338, US8231663, US8197523, US8197521, US8192472, US8182517, US8172886, US8167918, US8118848, US8118846, US8100954, US8057521, US8021402, US7935126, US7828828, US7799061, US7771457, US7641697, US7325470, US7306605, US2016278823, US2015201980, US2014336761, US2014309703, US2014309701, US2014296924, US2014296923, US2014277178, US2014228894, US2014180343, US2014066998, US2013211459, US2013172948, US2013158553, US2013066378, US2012203227, US2012197254, US2012184959, US2012095466, US2012059424, US2011230884, US2011224671, US2011184414, US2011178522, US2011172669, US2011166607,

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Abstract:

Source: US2006173459A The present invention relates to an orthopedic plate and screw system and instruments for surgical fixation of a small bone or bones. The plate facilitates three dimensional contouring to provide for a variety of applications and to accommodate individual variation in bone shape. The plate has a modified x shape including a central trunk portion including one or more screw holes along a longitudinal axis and a set of divergent upper and an oppositely extending set of divergent lower arms, each arm including screw holes which are placed at a radially equal distance but which diverging asymmetrically from the longitudinal axis relative to its paired upper or lower mate. The screws of the system are self-starting, self-tapping screws including the option of partial or full cannulation.



10) Family number: 50018229 (US2012071802A)

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Title: SYSTEMS, DEVICES, AND METHODS FOR MECHANICALLY REDUCING AND FIXING BONE FRACTURES

Priority: US20100396562P 20100528 US20110051774 20110318 US20110443080P 20110215
 US20110292548 20111109 US20110292653 20111109 US20110292707 20111109
 WO2011US37732 20110524 US20130770797 20130219

Family:	Publication number	Publication date	Application number	Application date
	<u>EP2575653 A1</u>	20130410	EP20110787241	20110524
	<u>JP2013528438 T2</u>	20130711	JP20130512156T	20110524
	<u>US2012071802 AA</u>	20120322	US20110051774	20110318
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	<u>US2012289879 AA</u>	20121115	US20110292653	20111109
	<u>US2012303030 AA</u>	20121129	US20110292707	20111109
	<u>US2013184627 AA</u>	20130718	US20130770797	20130219
	<u>US8632483 BB</u>	20140121	US20110292653	20111109
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	<u>US8870799 BB</u>	20141028	US20110292707	20111109
	<u>US8870803 BB</u>	20141028	US20110292548	20111109
	<u>US8894596 BB</u>	20141125	US20130770797	20130219
	<u>WO11149932 A1</u>	20111201	WO2011US37732	20110524
	<u>WO13070919 A1</u>	20130516	WO2012US64155	20121108

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Assignee(s): FIXES 4 KIDS

Inventor(s):^(std) COLIN JAMES C ; COREY COLIN J ; GEHRKE CODY ; HOWELL ADAM ; REILEY MARK A ; THOMPSON MATTEW ; THOMPSON MATTHEW ; VEDDER KURT

Agent(s): DEE IAN MARK; RYAN KROMHOLZ AND MANION SC; RYAN KRUMHOLZ AND MANION SC; KROMHOLZ RYAN ET AL; FLEIS PATRICK J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/60 A61B17/66 A61B17/88 A61B17/90 A61F5/00 A61F5/01 A61F5/04 A61F5/058
 (IPC 8-9): A61G15/00 (Advanced/Invention)

CPC: A61F5/05841 A61F5/05858 A61B17/848 A61F5/04 A61B17/1782 A61B17/1739

European class: A61B17/17S A61F5/04 K61B17/84N2

US class: 128/845 128/870 602/1 602/16 602/1P 602/20 602/23 602/27 602/32 602/39 606/57 606/57S 606/96 606/96S

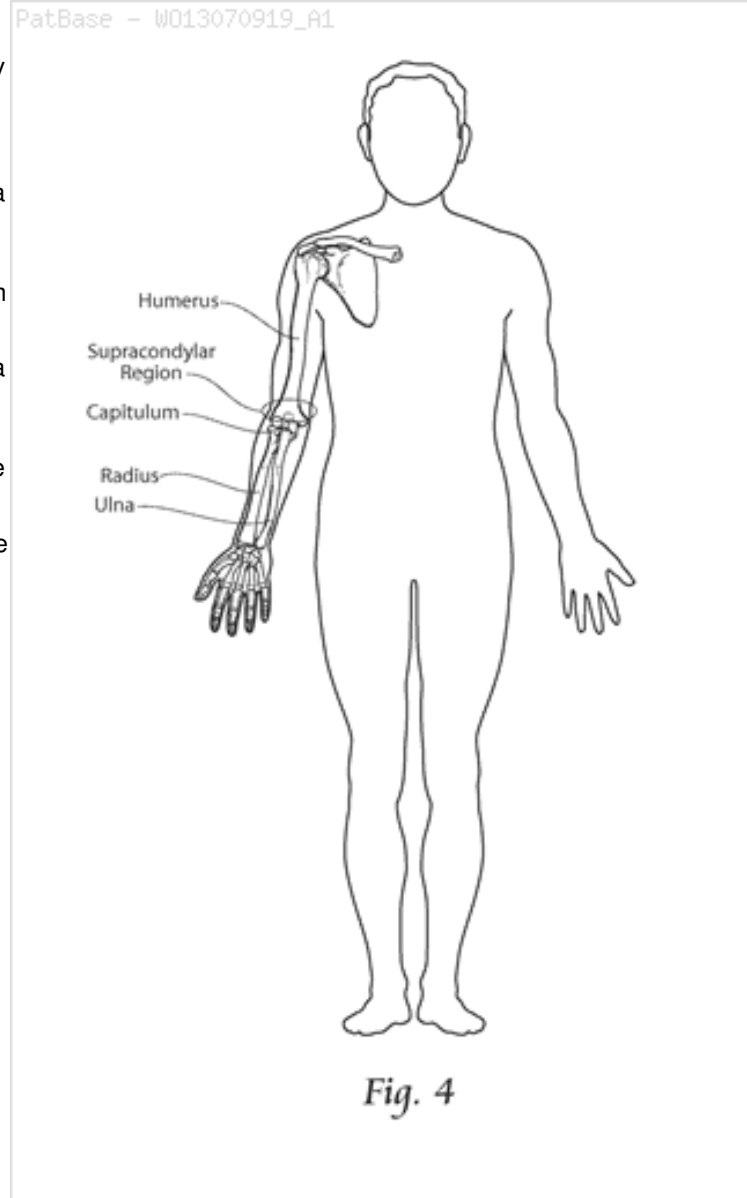
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Forward Citations: WO13052434, US9427333, US9055975, US8870799, US2016331552, US2015341615, US2015250635, US2015238326, US2014208490, US2014094925, CN103705292, CN102670290,

Abstract:

Source: US2012071802A A fracture reduction is mechanically achieved by supporting a body region having the bone fracture on a frame. A first reduction mechanism on the frame is operated to apply to the bone fracture a first predefined force reduction vector that returns the bone fracture to a corrective alignment in a first anatomic orientation, while also mechanically maintaining the corrective alignment in the first anatomic orientation. Independently, a second reduction mechanism on the frame is operated to apply a second predefined force reduction vector that returns the bone fracture to a corrective alignment in a second anatomic orientation different than the first anatomic orientation without altering the corrective alignment in the first anatomic orientation, while mechanically maintaining the corrective alignment in the second anatomic orientation. The fracture reduction is mechanically fixed by mechanically guiding the placement at least one bone fixing device into the reduced bone fracture.



11) Family number: 10362222 (US4945914A)

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Title: METHOD AND APPARATUS FOR PROVIDING RELATED IMAGES OVER TIME OF A PORTION OF THE ANATOMY USING AT LEAST FOUR FIDUCIAL IMPLANTS

Priority: AU19880024593 19881102 AU19900065907 19901108 AU19920019414 19920702
 CA19880581885 19881101 CA19880616562 19881101 CA19902029401 19901106
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Family:

Publication number	Publication date	Application number	Application date
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<u>US5397329 A</u>	19950314	US19930026223	19930226

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Inventor(s): GEORGE SEWELL ALLEN ; ROBERT J MACIUNAS ; ROBERT L GALLOWAY JR ; MARTIN R ZINK ; JOOJI ESU AREN ; GEORGE S ALLEN ; GALLOWAY ROBERT L ; GALLOWAY JUN ; GALLOWAY JR ; CHIYAARUSU EE EDOWAAZU ZA SEKONDO ; EDWARDS CHARLES A ; CHARLES A EDWARDS II

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; BORDEN LADNER GERVAIS LLP

Designated states: DE ES FR GB IT SE

International class
(IPC 8-9): A61B10/00 A61B18/20 A61B19/00 A61B5/055 A61B6/03 A61B6/12 A61N5/10 G01N23/00 G01T1/161 (Advanced/Invention);
A61B10/00 A61B18/20 A61B5/055 A61B6/03 A61N5/10 G01N23/00 (Advanced/Non-invention);
A61B10/00 A61B18/20 A61B19/00 A61B5/055 A61B6/03 A61B6/12 G01N23/00 (Core/Invention);
A61N5/10 (Core/Non-invention)

International class (IPC 1-7): A61B10/00 A61B17/00 A61B17/36 A61B19/00 A61B5/05 A61B5/055 A61B5/103 A61B6/00 A61B6/03 A61B6/08 A61B6/12 A61B8/00 A61F2/32 B25J1/00 B25J17/00 B25J19/02 B25J19/04 G01N23/00 G01N24/08 G01T1/161 G05G1/00 G06F15/42

CPC: A61B6/4423 Y10S378/901 Y10T74/20 A61N5/1049 A61B34/20 A61B34/70 A61B90/10 A61B90/36 A61B90/39 A61B2034/107 A61B2034/2072 A61B2090/363 A61B2090/365 A61B2090/3954 A61B6/12

European class: A61B19/20 A61B19/22 A61B19/52 A61B19/52H12 A61B6/12 K61B19/00Q6 K61B19/50D K61B19/52H12F K61B19/52J K61B19/52L2 K61B19/54 K61B19/54L K61N5/10E1

US class: 128/653 128/653.1 128/653.4 128/653R 128/898 364/413.13 364/413.22 378/205 378/901 414/4 600/414 600/426 600/427 600/429 606/130 606/54 606/73 606/97 74/469 901/28 901/47

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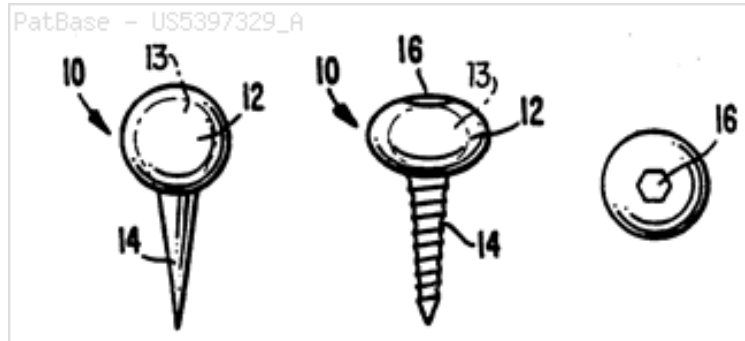
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AT399272,

Abstract:

Source: US4945914A The present invention pertains to a fiducial implant for the human body that is detectable by an imaging system. The invention is comprised of a first portion and a second portion. The first portion is configured to be detected by an imaging system when placed beneath the skin. The second portion is configured for fixed attachment to a bone beneath the skin without penetrating entirely through the bone and without fracturing the bone. The first portion is of detectable size and comprised of a material for detection by an imaging system, and

sufficiently small to avoid the distortion of the skin when placed at an interface between the skin and the bone. The first portion also has at least a portion which is spherical and defines a surface for cooperating with a tool for securing the second portion to the bone. Additionally, the placement of n fiducial implants, where $n \geq 4$ and is an integer, into a portion of anatomy of the human body allows for the recreation of a particular image slice of the portion of the anatomy taken by an imaging system with respect to a first time period, at subsequent imaging sessions and also with different scan modalities. This provides a doctor with the ability to accurately follow the progress of the portion of the anatomy of interest. Moreover, the existence of n fiducial implants allows a target to be identified without the portion of anatomy relative to an external coordinate system. The portion of anatomy with the target may then be operated on, for instance, robotically, or precisely irradiated.



12) Family number: 51909830 (US2012253410A)

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Title: APPARATUS AND METHODS FOR BONE REPAIR PREPARATION**Priority:** AU20120225496 20120307 AU20160277681 20161222 US20110450112P 20110307
US20120414695 20120307 JP20130557842T 20120307 JP20160137272 20160712
WO2012US28145 20120307 US20160056918 20160229

Family:	Publication number	Publication date	Application number	Application date
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	<u>WO12122317 A2</u>	20120913	WO2012US28145	20120307
	<u>WO12122317 A3</u>	20121122	WO2012US28145	20120307

Probable Assignee: CONVENTUS ORTHOPAEDICS INC**Assignee(s):^(std):** TAYLOR KYLE ; HINDRICHs PAUL ; PETERSON ALEX A ; MAGNUSON THOMAS DAVID ; KRINKE TODD A ; KRUSE STEVE D ; BILITZ MARK ROBERT ; BRENZEL MICHAEL P ; CONVENTUS ORTHOPAEDICS INC ; HERTEL STEFAN J**Assignee(s):** CONVENTUS ORTHOPAEDICS INC10200 73RD AVE N.EAGLE LAKE OFFICE, SUITE #122MAPLE GROVEMN55369US ; CONVENTUS ORTHOPAEDICS ; MAGNUSON THOMAS D ; WESTERN ALLIANCE BANK**Inventor(s):^(std):** HINDRICHs PAUL ; KRINKE TODD A ; KRUSE STEVE D ; MAGNUSON THOMAS D ; PETERSON ALEX A ; TAYLOR KYLE ; TODD A KRINKE ; THOMAS D MAGNUSON ; STEVE D KRUSE ; STEFAN J HERTEL ; PAUL HINDRICHs ; MICHAEL P BRENZEL ; MARK ROBERT BILITZ ; KYLE TAYLOR ; ALEX A PETERSON ; BILITZ MARK ROBERT ; BRENZEL MICHAEL P ; HERTEL STEFAN J ; MAGNUSON THOMAS DAVID ; MAGNUSON THOMAS A**Inventor(s):** KRUSE STEVE DUS ; KRINKE TODD AUS ; HINDRICHs PAULUS ; BRENZEL MICHAEL PUS ; BILITZ MARK ROBERTUS ; HERTEL STEFAN JUS ; TAYLOR KYLEUS ; PETERSON ALEX AUS ; MAGNUSON THOMAS DUS**Agent(s):** CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; MOFFAT AND CO; VENNER JULIA ANN; WEISS AND ARONS LLP; ARONS EDWARD M**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
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C12P19/14 (Advanced/Invention);
A61B17/72 (Advanced/Non-invention)

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US class: 606/105 606/329 606/86R 606/96

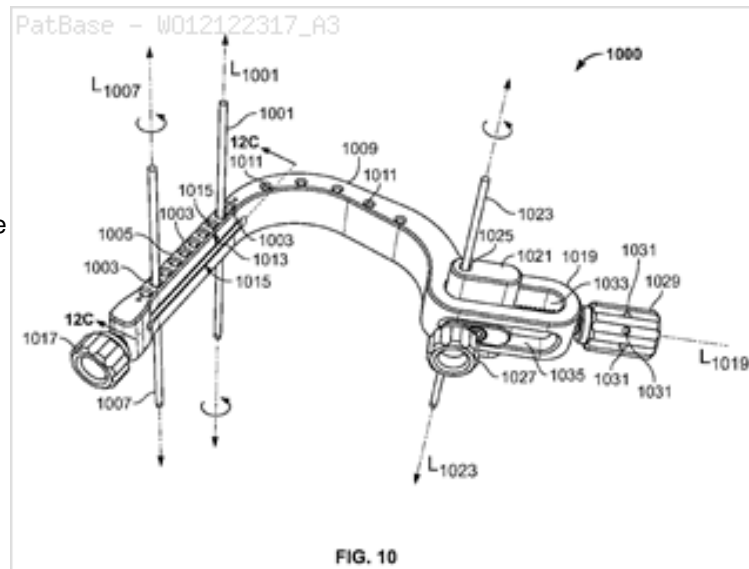
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Forward Citations: WO17017443, WO16205128, WO16154107, WO16080925, WO16025375, WO15072187, WO13070919, US9517093, US8961518, US8906022, US8870799, US2015012096, US2012259207,

Abstract:

Source: US2012253410A Apparatus and methods for preparing a fractured bone for repair. Preparing the bone may include fracture reduction. Preparing the bone may include holding a fracture in reduction. Preparing the bone may include identifying locations for obtaining access to an interior region of the bone. The apparatus may include structures outside the bone that interact with fragments of the bone. The structures may participate in the reduction. The structures may participate in holding the reduction. The structures may participate in identifying the locations.



0) US2005033431A – ARTIFICIAL FUNCTIONAL SPINAL UNIT ASSEMBLIES

13) Family number: 36058778 (US2005033431A)

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Title: ARTIFICIAL FUNCTIONAL SPINAL UNIT ASSEMBLIES

Priority:

EP20070758171	20070308	US20030634950	20030805	US20050050632	20050203
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Publication number	Publication date	Application number	Application date
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Probable Assignee: FLEXUSPINE

Assignee(s):^(std): GORDON CHARLES ; HARBOLD COREY ; GORDON CHARLES R ; HARBOLD COREY T ; HANSON HEATHER S ; HARBOLD CORY T ; SOUTHWEST RES INST ; FLEXUSPINE INC ; WAGNER ERIK J

Assignee(s): SOUTHWEST RESEARCH INST ; SOUTHWEST RESEARCH INSTITUTE ; FLEXUSPINE INC A DELAWARE CORP ; FLEXUSPINE INC CARNEGIE ; SAKI CORP ; FLEXUSPINE

Inventor(s):^(std): GORDON CHARLES R ; HARBOLD COREY T ; HARBOLD CORY T ; HANSON HEATHER S ; WAGNER ERIK J ; HARBOLD COREY ; GORDON CHARLES

Inventor(s): WAGNER ERIK J AUSTIN ; HANSON HEATHER S SAN ANTONIO ; HARBOLD CORY T TYLER ; HEATHER S HANSON ; WAGNER ERIK ; GORDON CHARLES R TYLER ; HANSON HEATHER ; CHARLES R GORDON ; CORY T HARBOLD ; ERIK J WAGNER

Agent(s): GRIFFITH HACK; CASALONGA AND PARTNERS; DOSSMANN GERARD; ADAMS AND REESE LLP; FRANK EYMARD ADAMS AND REESE LLP; MEYERTONS HOOD KIVLIN KOWERT AND GOETZEL PC; MEYERTONS ERIC B; ERIC B; PANDISCIO AND PANDISCIO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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A61B A61F (Subclass/Invention)

International class
(IPC 1-7): A61B17/70 A61B17/88 A61F2/30 A61F2/44 A61F2/46

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European class:

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623/17.11 623/17.110P 623/17.110S 623/17.13 623/17.130P 623/17.14 623/17.140S
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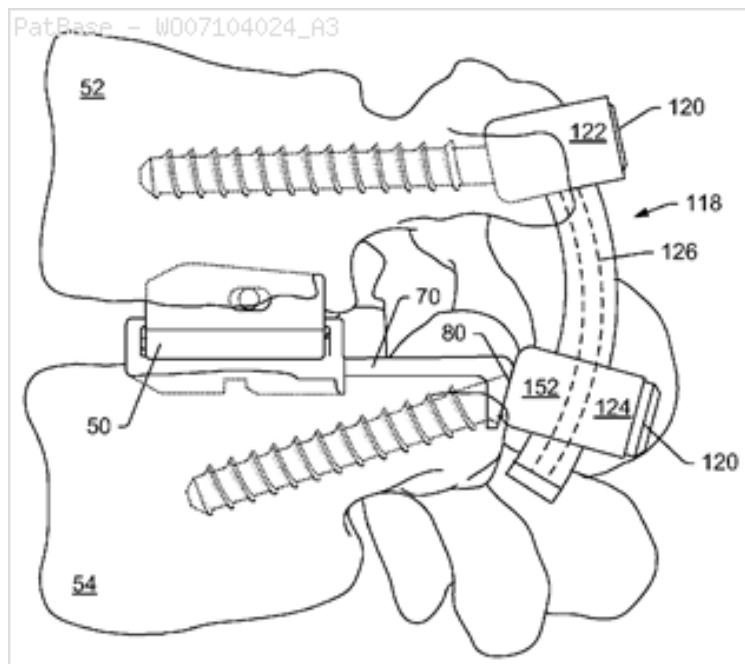
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Abstract:

Source: US2005033431A An artificial functional spinal unit is provided comprising, generally, an expandable artificial intervertebral implant that can be placed via a posterior surgical approach and used in conjunction with one or more artificial facet joints to provide an anatomically correct range of motion. Expandable artificial intervertebral implants in both lordotic and non-lordotic designs are disclosed, as well as lordotic and non-lordotic expandable cages for both PLIF (posterior lumbar interbody fusion) and TLIF (transforaminal lumbar interbody fusion) procedures. The expandable implants may have various shapes, such as round, square, rectangular, banana-shaped, kidney-shaped, or other similar shapes. By virtue of their posteriorly implanted approach, the disclosed artificial FSU's allow for posterior decompression of the neural elements, reconstruction of all or part of the natural functional spinal unit, restoration and maintenance of lordosis, maintenance of motion, and restoration and maintenance of disc space height.



14) Family number: 28284379 (US2002095214A)

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Title: TRANSOSSEOUS CORE APPROACH AND INSTRUMENTATION FOR JOINT REPLACEMENT AND REPAIR

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Probable Assignee: HYDE JR EDWARD R

Assignee(s):^(std): HYDE EDWARD R JR ; HYDE JR EDWARD R

Assignee(s): HYDE EDWARD R

Inventor(s):^(std): HYDE EDWARD R ; HYDE EDWARD R JR ; HYDE JR EDWARD R

Inventor(s): JR EDWARD R ; HYDE EDWARD RJR ; HYDE ; HYDE EDWARD

Agent(s): PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP; MORGAN LEWIS AND BOCKIUS LLP (SF); MORGAN LEWIS AND BOCKIUS LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

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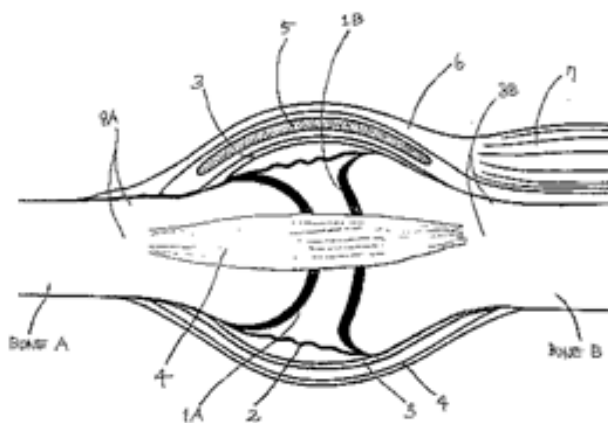
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Abstract:

Source: US2002095214A The present invention relates to a method and instrumentation for gaining access to areas in and around joints for treatment and to provide new implants and instrumentation adapted for the new method. In a transosseous core approach of the present invention, the joint is entered through a pathway provided in a portion of a joint bone. Such pathway is preferably made by taking out a bone core from the bone in or adjacent to the joint, wherever possible without substantially compromising physical integrity and physiological viability of the joint. Typically the main route for the transosseous core approach traverses through a more-accessible bone of the joint which can be aligned with a less-accessible bone of the joint in order to facilitate treatment of articular surfaces and/or other structures in the joint. The transosseous pathway into the joint is preferably provided by novel surgical instruments such as a core cutter, cartilage punch, hemostatic device, and retractable axial/transaxial cutting device. Implants modules are also provided which can be inserted into the joint through the transosseous pathway and assembled in situ inside the joint to form an implant assembly.

PatBase - W002067811_A2



0) US2003014054A – SYSTEM FOR FUSING JOINTS

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Title: SYSTEM FOR FUSING JOINTS

Priority:

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International class
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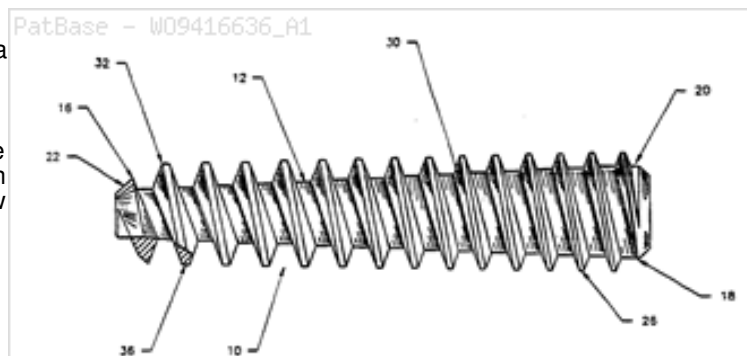
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Abstract:

Source: US2003014054A A method of fusing a joint between two bones, comprising boring a hole through one of the bones across the joint therebetween and into the other bone, placing the leading end of a screw into the hole, where the screw has a threaded region having a pitch that is larger toward a leading end of the screw and smaller toward a trailing end of the screw, and driving the screw into the bone until the threaded region spans the joint.



16) Family number: 20646974 (US5702389A)

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Title: Orthopaedic fixation device

Priority: US19950396624 19950301 US19960726713 19961007 US19970782731 19970113
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 WO1999US05738 19990316

Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: SMITH AND NEPHEW INC

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Inventor(s): TAYLOR J

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; BORDEN LADNER GERVAIS LLP; NOGAWA SHINTARO

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GN GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SZ TJ TM TR TT UA UG UZ VN YU ZW

International class
(IPC 8-9): A61B17/60 A61B17/62 A61B17/66 G06F17/10 (Advanced/Invention);
A61B17/60 A61B17/66 (Advanced/Non-invention);
A61B17/60 (Core/Invention)

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(IPC 1-7): A61B17/60 A61B17/62 A61B17/66 B25J11/00 B66F3/00 G02B23/16 G09B9/12

CPC: A61B17/62

European class: A61B17/62

US class: 128/898 606/54 606/56 606/57 606/59

[Classification Explorer](#)

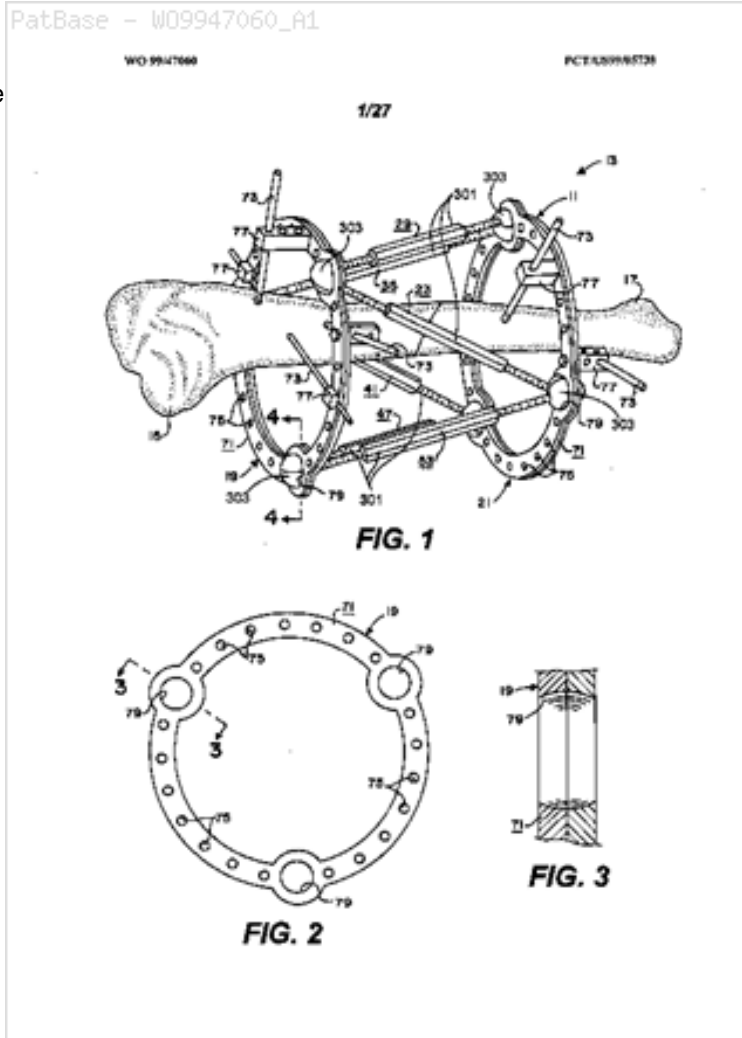
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Abstract:

Source: US5702389A A spatial frame for positioning a first element or the like relative to a second element or the like. The spatial frame includes a first base for mounting to the first element; a second base for mounting to the second element; a plurality of adjustable effective length struts; connector structure for rotatably attaching the first ends of a first pair of struts relative to one another and relative to the first base; connector structure for rotatably attaching the first ends of a second pair of struts relative to one another and relative to the first base; connector structure for rotatably attaching the first ends of a third pair of struts relative to one another and relative to the first base; connector structure for rotatably attaching the second ends of the first pair of struts relative to one another and relative to the second base; connector structure for rotatably attaching the second ends of the second pair of struts relative to one another and relative to the second base member; and connector structure for rotatably attaching the second ends of the third pair of struts relative to one another and relative to the second base member.



17) Family number: 30464446 (US2001016746A)

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Title: FEMORAL GUIDE AND METHODS OF PRECISELY FORMING BONE TUNNELS IN CRUCIATE LIGAMENT RECONSTRUCTION OF THE KNEE

Priority: CA19952159373 19950928 US19910806906 19911213 US19910839466 19910219
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Designated states: AT BE CA CH DE DK ES FR GB GR IE IT JP LI LU MC NL PT SE

International class
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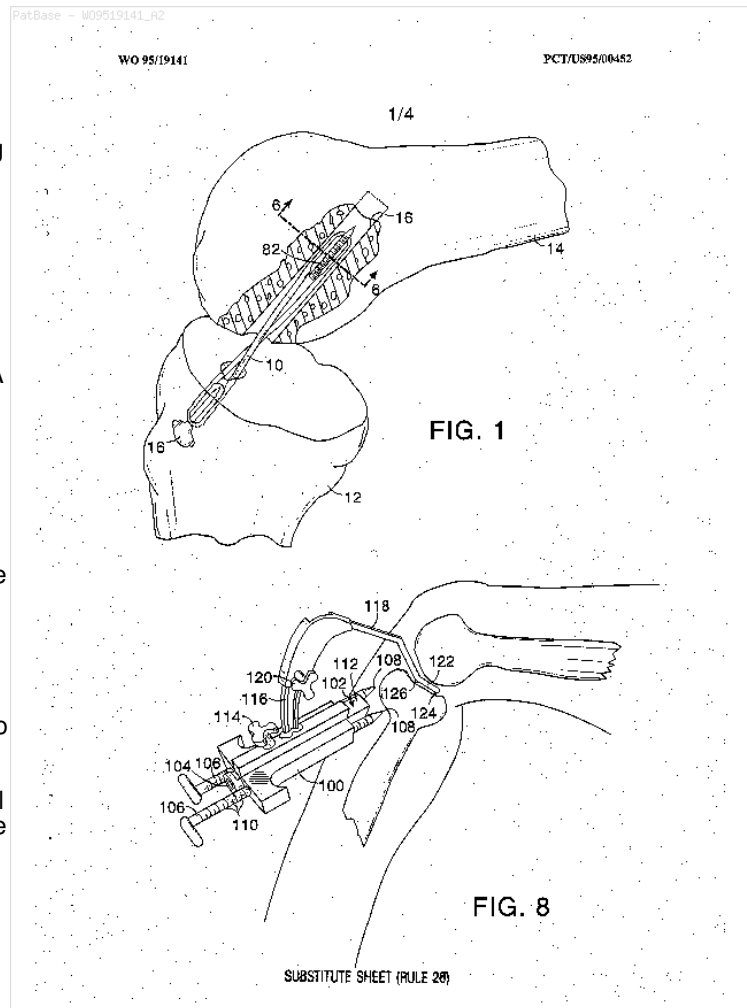
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Abstract:

Source: US2001016746A Abstract of Disclosure A femoral guide for precisely positioning a guide wire on a bone surface of the femur includes a body having a lumen for receiving a guide wire and a tongue protruding from the body for engaging an edge or reference point on the bone surface with the tongue being spaced a predetermined distance from a longitudinal axis of the lumen. The lumen includes an opening allowing a guide wire extending through the lumen to contact the bone surface at a location spaced from the edge substantially the predetermined distance with the tongue engaging the edge. A stylus on the body can be driven into the bone to secure and stabilize the femoral guide prior to driving the guide wire into the bone through the lumen. With the guide wire driven into the bone, a bone tunnel can be formed substantially concentrically or coaxially along the guide wire such that a longitudinal axis of the bone tunnel will be disposed from the edge substantially the predetermined distance. Methods of precisely forming bone tunnels include the steps of engaging an edge of a bone surface with a tongue of the femoral guide, inserting a guide wire through a lumen of the femoral guide, driving the guide wire into the bone through the lumen and forming a bone tunnel in the bone along the guide wire such that a longitudinal axis of the bone tunnel will be disposed from the edge engaged by the tongue a distance substantially equal to the distance that the tongue is disposed from a longitudinal axis of the lumen.



0) US2006241621A – BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCR...

18) Family number: 33515198 (US2006241621A)

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Title: BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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Family:

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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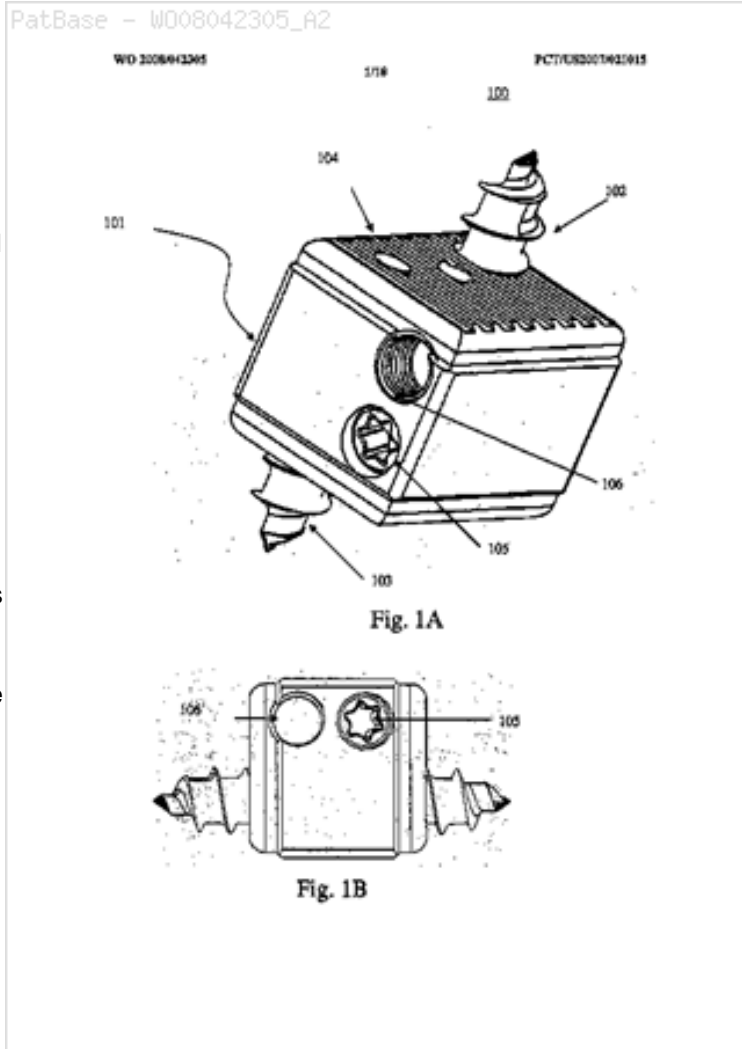
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Abstract:

Source: US2006241621A An apparatus and method for joining members together using a self-drilling screw apparatus or stapling apparatus are disclosed. The screw apparatus includes a shell and first and second first screw members having tapered ends and threaded bodies that are disposed within the shell. A drive mechanism rotatably drives the first and second screw members from the shell in opposite directions and causes the screw members to embed themselves in the members to be joined. The screw apparatus can be used to join members such as bones, portions of the spinal column, vertebral bodies, wood, building materials, metals, masonry, or plastics. The stapling apparatus includes first and second lever arms rotatably joined together at a fulcrum, and the lever arms rotate in opposite directions. First and second cartridges are disposed at the ends of the lever arms. Each cartridge is capable of holding a staple including a bracket, a nail member and an alignment slot. When the ends of the lever arms are rotated towards each other the staples from the cartridges are interlocked. The staples can be also be used to join members such as bones, portions of the spinal column, or vertebral bodies.



19) Family number: 38524553 (US2007233140A)

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Title: FEMORAL ADJUSTMENT DEVICE AND ASSOCIATED METHOD

Priority:

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Family:

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Designated states:

AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class

(IPC 8-9).

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Source: US2007233140A A femoral adjustment device to balance a flexion gap. The device includes a body attachable to a distal femur, the body having a cutting guide and an adjustment mechanism operable to balance the flexion gap, wherein upon balancing the flexion gap, the cutting guide is operable to guide at least one cut in the distal femur.



20) Family number: 28677799 (US2002087233A)

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Title: Portable coordinate measurement machine with pre-stressed bearings

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Family:

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International class
(IPC 8-9): [B25J9/10 B25J9/16 B25J9/22 G01B21/00 G01B21/04 G01B21/20 G01B5/00 G01B5/008 G01B7/00 G01B7/008 G05B19/40 G05B19/401 G05B19/4068 G05B19/4093 G05B19/42](#) (Advanced/Invention);
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Abstract:

Source: US2002087233A A portable coordinate measuring machine comprises a multijointed manually positionable articulated measuring arm for accurately and easily measuring a volume. The articulated arm includes a plurality of bearing arrangements comprising at least a pair of spaced bearings, the spaced bearings being pre-stressed such that, under an applied load, any motion of the arm is limited to axial motion and wherein the mechanical stability of the arm is increased.

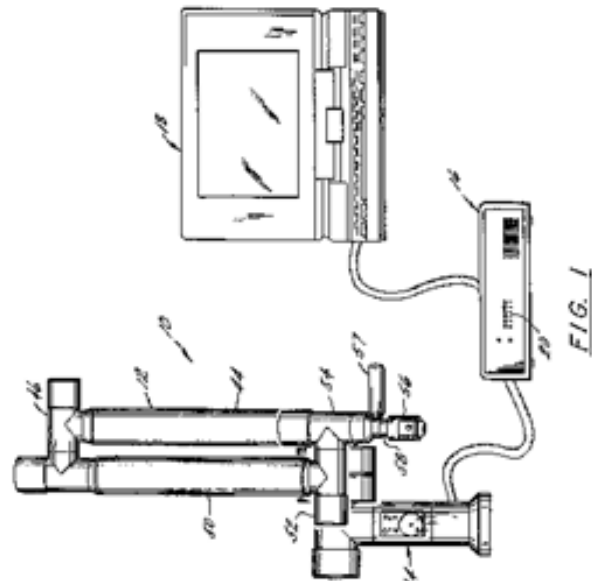
PatBase - US6606539_BB

U.S. Patent

Aug. 12, 2003

Sheet 1 of 23

US 6,606,539 B2



21) Family number: 30726788 (US2004138659A)

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Title: EXTERNAL FIXATION APPARATUS AND METHOD

Priority: US20030439195P 20030110 US20030607010 20030626 US20070823178 20070627
WO2003US39307 20031210

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2003296463 AA</u>	20040810	AU20030296463	20031210
	<u>AU2003296463 BB</u>	20090903	AU20030296463	20031210
	<u>CA2512074 AA</u>	20050629	CA20032512074	20031210
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	<u>US2004138659 AA</u>	20040715	US20030607010	20030626
	<u>US2007255280 AA</u>	20071101	US20070823178	20070627
	<u>US7608074 BB</u>	20091027	US20030607010	20030626
	<u>US8382755 BB</u>	20130226	US20070823178	20070627
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Assignee(s): N A

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Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; BORDEN LADNER GERVAIS LLP; CHIEF PATENT COUNSEL SMITH AND NEPHEW INC; FISH AND RICHARDSON PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

International class A61B17/00 A61B17/56 A61B17/60 A61B17/64 (Advanced/Invention);
(IPC 8-9): A61B17/00 A61B17/56 A61B17/60 (Core/Invention)

International class A61B17/60 A61B17/64
(IPC 1-7):

CPC: A61B17/6416 A61B17/6425

European class: A61B17/64C A61B17/64D

US class: 606/54 606/54P

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Abstract:

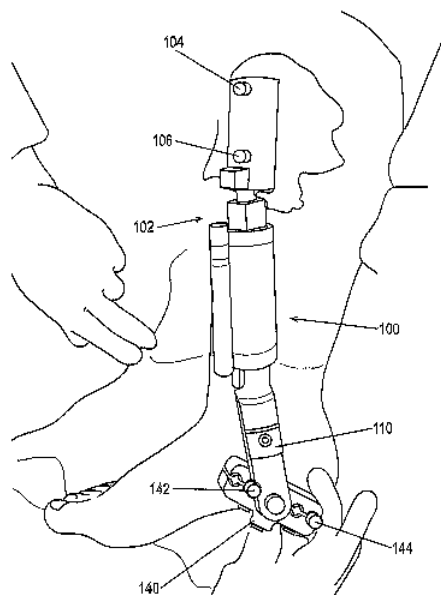
Source: US2004138659A Apparatuses and methods for externally fixing and precisely adjusting fractures, such as fractures near the ankle, are disclosed. In one embodiment, an external fixation apparatus includes a first member attachable to a first bone segment through pins, a second member coupled to the first member through a lockable ball joint, wherein first and second ends of the second member may be translated transversely relative to a longitudinal axis of the second member, and a pin clamp coupled to and rotatable about the second member through a lockable joint and attachable to a second bone segment. The pin clamp and the second member may be releasably coupled.

PatBase - W004062514_R1

WO 2004/062514

PCT/US2003/039307

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0) US2005188469A – SCREWDRIVER

22) Family number: 32198157 (US2005188469A)

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Title: SCREWDRIVER

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Probable Assignee: CUSTOM SPINE ACQUISITION INC

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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A61B17/60 (Advanced/Non-invention);
A61B17/04 A61B17/56 A61B17/58 A61B17/70 A61B17/88 A61F2/00 A61F2/30 A61F2/44 B25B13/00 B25B23/02 B25G3/00 (Core/Invention)

International class
(IPC 1-7): A61B17/58 A61F2/00 A61F2/30

CPC: B25B23/101 A61B17/862 A61B17/8883 A61B17/8891 B25B13/48 B25B23/105 B25G3/26 A61B17/704 A61B17/7041 A61B17/7038 A61B17/7004 Y10T29/49948 A61B17/7037 A61B17/7032

European class: A61B17/70B5B A61B17/70B5D A61B17/70B6 A61B17/86A2P A61B17/88S A61B17/88S2P A61B17/88S4P B25B13/48 B25B23/10B B25B23/10D B25G3/26 K61B17/70B1C K61B17/70B2 K61B17/70B5F

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Abstract:

Source: US2005188469A A scissor-action screwdriver and screwdriver attachment comprises a plurality of arms pivotally attached to one another; a bias element mounted in at least one of the plurality of arms; and a sleeve slidably mounted around at least one of the plurality of arms, wherein the plurality of arms comprise a first arm and a second arm, and wherein each of the plurality of arms preferably comprise a prong end. The screwdriver attachment further comprises a stop component adapted to limit a distance of separation between the first arm and the second arm. Additionally, the bias element may comprise a spring. Moreover, each of the plurality of arms preferably comprises a tapered section, wherein the sleeve comprises an inner tapered wall adapted to engage the tapered section of each of the plurality of arms. The screwdriver further includes a handle connected to the second arm.

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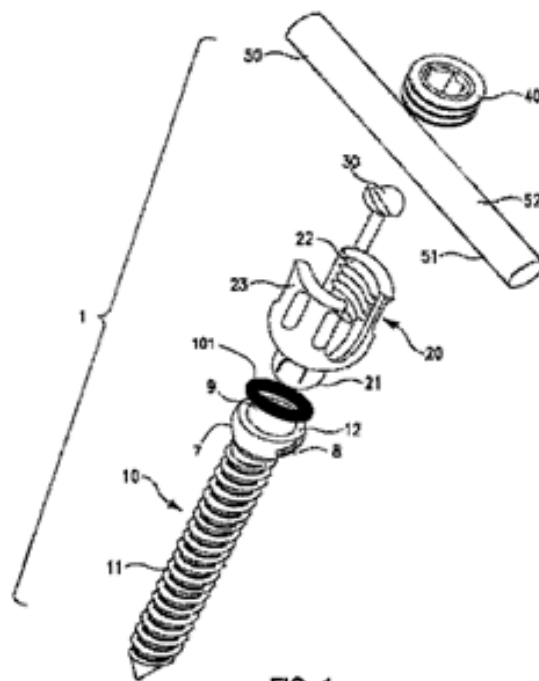


FIG. 1

23) Family number: 42460152 (US2008275509A)

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Title: MOUNTS FOR IMPLANTABLE EXTRA-ARTICULAR SYSTEMS

Priority:

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Assignee(s): MOXIMED INC HAYWARD

Inventor(s):^(std): GABRIEL STEFAN ; DREMEL ERIC ; JOSHUA MAKOWER ; ANTON G CLIFFORD ; CLIFFORD ANTON G ; CLIFFORD ANTON ; LANDRY MICHAEL E ; MAKOWER JOSHUA ; O CONNELL MARY ; REGALA ALAN C ; MIKSOVSKY CHRISTOPHER A ; SLONE CLINTON N ; VECCHIOTTI RICHARD G ; TAMMEN WILLIAM G ; STRASSER MICHAEL ; SALIMAN JUSTIN ; TORNETTA PAUL III ; TORNETTA III PAUL ; SIDOW KEVIN ; RICHARD G VECCHIOTTI ; LOWE DAVID ; MARY O CONNELL ; LANDRY MICHAEL ; PFAUTZ DANIEL ; SCHIFF DAVID R ; SCHIFF EZRA T

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY NZ NA NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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A61B17/60 A61F2/08 (Core/Non-invention)

International class
(IPC 1-7): A61B17/68 A61B17/70

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US class: 1/1 128/898 128/898S 606/280 606/282 606/283 606/283P 606/286 606/286S 606/300 606/300S 606/301 606/86.00R 606/86.00RS 606/86R 623/13.11 623/13.110S 623/13.12 623/13.120P 623/13.13 623/13.130P 623/13.14 623/13.140P 623/13.140S 623/14.12 623/14.120P 623/14.120S 623/18.11 623/18.110P 623/18.110S 623/20.14 623/20.140P 623/20.15 623/20.150P 623/20.16 623/20.21 623/20.210P 623/20.22 623/20.220P 623/20.23 623/20.24 623/20.25 623/20.28 623/23.39 623/23.41 623/23.410P 623/23.47 623/46 623/46P 623/914

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Abstract:

Source: US2008275509A A mount usable with an implantable extra-articular system including a body having a first end opposite a second end. The mount includes a coupling connection positioned at the first end of the mount for attaching the mount to a base component. The mount also includes a multi-dimensional articulating connection component configured at the second end of the mount. The body of the mount offsets the articulating connection component away from body anatomy when coupled to the base component. The mount also orients and aligns a link absorber that is coupled to the articulating connection component.

PatBase - W011153026_A2

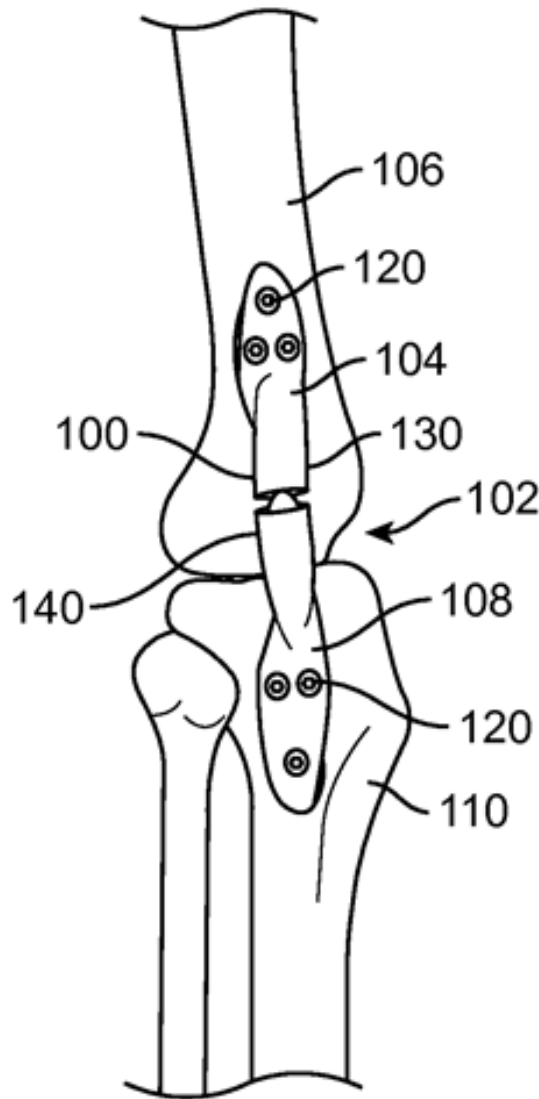


FIG. 1

24) Family number: 48843191 (US2011106091A)

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Title: KNEE ARTHROPLASTY APPARATUS AND METHOD

Priority: EP20100827286 20100325 EP20130711520 20130308 US20100729222 20100322
 US20090616747 20091111 US20120417079 20120309 US20150752161 20150626
 WO2009US63015 20091102 WO2010US28729 20100325 WO2013US29767 20130308

Family:	Publication number	Publication date	Application number	Application date	
	<u>CA2780063 AA</u>	20120502	CA20102780063	20100325	
	<u>CA2866539 AA</u>	20140905	CA20132866539	20130308	
	<u>CN102834067 A</u>	20121219	CN201080060338	20100325	
	<u>CN104302234 A</u>	20150121	CN201380024117	20130308	
	<u>CN104302234 B</u>	20161221	CN201380024117	20130308	
	<u>DE602010028511 D1</u>	20151203	DE201060028511T	20100325	
	<u>DE602013015847 D1</u>	20170216	DE201360015847T	20130308	
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	<u>EP2496156 B1</u>	20151021	EP20100827286	20100325	
	<u>EP2822481 A1</u>	20150114	EP20130711520	20130308	
	<u>EP2822481 B1</u>	20161228	EP20130711520	20130308	
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	<u>WO11053373 A9</u>	20120614	WO2010US28729	20100325	
	<u>WO13134595 A1</u>	20130912	WO2013US29767	20130308	

Probable Assignee: SYNVASIVE TECHNOLOGY INC

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 MAVIS S ET AL; GALLENSON MAVIS ET AL; DELANEY KAROLINE A ET AL; MADDEN
 ROBERT B ET AL

Designated states:

AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA
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SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM
ZW

International class
(IPC 8-9): A61B17/15 A61B17/56 A61B17/88 A61B17/90 A61B19/00 A61B90/10 A61B90/11
A61B90/13 (Advanced/Invention);
A61B17/56 A61B19/00 (Advanced/Non-invention)

CPC: A61B2017/565 A61B17/157 A61B17/8875 A61B90/11 A61B90/13 A61B2090/062
A61B2090/0807

European class: A61B17/15K4 A61B19/20B K61B17/88S K61B19/20B2 K61B19/46D K61B19/48H

US class: 1/1 606/87 606/88 606/88P

[Classification Explorer](#)

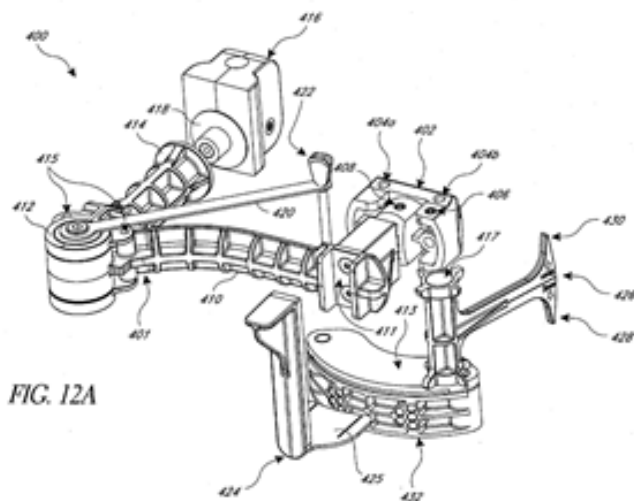
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Forward Citations: WO15027288, WO14137726, WO13134595, US9622805, US9554745, US9549742,
US9427240, US9192459, US9173695, US9101443, US9095352, US9060797,
US8858557, US8840629, US8834490, US8828013, US8784495, US2016278929,
US2014288562, US2014031830, US2011106092, US2009234360, EP2957249,
CN104644175, CN104302234, CN104302234, CN104013451, CN104013451,
CN103932778, CN103932778, CN103120600, CN103120600,

Abstract:

Source: US2011106091A A method for positioning a bone cutting guide on a tibia may involve coupling a cutting guide positioning apparatus with a tibia, adjusting the positioning apparatus in a varus/valgus orientation, adjusting the positioning apparatus in an anterior/posterior orientation, adjusting the positioning apparatus up or down to select a tibial bone resection level, and contacting a cutting guide with the tibia, using the adjusted positioning apparatus.

PatBase - W013134595_A1



25) Family number: 8792178 (US5846245A)

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Title: Bone-adjusting device
Priority: US19950546208 19951020 US19980140958 19980827 WO1996US16755 19961018
Family:

Publication number	Publication date	Application number	Application date
AT274849 E	20040915	AT19960936714T	19961018
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AU713344 B2	19991202	AU19960074567	19961018
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DE69633302 T2	20050901	DE19966033302T	19961018
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US6019769 A	20000201	US19980140958	19980827
WO9714367 A1	19970424	WO1996US16755	19961018

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Designated states: AT AU BE CA CH DE DK ES FI FR GB GR IE IT JP LI LU MC MX NL PT SE

International class [A61B17/60](#) [A61B17/64](#) [A61B17/66](#) (Advanced/Invention);
^{(IPC 8-9):} [A61B17/60](#) (Advanced/Non-invention)

International class [A61B17/56](#) [A61B17/58](#) [A61B17/60](#) [A61B17/64](#)
^{(IPC 1-7):}

CPC: [A61B17/663](#) [A61B17/6416](#)

European class: [A61B17/64C](#) [A61B17/66J](#)

US class: [606/105](#) [606/54](#) [606/57](#) [606/59](#)

[Classification Explorer](#)

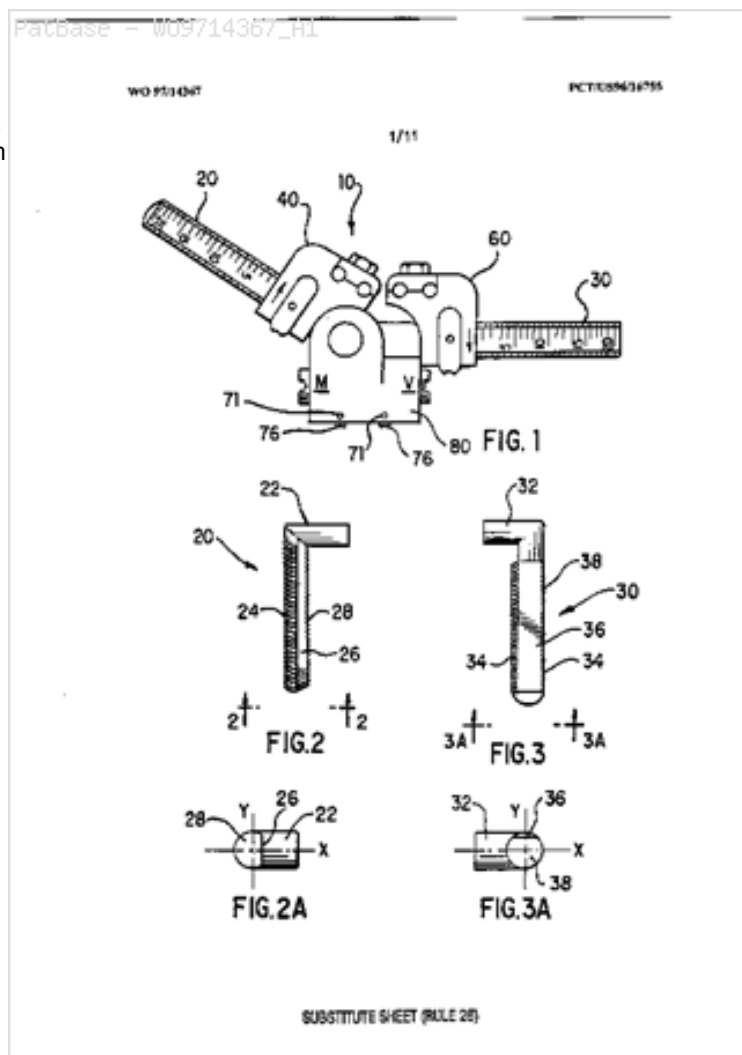
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Forward Citations: WO9904715, WO9904713, WO9814130, WO06120482, WO04026103, WO04010893, WO02076313, WO0134044, WO0062690, USD720853, USD704840, USD683461, USD682426, USD663030, USD633207, USD460184, US9649156, US9592386,

US9579030, US9510901, US9486355, US9463062, US9463045, US9445720, US9433760, US9420955, US9408661, US9408644, US9402684, US9402651, US9393045, US9364284, US9358365, US9351763, US9327100, US9326751, US9320638, US9297845, US9277955, US9265969, US9259242, US9220561, US9220558, US9220533, US9192790, US9192435, US9186211, US9186210, US9186209, US9174050, US9173696, US9162046, US9155589, US9125667, US9125666, US9119632, US9119600, US9101398, US9089350, US9084609, US9079000, US9072902, US9060761, US9050135, US9050106, US9037259, US9028485, US9028472, US9023034, US8974451, US8951251, US8945129, US8945128, US8939970, US8906020, US8880185, US8858555, US8834467, US8827998, US8808289, US8777947, US8721643, US8721641, US8685023, US8570187, US8486070, US8419801, US8419732, US8388619, US8388553, US8382757, US8303588, US8172849, US8172840, US8025681, US7892241, US7854752, US7841998, US7621922, US7559951, US7485121, US7481841, US7468063, US7449023, US7282052, US7261713, US6918915, US6716212, US6692447, US6673079, US6613049, US6409729, US6322566, US6280191, US6224594, US2014276816, US2012209266, US2011103676, US2011082458, US2011066151, US2010075270, US2009131944, US2009125068, US2009024128, US2008200855, US2008065073, US2007282338, US2007233094, US2007043370, US2006122606, US2006069447, US2006004459, US2005251136, US2005113829, US2005085754, US2005021045, US2005015087, US2004097944, US2004097922, US2004059331, RU2504341, EP1118309, EP1099415, EP1027868, EP0998237, EP0998236, EP0880942, AU2003272557,

Abstract:

Source: US5846245A A method of performing angular distraction osteogenesis by drilling bone-pin holes into the first and second sides of a segmented bone, inserting bone-pins into the bone-pin holes, attaching the bone-pins into each side of the segmented bone to a distraction device and adjusting the distraction device so that the bone portion of the first side of the segmented bone angularly adjusts, rotates or pivots its position relative to the bone portion on the second side of the segmented bone in precise, gradual and predetermined incremental amounts over a period of time so that the bone tissue remains healthy and the blood vessels and nerve endings remain intact during the bending distraction process. A device for achieving angular distraction osteogenesis is provided having a support member extending across a segmented piece of bone, members for securing the first side of the segmented bone to the support member and the second side of the segmented bone to the support member, and a member for angularly adjusting the first section of segmented bone relative to the second section of segmented bone. The angular adjustment member includes a gear and a cooperating adjustment screw which rotates the gear when the screw is adjusted in order to easily angularly adjust or rotate the support member or the members for securing the segmented bone pieces to the support member in precise, small incremental predetermined amounts over a period of time. The members for securing the segmented bone pieces to the support member include bone-pin clamps which can be adjusted linearly or translated in precise, gradual and incremental distances along the length of the support member. In one embodiment, the device has two arms, a central joint for angularly adjusting the two arms and two bone-pin clamps for attaching at least one bone-pin on each side of the segmented bone to a respective arm. The arms are attached to the central joint and angularly adjust or rotate in planes that are oriented different from one another and perhaps perpendicularly and the bone-pin clamps linearly translate along each arm.



0) US2002016593A – CRANIAL FLAP CLAMP AND INSTRUMENT FOR USE THERE...

26) Family number: 28172088 (US2002016593A)

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Title: CRANIAL FLAP CLAMP AND INSTRUMENT FOR USE THEREWITH

Priority: AU20010260010 20010607 AU20040205213 20040824 CA20012416117 20010607
CA20012696262 20010607 EP20010933533 20010607 US20010910720 20010724
US20040015365 20041216 WO2005US45746 20051214 WO2001CH00349 20010607
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: SYNTHES USA LLC

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Assignee(s): SYNTHES U S A ; SYNTHES AG CHUR ; SYNTHES AG CHUR CHUR ; SYNTHES AKTIENGESELLSCHAFT ; SYNTHES CHUR AG ; SYNTHES ; SYNTHES (USA) ; HFSC COMPANY

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [A61B17/122](#) [A61B17/128](#) [A61B17/56](#) [A61B17/58](#) [A61B17/68](#) [A61B17/84](#) [A61B17/88](#) [A61B19/00](#) [A61F2/00](#) [A61F2/08](#) [A61F2/30](#) [A61H19/00](#) (Advanced/Invention); [A61B17/00](#) [A61B17/122](#) [A61B17/128](#) [A61B17/56](#) [A61B17/58](#) [A61B17/68](#) [A61B17/88](#) [A61B19/00](#) (Advanced/Non-invention); [A61B17/68](#) (Core/Invention); [A61B](#) (Subclass/Invention)

International class
(IPC 1-7): [A61B017/68](#) [A61B17/56](#) [A61B17/58](#) [A61B17/68](#) [A61B17/88](#)

CPC: [A61B90/03](#) [A61B2090/037](#) [A61B17/8869](#) [A61B17/688](#) [A61B17/88](#) [A61B17/8863](#) [A61B2017/00004](#) [A61B2017/00862](#)

European class: [A61B17/68S](#) [A61B17/88](#) [A61B17/88F](#) [A61B17/88L](#) [K61B17/00A](#) [K61B17/00S10](#) [K61B19/30](#) [K61B19/30H](#)

US class: [606/103](#) [606/103P](#) [606/232](#) [606/281](#) [606/324](#) [606/324S](#) [606/72](#) [606/916](#) [606/916P](#) [606/99](#)

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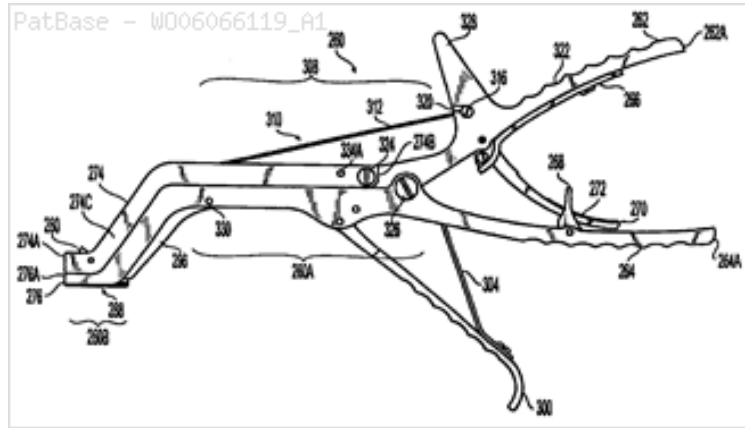
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Abstract:

Source: US2002016593A The disclosed cranial flap clamp includes first and second clamping members and an extension member. A portion of the first member is positionable against inferior surfaces of a bone flap and skull and a portion of the second member is positionable against superior surfaces of the flap and skull. The extension member extends from the first member and fits between the flap and skull. The second member has a through opening for receiving the extension member. Movement of either of the clamping members urges the inner surface of the first member against the inferior surfaces of the flap and skull and urges the inner surface of the second member against the superior surfaces of the flap and skull. A stop provided by mechanical deformation of the extension member at any location along its length secures the clamp.



0) US2001016675A – STRESS REDUCTION APPARATUS AND METHOD

27) Family number: 29993406 (US2001016675A)

© PatBase

Title: Stress reduction apparatus and method

Priority:

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

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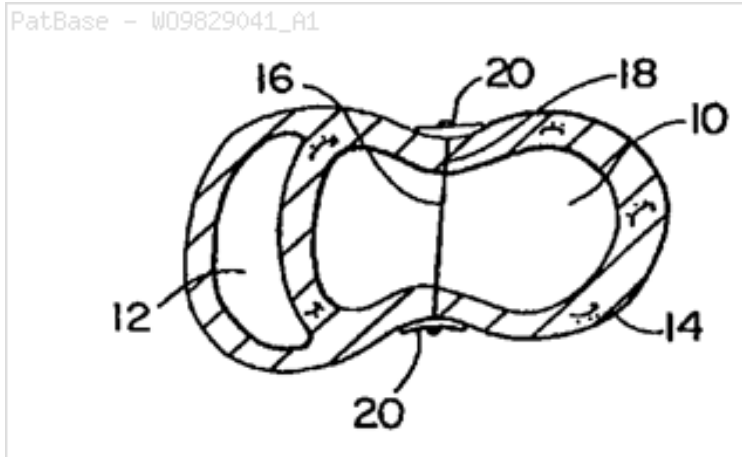
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Abstract:

Source: US2001016675A The device and method for reducing heart wall stress. The device can be one which reduces wall stress throughout the cardiac cycle or only a portion of the cardiac cycle. The device can be configured to begin to engage, to reduce wall stress during diastolic filling, or begin to engage to reduce wall stress during systolic contraction. Furthermore, the device can be configured to include at least two elements, one of which engages full cycle and the other which engages only during a portion of the cardiac cycle.



Title: FIXATOR OR SPLINT**Priority:** GB20050009613 20050512 WO2006GB50102 20060512**Family:**

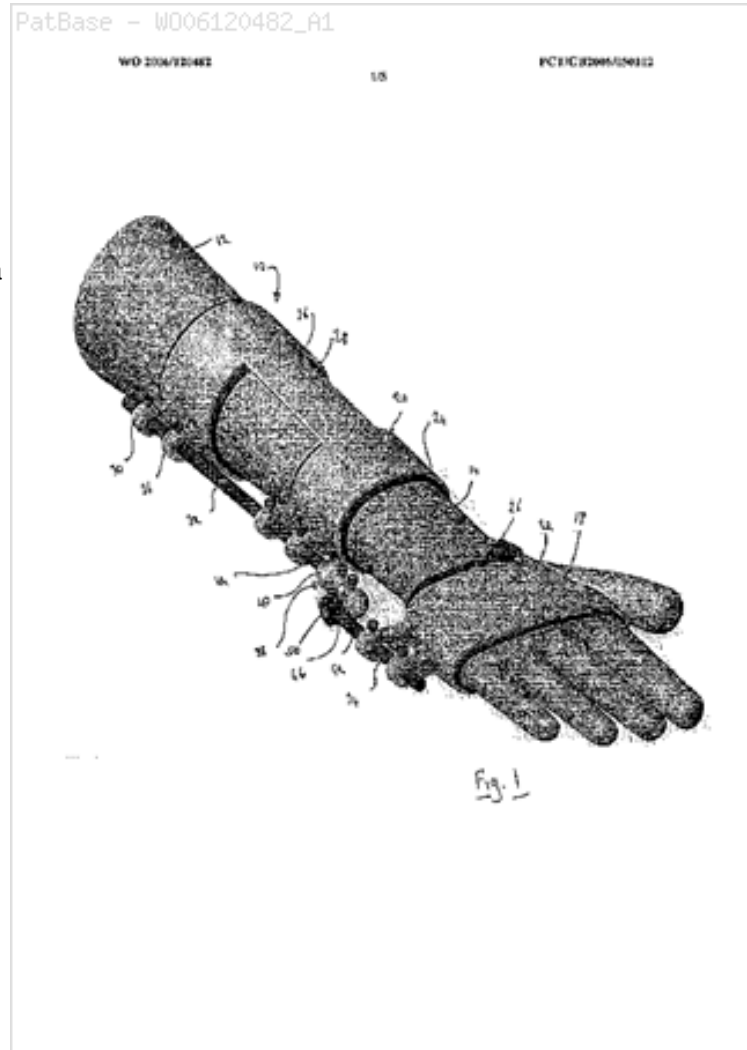
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US7841998 BB	20101130	US20060914191	20060512
WO06120482 A1	20061116	WO2006GB50102	20060512

Probable Assignee: BAJWA ALI**Assignee(s):**^(std) ALI BAJWA ; BAJWA ALI ; LINDA POMEROY ; POMEROY LINDA**Inventor(s):**^(std) ALI BAJWA ; BAJWA ALI ; LINDA POMEROY ; POMEROY LINDA**Agent(s):** GRIFFITH HACK; MARKS AND CLERK; FLECK BARBARA ET AL; BAILEY JENNIFER ANN; TAROLLI SUNDHEIM COVELL AND TUMMINO LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
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[A61F5/34](#) (Advanced/Invention);
[A61B17/60](#) [A61F5/00](#) [A61F5/01](#) [A61F5/04](#) (Core/Invention)**International class**
(IPC 1-7): [A61B17/64](#)**CPC:** [A61B17/6425](#) [A61B17/6416](#) [A61B2017/00915](#) [A61F5/013](#) [A61F5/05866](#) [A61F5/05841](#)**European class:** [A61B17/64D](#) [A61F5/01D7](#) [A61F5/058H](#) [A61F5/058H4B](#) [K61B17/00S25R](#) [K61B17/64C](#)**US class:** [602/16](#) [602/16P](#) [602/20](#) [602/20S](#) [602/21](#) [602/21S](#) [602/5](#) [606/54](#)[Classification Explorer](#)**Cited documents:** WO9423662 A2, US7476207 BB, US7416537 BA, US6676619 BB, US6589195 BA, US6179799 BA, US6179799 B1, US6019769 A, US5916184 A, US5846245 A, US5707370 A, US5683353 A, US5545162 A, US5514081 A, US5437619 A, US5421810 A, US5385536 A, US5316547 A, US5002044 A, US4977890 A, US4834057 A, US4677971 A, US4583600 A, US4538600 A, US4497315 A, US4180870 A, US2002035342 AA, US1789060 A, JP3092151 A2, JP2002537936 T2, FR2609887 A1, EP1382317 A1, DE82161 A,

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Abstract:

Source: US2008200855A The present invention relates to a non-invasive external fixator particularly suitable for fracture fixation. In particular, the fixator of the invention comprises proximal and distal portions for mounting on a limb either side of a fracture, each of the proximal and distal portions including a rigid member; and an articulation member connecting the proximal and distal portions, the articulation member comprising a universal joint for allowing relative movement between the proximal and distal portions, wherein the articulation member connects the rigid members.



0) US2005085813A – SYSTEM AND METHOD FOR STABILIZING OF INTERNAL S...

29) Family number: 33005577 (US2005085813A)

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Title: SYSTEM AND METHOD FOR STABILIZING OF INTERNAL STRUCTURES

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Probable Assignee: THEKEN SPINE LLC

Assignee(s):^(std): BROWN ROB ; COLLERAN DENNIS ; DIEDERICH JENNIFER ; DYE NOELLE ; SPITLER JAMES ; SCHORER SCOTT ; ROGERS CAROLYN ; INNOVATIVE SPINAL TECHNOLOGIES ; THEKEN SPINE LLC

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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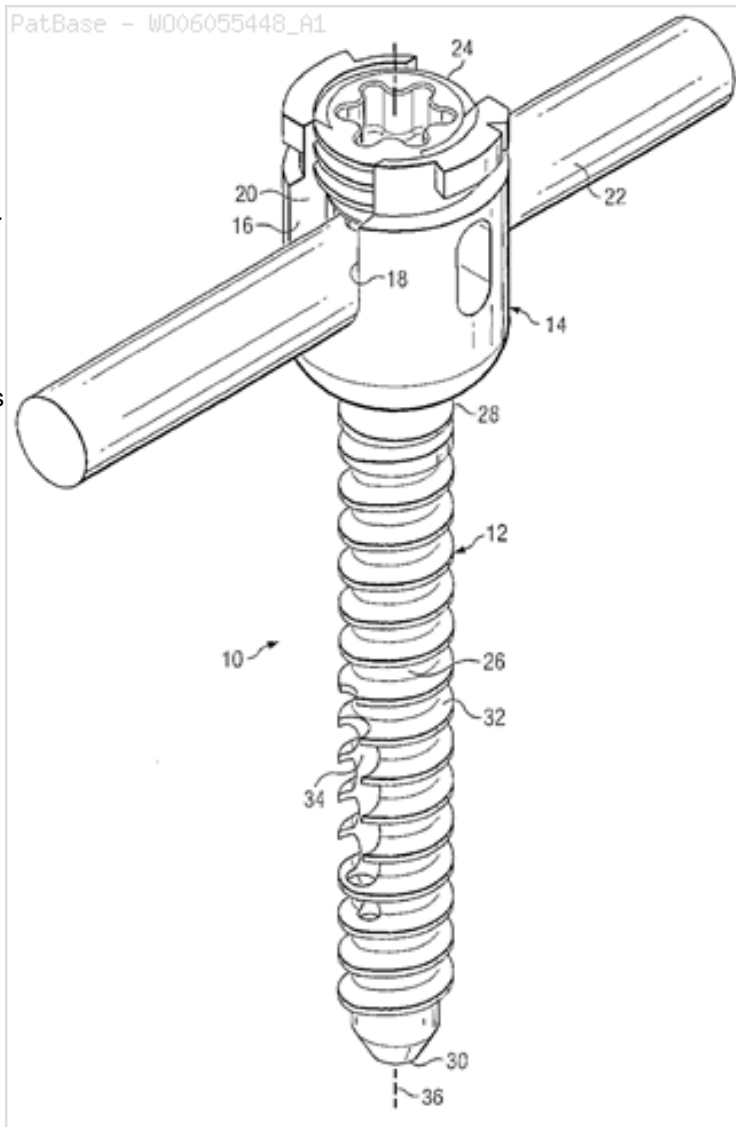
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Abstract:

Source: US2005085813A There is shown a system and method for reducing the difficulty in percutaneous placement of a spine stabilization brace by coupling the brace to a pedicle screw in a single assembly. The brace-screw assembly is delivered along with an anchor extension through a cannula for anchoring in the vertebrae pedicle. The anchor extension becomes a cannula for working on the brace from the exterior of the patient, as constructed with a slot opening along two sides. Once the screw portion of the brace-screw assembly is locked in place with respect to the first vertebra, the proximal end of the brace is below the skin line. The brace is then repositioned so that the proximal end leaves the cannula through one slot and is captured by a corresponding slot positioned in a second cannula coupled to a second anchor. Once captured, the proximal end of the brace is guided by the second cannula to a receptacle positioned in the second vertebra.



0) US2010063508A – SYSTEMS AND METHODS FOR JOINT REPLACEMENT

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Probable Assignee: ORTHALIGN INC

Assignee(s):^(std): BORJA SANTIAGO P ; GROSS JACOB ; LANE RICHARD ; NASH SEAN ; ORTHALIGN INC ; VAN DER WALT NICHOLAS ; WOLTERS PIETER ; SHAPIRO CHARLES S ; ORTHALLGN INC ; RYAN MATT ; SHAPIRO CHARLES ; WALT NICHOLAS VAN D

Assignee(s): RESEARCH TECHNOLOGIES INC CORP

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Agent(s): PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; AIRD AND BERLIS IP PARTNERSHIP LTD; VOSSIUS AND PARTNER; KNOBBE MARTENS OLSON AND BEAR LLP; ALTMAN DANIEL E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A61B17/02 A61B17/15 A61B17/17 A61B17/56 A61B17/58 A61B17/60 A61B19/00 A61B5/00 A61B5/103 A61B5/11 A61F2/00 A61F2/28 A61F2/30 A61F2/38 A61F2/46 G06F3/00 G06T15/00 (Advanced/Invention); A61B19/00 A61B5/107 (Advanced/Non-invention); A61B17/56 A61B17/58 A61B5/103 A61F2/28 G06F3/00 G06T15/00 (Core/Invention)

CPC: A61B5/4528 A61B5/1071 A61B17/155 A61B17/157 A61B17/1764 A61B2034/108 A61B90/11 A61B90/13 A61B17/154 A61B90/10 A61B2034/2048 A61B34/10 A61B34/20 A61B2034/2051 A61B2019/5251 A61B2019/5248 A61B2019/202 A61B19/201 A61B19/5244 A61B19/20 A61B17/1707 A61B2090/067 A61F2/4657 A61B5/1121 A61B2562/0219 A61B17/56

European class: A61B17/15K2 A61B17/15K4 A61B17/17S8 A61B19/20 A61B19/52H12 A61B5/45K K61B17/15K2 K61B19/20B K61B19/20B2 K61B19/46J K61B19/52H12B2 K61B19/52H12B4 K61B5/107A

US class: 1/1 345/419 345/419S 600/587 600/587P 600/587S 606/102 606/86.00RS 606/86R 606/88 606/88P 715/705 715/705P

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Forward Citations:

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Abstract: Source: US2010063508A Systems and methods for joint replacement are provided. The systems and methods include a surgical orientation device and at least one orthopedic fixture. The surgical orientation device and orthopedic fixtures can be used to locate the orientation of an axis in the body, to adjust an orientation of a cutting plane or planes along a bony surface, to distract a joint, or to otherwise assist in an orthopedic procedure or procedures.

FIG. 31C

31) Family number: 20414933 (US5493788A)

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Title: SYSTEM FOR MEASURING STIFFNESS OF A FRACTURED BONE
Priority: CA19952149177 19950511 GB19940012344 19940620 US19940346615 19941130
 WO1995GB01437 19950619

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199527444 A1</u>	19960115	AU19950027444	19950619
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	<u>WO9535061 A2</u>	19951228	WO1995GB01437	19950619
	<u>WO9535061 A3</u>	19960208	WO1995GB01437	19950619

Probable Assignee: RICHARDSON JAMES BRUCE

Assignee(s):^(std): JAMES BRUCE RICHARDSON ; RICHARDSON JAMES B ; RICHARDSON JAMES BRUCE

Inventor(s):^(std): JAMES BRUCE RICHARDSON ; RICHARDSON JAMES B ; RICHARDSON JAMES BRUCE

Agent(s): SMART AND BIGGAR

Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LI LK LR LT LU LV MC MD MG ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TT UA UG US UZ VN

International class
 (IPC 8-9): A61B17/60 A61B5/103 A61B5/107 A61B5/117 G01N3/00 G01N3/20 (Advanced/Invention);
A61B5/107 A61B5/117 G01N3/00 (Advanced/Non-Invention);
A61B5/103 A61B5/107 A61B5/117 G01N3/00 (Core/Invention)

International class
 (IPC 1-7): A61B17/60 A61B5/103 A61B5/107 A61B5/117

CPC: A61B5/6878 A61B5/4504 A61B5/103 G01N3/20 G01N2203/0041 G01N2203/0089

European class: A61B5/103 A61B5/45B G01N3/20 S01N203/00G1M S01N203/00P6 S01N3/00G1M S01N3/00P9B

US class: 128/782 33/512 335/120 600/595

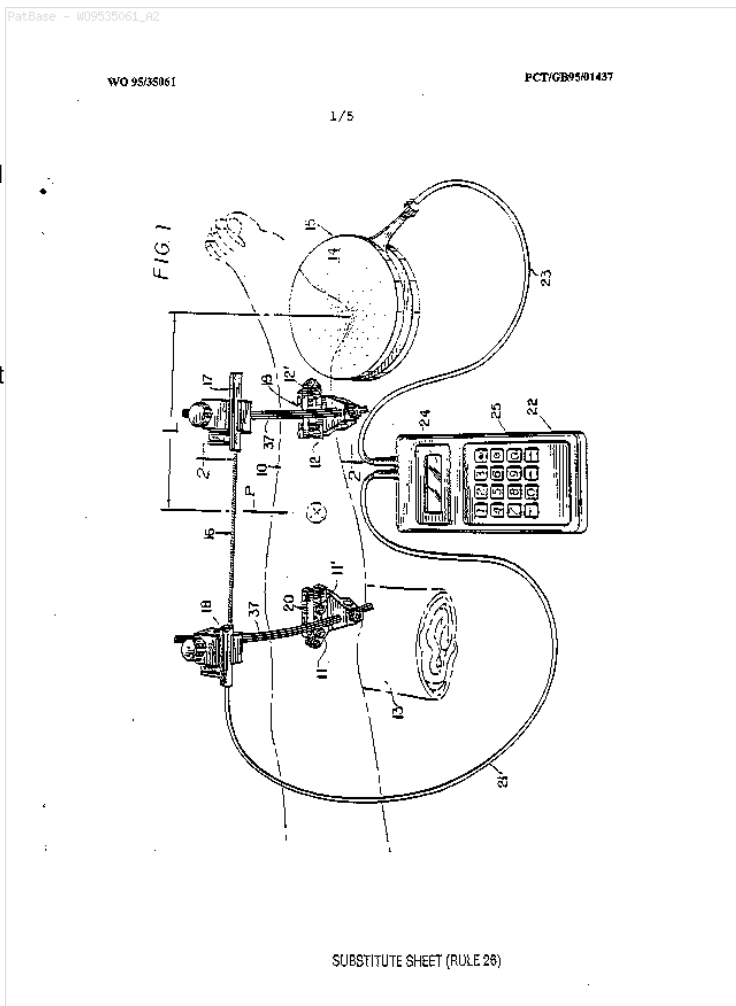
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Forward Citations: WO9700643, US9307951, US8123688, US6877239, US5895364, US5792077, US5697165, US2012298820, US2009043196, US2008086055, US2003056385, EP1911403,

Abstract:

Source: US5493788A A bone-stiffness measuring instrument comprises a set or kit of readily assembled and adjusted components, namely a goniometer, a light-weight load cell, and a small computer package, adapted to continuously respond to the outputs of the load cell and goniometer and to display and/or record (i.e., store) measured stiffness data; plus hardware in duplicate, namely, a bone-screw clamp and bracket for fixed reference to bone-screws that are externally exposed on each of the respective sides of the fracture (following removal of an external fixator), a stiff arcuate arm member of radius at least twice the diameter of the fractured bone, and a goniometer-end mount. The arcuate arm member is adjustably fixed to the bracket for bone-screw reference, and the goniometer-end mount is also adjustably fixed to the arcuate arm member, with a releasably lockable ball-joint connection for adjusted orientation of an end mounting to the goniometer.



32) Family number: 50238084 (US2011313460A)

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Title: SYSTEM FOR PERCUTANEOUSLY FIXING A CONNECTING ROD TO A SPINE

Priority: US20100818949 20100618 US20100818965 20100618 US20100818983 20100618
 US20100819000 20100618 US20100819007 20100618 US20120523266 20120614
 WO2011US39062 20110603 US20140493453 20140923 US20160242838 20160822

Family:	Publication number	Publication date	Application number	Application date
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Probable Assignee: SPINE WAVE INC**Assignee(s):^(std):** BOISVERT DAVID ; MCLEAN SCOTT ; SEYER STEVEN ; SPINE WAVE INC**Inventor(s):^(std):** BOISVERT DAVID ; MCLEAN SCOTT ; SEYER STEVEN**Agent(s):** FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; PIASETZKI NENNIGER KVAS LLP; VERMEULEN MARTIJN; HOFFMANN AND BARON LLP; HOFFMAN AND BARON LLP; BUDZYN LUDOMIR A ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [A61B17/56](#) [A61B17/60](#) [A61B17/68](#) [A61B17/70](#) [A61B17/86](#) [A61B17/88](#) (Advanced/Invention);
^{(IPC 8-9):} [A61B17/88](#) (Advanced/Non-invention)**CPC:** [A61B17/708](#) [A61B17/8888](#) [A61B17/7002](#) [A61B17/7034](#) [A61B17/7035](#) [A61B17/8875](#)
[A61B17/7083](#) [A61B17/7004](#) [A61B17/7032](#) [A61B17/7037](#) [A61B17/7076](#) [A61B17/7079](#)
[A61B17/7082](#) [A61B17/7085](#) [A61B17/7086](#) [A61B17/7011](#)

European class: A61B17/70B2 A61B17/70T2 A61B17/70T2B2 A61B17/70T2D A61B17/70T4
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US class: 1/1 606/104 606/264 606/264P 606/267 606/305 606/305P 606/306 606/60 606/86.00A
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[Classification Explorer](#)

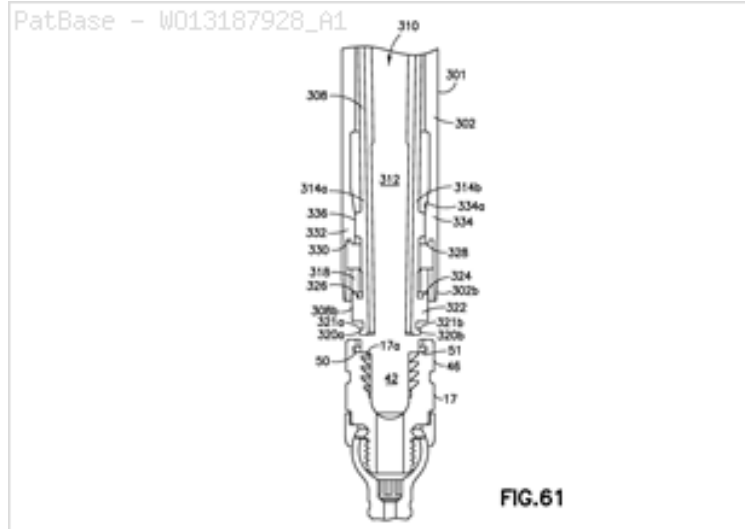
Cited documents: WO10111693 A1, WO10111693, USRE43526 E, USD488229 S1, US8439922 BA, US8273089 BB, US8235997 BB, US8231635 BB, US8206395 BB, US8202274 BB, US8197519 BB, US8192439 BB, US8167887 BB, US8142437 BB, US8097024 BB, US8096996 BB, US8038699 BB, US7951168 BB, US7918858 BB, US7909835 BB, US7887539 BB, US7854751 BB, US7758617 BB, US7758584 BB, US7708763 BB, US7691132 BB, US7686814 BB, US7666189 BB, US7666188 BB, US7651502 BB, US7648521 BB, US7648507 BB, US7648506 BB, US7621918 BB, US7618442 BB, US7597694 BB, US7588588 BB, US7588575 BB, US7572276 BB, US7563264 BB, US7527638 BB, US7520879 BB, US7497869 BB, US7491218 BB, US7491208 BB, US7476240 BB, US7473267 BB, US7465306 BB, US7420279 BB, US7306603 BB, US7278995 BB, US7250052 BB, US7188626 BB, US7179261 BB, US7160300 BB, US7090680 BB, US7011660 BB, US7008422 BB, US6945933 BB, US6860889 BB, US6857343 BA, US6830574 BB, US6802844 BB, US6793656 BA, US6716218 BB, US6660006 BB, US6530929 BA, US6530926 BA, US6440133 BA, US6319257 BA, US6235028 BA, US6188472 BA, US6183472 BA, US6139549 A, US6102934 A, US6090113 A, US5961554 A, US5961538 A, US5954635 A, US5948002 A, US5910141 A, US5902231 A, US5897574 A, US5814072 A, US5741261 A, US5720751 A, US5458608 A, US5439464 A, US5411503 A, US5263953 A, US5242443 A, US5092866 A, US5049151 A, US4913134 A, US4736738 A, US4657001 A, US4448191 A, US4411259 A, US4411191 A, US4238339 A, US2669896 A, US2014052187 AA, US2013103096 AA, US2013035726 AA, US2012271365 AA, US2012215266 AA, US2012203288 AA, US2012197317 AA, US2012191144 AA, US2012150237 AA, US2012031792 AA, US2012029580 AA, US2012022594 AA, US2011313477 AA, US2011313476 AA, US2011313475 AA, US2011313471 AA, US2011313470 AA, US2011313464 AA, US2011313463 AA, US2011313460 AA, US2011257692 AA, US2011245881 AA, US2011218581 AA, US2011172723 AA, US2011166610 AA, US2011152940 AA, US2011125192 AA, US2011106179 AA, US2011087298 AA, US2011040328 AA, US2011034962 AA, US2011022093 AA, US2011022088 AA, US2010331849 AA, US2010312279 AA, US2010222828 AA, US2010174326 AA, US2010145389 AA, US2010145349 AA, US2010145348 AA, US2010137915 AA, US2010137875 AA, US2010094359 AA, US2010069972 AA, US2010049206 AA, US2010036443 AA, US2010030283 AA, US2010024487 AA, US2010004695 AA, US2009318972 AA, US2009312797 AA, US2009264930 AA, US2009228055 AA, US2009228054 AA, US2009228053 AA, US2009182382 AA, US2009171391 AA, US2009157125 AA, US2009149892 AA, US2009149887 AA, US2009143828 AA, US2009138056 AA, US2009105774 AA, US2009105712 AA, US2009099172 AA, US2009082811 AA, US2009082775 AA, US2009082666 AA, US2009005814 AA, US2008319477 AA, US2008312703 AA, US2008275456 AA, US2008262551 AA, US2008262255 AA, US2008221626 AA, US2008208258 AA, US2008125788 AA, US2008119858 AA, US2008119857 AA, US2008077139 AA, US2008077135 AA, US2008051794 AA, US2008051787 AA, US2008045970 AA, US2008039838 AA, US2008009864 AA, US2007233097 AA, US2007213722 AA, US2007198015 AA, US2007185491 AA, US2007173745 AA, US2007167954 AA, US2007162010 AA, US2007078460 AA, US2007016199 AA, US2007016198 AA, US2007016188 AA, US2006293693 AA, US2006276803 AA, US2006264962 AA, US2006264942 AA, US2006247630 AA, US2006229614 AA, US2006200135 AA, US2006200132 AA, US2006149238 AA, US2006142761 AA, US2006111714 AA, US2006111713 AA, US2006111712 AA, US2006084993 AA, US2006074445 AA, US2006074418 AA, US2005277934 AA, US2005245928 AA, US2005228380 AA, US2005192579 AA, US2005192570 AA, US2005171540 AA, US2005154389 AA, US2005131422 AA, US2005131408 AA, US2005080418 AA, US2005065517 AA, US2005033299 AA, US2004267275 AA, US2004147937 AA, US2004138662 AA, US2004138662, US2003208203 AA, US2002161368 AA, US2002161268 AA, JP2010512178 T2, JP2010512178, JP2009524497 T2, JP2009524497, JP2009505748 T2, JP2009505748,

Forward Citations: WO15066325, WO15034943, WO14074892, WO13187928, WO13102102, WO13085958, US9642655, US9636152, US9636151, US9636146, US9629669, US9629668, US9610107, US9603634, US9597119, US9566092, US9554835, US9554833, US9545280, US9532815, US9526553, US9526536, US9526534, US9522021, US9510874, US9504496, US9492209, US9486256, US9480516, US9451993, US9439692, US9439684, US9433446, US9402660, US9387018, US9333012, US9308027, US9265533, US9220543, US9220539, US9161788, US9149302, US9125703, US9113962, US9060817, US9055978, US9050146, US9050139, US9023087, US9011450, US8998960, US8936623, US8936605, US8932303, US8926672, US8926670, US8911478, US8876869, US8870928, US8852239, US8845640, US8828059, US8777954, US8740950, US8663281, US8657826,

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Abstract:

Source: US2011313460A A system for percutaneously fixing a connecting rod to vertebrae comprises first and second bone screws, each with a corresponding hollow bone screw extension mounted thereto, and a connecting rod of length sized for simultaneous receipt in the yokes of the bone screws. A rod introducer is provided for inserting the connecting rod into slots of the screw extensions and into the yokes of the bone screws. A rod persuader may also be provided that is attachable to at least one of the screw extensions, the rod persuader being operable to engage the connecting rod and urge the rod into the slot of the yoke of the corresponding bone screws. A rod detector may also be provided for insertion one of the screw extensions, the rod detector having an indicator sensing the presence of a rod in the slot of the yoke of at least one of the bone screws.



33) Family number: 14949919 (US6176860B)

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Title: Orthopaedic fixator**Priority:** IL19950114714 19950724 WO1996IB00785 19960724

Family:	Publication number	Publication date	Application number	Application date
	AT193818 E	20000615	AT19960925045T	19960724
	AU199669180 A1	19970218	AU19960069180	19960724
	CA2226914 AA	19980114	CA19962226914	19960724
	CA2226914 C	20041012	CA19962226914	19960724
	DE69608901 D1	20000720	DE19966008901	19960724
	DE69608901 T2	20001207	DE19966008901T	19960724
	EP0840573 A1	19980513	EP19960925045	19960724
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	IL114714 A0	19951127	IL19950114714	19950724
	IL114714 A1	19981227	IL19950114714	19950724
	US6176860 BA	20010123	US19980077756	19980611
	WO9703620 A1	19970206	WO1996IB00785	19960724

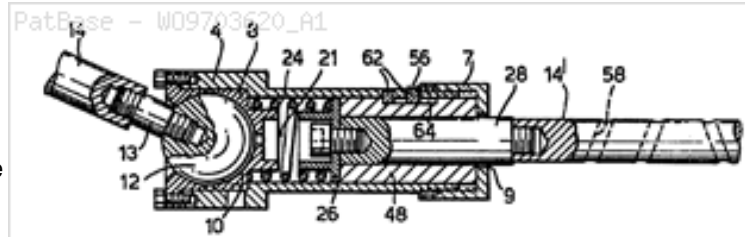
Probable Assignee: HADASIT MEDICAL RESEARCH SERVICES AND DEVELOPMENT CO LTD**Assignee(s):^(std):** HADASIT MED RES SERVICE ; HADASIT MEDICAL RES SERVICES AND ; HOWARD CHARLES**Assignee(s):** HADASIT MEDICAL RESEARCH SERVICES AND DEVELOPMENT COMPANY LTD ; HADASIT MEDICAL RESEARCH SERVICES AND DEVELOPMENT CO LTD ; HADASIT MEDICAL RESEARCH SERVICES AND DEVELOPMENT CO LTD JERUSALEM ; HADASIT MEDICAL RESEARCH SERVICES AND DEVELOPMENT CO ; HADASIT MEDICAL RESEARCH SERVICES AND DEVELOPMENT LTD ; HADASIT MEDICAL RESEARCH SERVICES AND ; HADASIT MEDICAL RESEARCH SERVICES AND DEVELOPMENT ; CHARLES HOWARD**Inventor(s):^(std):** HOWARD CHARLES**Inventor(s):** CHARLES HOWARD**Agent(s):** RICHES MCKENZIE AND HERBERT LLP; WOLFF BREGMAN AND GOLLER**Designated states:** AT AU BE BR CA CH CN DE DK ES FI FR GB GE GR HU IE IT JP KR LI LU MC MX NL NO NZ PL PT RU SE TR UA US**International class**
(IPC 8-9): [A61B17/64](#) [A61B17/66](#) (Advanced/Invention);
[A61B17/60](#) (Core/Invention)**International class**
(IPC 1-7): [A61B17/60](#) [A61B17/64](#) [A61B17/66](#) [A61F](#)**CPC:** [A61B17/6491](#)**European class:** [A61B17/64P](#)**US class:** [606/54](#) [606/57](#)[Classification Explorer](#)**Cited documents:** US6036691 A, US6024745 A, US6022349 A, US5941877 A, US5928230 A, US5803924 A, US5688271 A, US5556398 A, US5320622 A, US5207676 A, US4782842 A, US4730608 A, US4714076 A, US4628919 A, US4621627 A, US4475546 A, US4312336 A, GB2258155 A1, FR2633345 A1, FR1206411 A, EP0424292 A2, EP0314021 A2,**Forward Citations:** WO15096861, WO14140831, WO09023751, WO04008981, WO02078554, WO0191655, WO0191654, US9655651, US9655648, US9622781, US9610103, US9468466, US9463045, US9398957, US9393045, US9301782, US9278004, US9220533, US9168065, US9155561, US9125746, US9114016, US9101398, US9060867, US9044270, US9034049, US9034016, US9005298, US9005252, US8945128, US8894714, US8845724, US8834467, US8801795, US8758343, US8709090,

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Abstract:

Source: US6176860B The invention provides a dynamic external fixator, including an elongate body having an axial bore accommodating, in a first portion thereof, at least part of a first member of a universal joint and, in a second portion thereof, a linear guide element, a first arm having an end portion carrying the second member of said universal joint. The arm is provided with a plurality of apertures for the traversing therethrough of bone pins.

There is also provided a second arm integral with, or fixedly attached to, a member of the guide element and provided with a plurality of apertures for the traversing therethrough of bone pins, and a spring accommodated in the axial bore of the body and bearing, on the one hand, against the first member of the universal joint and, on the other, at least indirectly, against the guide element, thereby opposing forces acting on the second arm.



34) Family number: 29990894 (EP1016381A1)

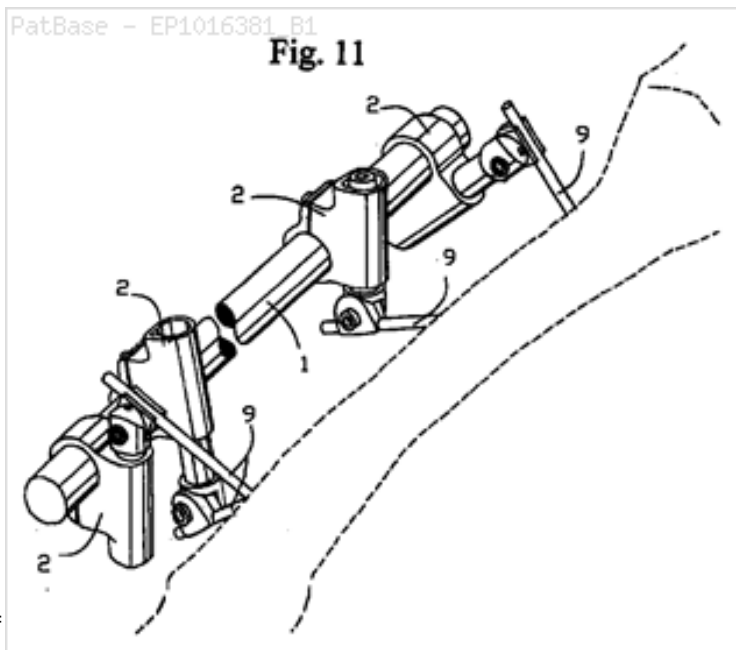
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Title: External fixation system with telescopic pin or arm holding unit**Priority:** EP19980600018 19981123

Family:	Publication number	Publication date	Application number	Application date
	AT255852 E	20031215	AT19980600018T	19981123
	DE69820464 D1	20040122	DE19986020464	19981123
	DE69820464 T2	20041007	DE19986020464T	19981123
	EP1016381 A1	20000705	EP19980600018	19981123
	EP1016381 B1	20031210	EP19980600018	19981123

Probable Assignee: KONSTANTINOS MALIZOS**Assignee(s):**^(std) KONSTANTINOS MALIZOS ; KOURTIS HRAKLIS ; KOURTIS LAMBROS**Inventor(s):**^(std) KOURTIS LAMBROS ; KOURTIS HRAKLIS ; KONSTANTINOS MALIZOS**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**International class**
(IPC 1-7): [A61B17/64](#)**CPC:** [A61B17/645](#) [A61B17/6466](#)**European class:** [A61B17/64M](#) [K61B17/64H](#)[Classification Explorer](#)**Cited documents:** WO9812975 A2, WO9202185 A1, WO9111149 A1,**Forward Citations:** WO04112625, US9622781, US9492198, US9220533, US9155561, US9101398, US8945128, US8906020, US8834467, US8758343, US8641714, US8114077, US8062293, US8057474, US7914557, US7591838, KR100861395, JP2007505267, EP2085035, DE102004056091, DE102004056091, DE102004056091, AU2009200332,**Abstract:**

Source: EP1016381A1 The invention belongs to the field of Orthopedic Surgery, Traumatology and Distraction Osteogenesis and consists of a telescopic unit used in an external fixation system, as well as of an external fixation system with telescopic units and has a wide range of applications in all therapeutic surgical practices which today use systems of external fixation. The telescopic mechanism carried by each unit of the system, in combination with the way the telescopic units are attached to the rod of the system, allow for each held pin the choice of five degrees of free spatial movement and, indeed, separately and independently of the rest of the held pins. Furthermore, it offers a wide range of choices to the user, with regard to the number of the telescopic units and the combination of the components he will choose to place on the rod, in order to achieve the best, in his opinion, stabilisation of the bone to be restored, while, for the same reason, he may incorporate in the system a second rod with the same wide range of choice, number of telescopic units and combination of components he will choose to place, which he will attach to the first rod.



0) US2008047560A – DELIVERY OF RESPIRATORY THERAPY

35) Family number: 41179175 (US2008047560A)

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Title: DELIVERY OF RESPIRATORY THERAPY

Priority:

AU20070278766	20070727	AU20070905737	20071022	AU20070906102	20071106
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Family:

Publication number	Publication date	Application number	Application date
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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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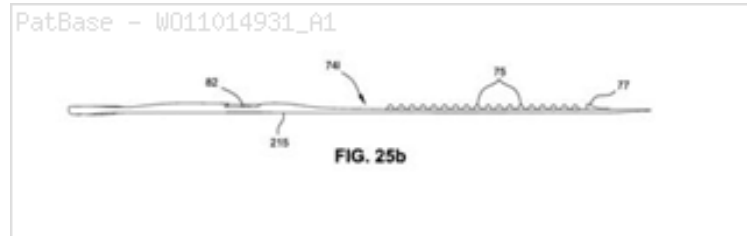
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Abstract:

Source: US2008047560A A patient interface includes a sealing arrangement adapted to provide an effective seal with the patient's nose, an inlet conduit arrangement adapted to deliver breathable gas to the sealing arrangement, and a cover that substantially encloses the sealing arrangement and/or the inlet conduit arrangement.



36) Family number: 30781353 (US2004158254A)

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Title: INSTRUMENT AND METHOD FOR MILLING A PATH INTO BONE

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Probable Assignee: WARSAW ORTHOPEDIC INC

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CENTER/TOWER; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP
BANK ONE CENTER TOWER; MEDTRONIC ATTN NOREEN C JOHNSON IP LEGAL
DEPARTMENT; HAYNES BOONE LLP

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AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV
LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL
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International class
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A61F2/46 (Advanced/Non-invention);
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US class:

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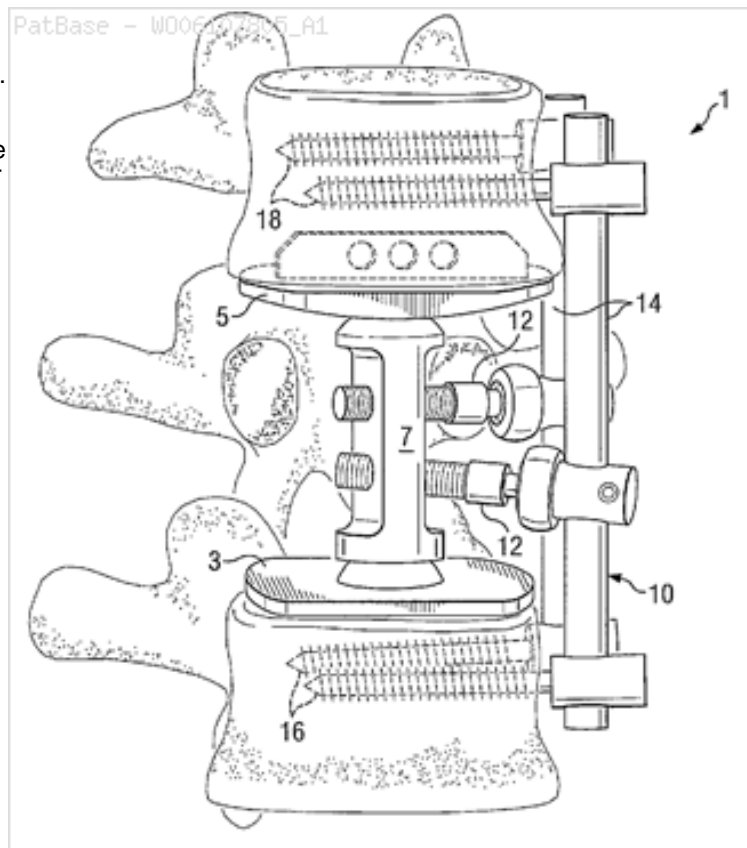
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Abstract:

Source: US2004158254A An instrument and method for cutting a path in bone are provided. The instrument includes a curved guide member defining a curved opening extending therein, and a bit member positioned within the opening of the guide member. The bit member is adapted to move within the opening of the guide member to cut a path in bone.



37) Family number: 3310707 (US4584995A)

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Title: External fixation device

Priority: US19840604047 19840426 US19850791222 19851025 WO1988US04070 19881115
US19860828051 19860210 US19870122397 19871119

Family:	Publication number	Publication date	Application number	Application date
	<u>AU198927957 A1</u>	19890705	AU19890027957	19881115
	<u>US4584995 A</u>	19860429	US19840604047	19840426
	<u>US4747400 A</u>	19880531	US19850791222	19851025
	<u>US4757809 A</u>	19880719	US19860828051	19860210
	<u>US4895141 A</u>	19900123	US19870122397	19871119
	<u>WO8905126 A1</u>	19890615	WO1988US04070	19881115

Probable Assignee: HARRINGTON ARTHRITIS RES

Assignee(s):^(std): HARRINGTON ARTHRITIS RES ; ORTHOTIC LIMITED PARTNERSHIP ; ORTHOTIC PARTNERSHIP LTD

Assignee(s): ORTHOTIC LTD ; ORTHOTIC PARTNERSHIP A PARTNERSHIP OF AZ LTD ; HARRINGTON ARTHRITIS RESEARCH CENTER ; HARRINGTON ARTHRITIS RESEARCH CENTER 1800 EAST VAN

Inventor(s):^(std): HANSEN THOMAS M ; KOENEMAN JAMES B ; PHILLIPS MARK ; WEINSTEIN ALLAN M

Inventor(s): ALLAN M WEINSTEIN ; THOMAS M HANSEN ; MARK PHILLIPS ; JAMES B KOENEMAN

Designated states: AT AU BB BE BG BJ BR CF CG CH CM DE DK FI FR GA GB HU IT JP KP KR LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG

International class
(IPC 8-9): A61B17/64 A61B17/66 (Advanced/Invention);
A61B17/60 (Core/Invention)

International class
(IPC 1-7): A61B17/60 A61F5/04

CPC: A61B17/6416 A61B17/66 A61B17/645 Y10T24/3978 Y10T403/7016 Y10T403/7069

European class: A61B17/64C A61B17/64H A61B17/66 K61B17/66

US class: 128/84B 128/92A 128/92R 128/92Z 128/92ZW 24/136B 248/316.2 403/354 403/374 403/374.4 606/54 606/57 606/59

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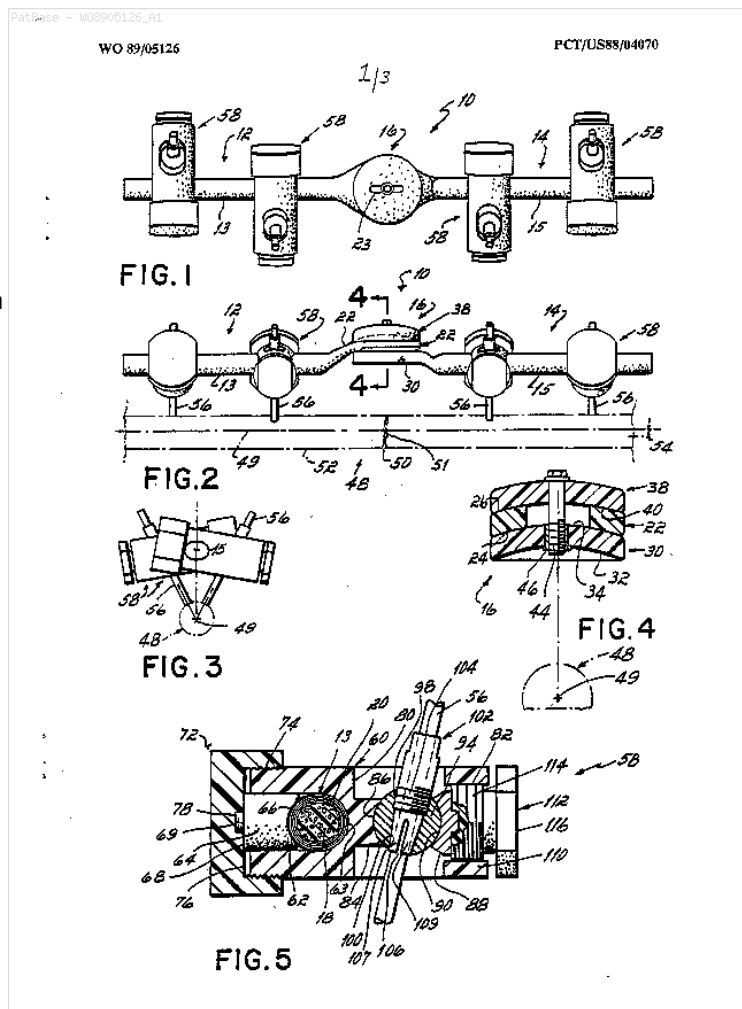
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Forward Citations: WO9949792, WO9901071, WO8905126, WO8810099, WO8808281, WO12051312, WO10036440, WO09023751, WO07122385, WO07122385, WO06102166, WO06102166, WO04045389, WO02069827, WO0156486, US9622781, US9597117, US9597116, US9532805, US9526523, US9510859, US9408635, US9371624, US9351764, US9308033, US9277937, US9273715, US9249551, US9247997, US9186179, US9155561, US9149296, US9138260, US9084631, US9084630, US8888777, US8840611, US8828056, US8808291, US8771319, US8763719, US8758343, US8734446, US8728078, US8696668, US8496072, US8486069, US8434969, US8425574, US8419732, US8388619, US8382757, US8377061, US8366710, US8361073, US8277448, US8262657, US8241285, US7931650, US7881770,

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Abstract:

Source: US4584995A An external fixation device for the reduction of severely compounded or infected long bone fractures with substantial soft tissue involvement comprises at least two sets of retaining pins, each set including at least one retaining pin adapted to secure the bone portion distally or proximally of the fracture, a frame having a center section disposed between spaced end sections, and a pair of coupling elements mounted to the end sections of the frame each connecting one set of retaining pins to the frame. One of the coupling elements is adapted to move longitudinally, parallel to the longitudinal axis of the frame so as to properly position and secure one set of retaining pins and the bone portion connected thereto. The other coupling element is connected to a second set of retaining pins and is adapted to translate and pivot such pins, and the bone portion attached thereto, about three mutually orthogonal axes independently of the first coupling element. The frame and coupling elements of the fixation device are preassembled to simplify installation of the device during a surgical procedure and to facilitate post-operative distraction or compression of the fracture site.



38) Family number: 48763450 (US2011093021A)

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Title: BONE ANCHOR ASSEMBLIES AND METHODS OF MANUFACTURING AND USE THEREOF

Priority: EP20100824157 20101015 US20090580777 20091016 WO2010US52828 20101015 US20130740403 20130114

Family:	Publication number	Publication date	Application number	Application date
	<u>DE602010027965 D1</u>	20151112	DE201060027965T	20101015
	<u>EP2488117 A1</u>	20120822	EP20100824157	20101015
	<u>EP2488117 A4</u>	20130306	EP20100824157	20101015
	<u>EP2488117 B1</u>	20150930	EP20100824157	20101015
	<u>US2011093021 AA</u>	20110421	US20090580777	20091016
	<u>US2013131731 AA</u>	20130523	US20130740403	20130114
	<u>US8361123 BB</u>	20130129	US20090580777	20091016
	<u>US9161782 BB</u>	20151020	US20130740403	20130114
	<u>WO11047251 A1</u>	20110421	WO2010US52828	20101015

Probable Assignee: DEPUY SYNTHES PRODUCTS INC

Assignee(s):^(std): DEPUY SPINE INC ; DEPUY SYNTHES PRODUCTS INC ; DOORIS ANDREW P ; POTTER LEIGH W ; FANGER JONATHAN ; DEPUY SYNTHES PRODUCTS LLC

Assignee(s): HAND INNOVATIONS LLC ; DEPUY SPINE INC RAYNHAM ; DEPUY SPINE LLC

Inventor(s):^(std): DOORIS ANDREW P ; FANGER JONATHAN ; POTTER LEIGH W

Inventor(s): POTTER LEIGH W RAYNHAM ; FANGER JONATHAN RAYNHAM ; DOORIS ANDREW P RAYNHAM

Agent(s): BOEHMERT AND BOEHMERT ANWALTSPARTNERSCHAFT MBB PATENTANWALTE RECHTSANWALTE; ORR ROBERT; JOHNSON PHILIP S ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A61B17/56 A61B17/70 A61B17/86 B23P11/00 (Advanced/Invention);
A61B17/86 (Advanced/Non-invention)

CPC: A61B17/7034 A61B17/7032 A61B17/7037 A61B17/864 Y10T29/49826

European class: A61B17/70B5B K61B17/70B2 K61B17/86D

US class: 1/1 29/428 29/428S 606/270 606/278 606/301 606/301S 606/308 606/308P

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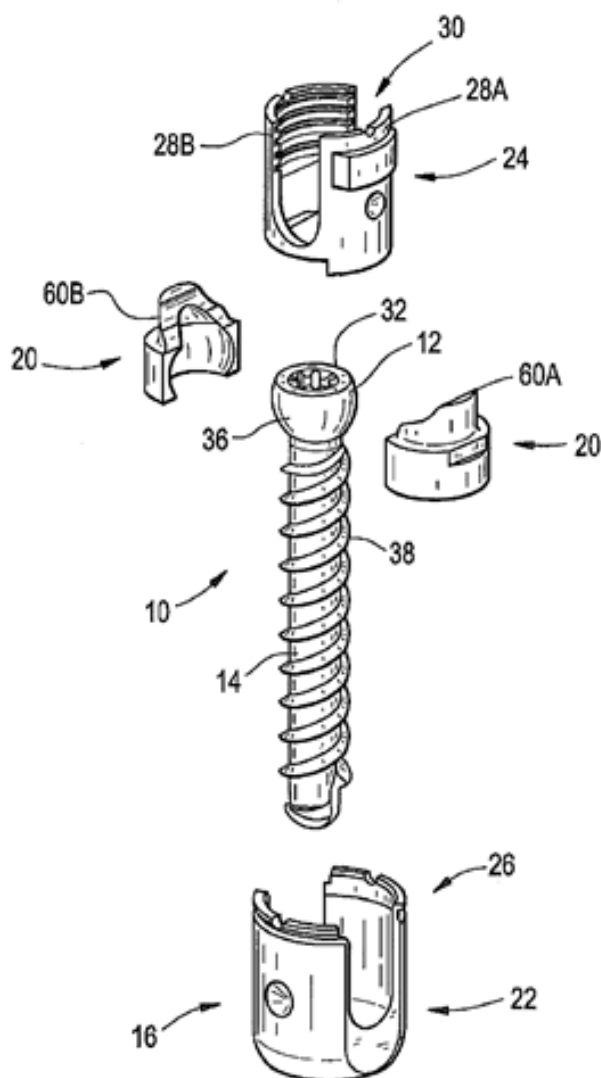
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WO13045603, WO13028851, WO12154478, WO12154478, USRE46115, US9636146, US9597119, US9579125, US9566092, US9522021, US9504497, US9504496, US9463047, US9451993, US9451991, US9393048, US9393047, US9308027, US9271761, US9265548, US9168069, US9161782, US9155580, US9044272, US9011495, US8998960, US8998959, US8936623, US8926672, US8926670, US8911478, US8870928, US8852239, US8491641, US8449578, US8361129, US2016066958, US2015289905, US2014228890, US2014228887, US2014163618, US2013013003, US2012165881, US2012078307, US2011112578, US2008015580, KR101576901, JP2015116486, EP2886073, CN104720881, CN103702628,

Abstract:

Source: US2011093021A A bone anchor assembly includes a bone anchor having a proximal head and a distal shaft configured to engage bone, a receiver member for receiving a spinal fixation element to be coupled to the bone anchor, an insert positioned in the proximal end of the receiver member having a pair of spaced apart insert arms defining a recess therebetween, and a closure mechanism positionable between and engaging the insert arms to capture a spinal fixation element within the recess of the insert and fix the spinal fixation element with respect to the receiver member.

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FIG. 1

39) Family number: 28325079 (US2002133175A)

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Title: SURGICAL NAVIGATION SYSTEMS AND PROCESSES FOR UNICOMPARTMENTAL KNEE ARTHROPLASTY

Priority: US20010271818P 20010227 US20020084012 20020227 US20020084291 20020227
 US20020229372 20020827 US20020355899P 20020211 US20020084278 20020227
 US20050098209 20050404 US20070697957 20070409 US20060645295 20061222
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Family:

Publication number	Publication date	Application number	Application date
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<u>US2011071532 AA</u>	20110324	US20100898365	20101005	
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<u>US2012226481 AA</u>	20120906	US20120470765	20120514	
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<u>WO02067783 C2</u>	20031113	WO2002US05955	20020227	
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<u>WO06044367 A1</u>	20060427	WO2005US36507	20051012	
<u>ZA200501122 A</u>	20070131	ZA20050001122	20050208	

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Assignee(s): N A

Inventor(s):^(std): CARSON CHRISTOPHER ; CARSON CHRISTOPHER P ; CARSON CHRISTOPHER PATRICK ; CHRISTOPHER P CARSON ; CHRISTOPHER PATRICK CARSON ; CRISTA SMOTHERS ; LYONS CHRISTOPHER M ; PATRICK CARSON CHRISTOPHER ; SMOTHERS CRISTA

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International class
(IPC 8-9): A61B17/00 A61B17/15 A61B17/16 A61B17/56 A61B17/58 A61B17/88 A61B17/90
A61B19/00 A61B5/103 A61F2/38 A61F2/46 G06G7/60 (Advanced/Invention);
A61B17/00 A61B17/70 A61B19/00 A61F2/30 A61F2/38 A61F2/46 (Advanced/Non-invention);
A61B17/14 A61B17/56 A61B17/58 A61B19/00 A61F2/38 A61F2/46 (Core/Invention);
A61B17/00 A61B17/70 A61B19/00 A61F2/30 A61F2/38 (Core/Non-invention);
A61B (Subclass/Invention)

International class
(IPC 1-7): A61B17/00 A61B17/15 A61B17/56 A61B17/58 A61B19/00 A61B5/05 A61F2/46

CPC: A61B34/10 A61B34/25 A61B90/10 A61B2034/102 A61B2034/105 A61B2034/108 A61B2034/2055 A61B2034/2068 A61B2034/2072 A61B2034/252 A61B2034/254 A61B2034/256 A61B2090/3916 A61B2090/3983 A61B2090/376 A61B2034/107 A61B17/154 A61B17/70 A61F2/38 A61F2/3859 A61F2/389 A61F2/4657 A61F2/4684 A61F2002/30616 A61F2002/30892 A61F2002/4632 A61F2/461 A61B2017/00725 A61F2002/3895 A61B90/36 A61B34/20

European class: A61B17/15K A61B19/20 A61B19/52 A61B19/52H12 A61F2/46B6 K61B17/00Q8 K61B17/70 K61B19/50 K61B19/50B2 K61B19/50B4 K61B19/50D K61B19/50F K61B19/52H10 K61B19/52H12 K61B19/52H12B6 K61B19/52H12D K61B19/52H12F K61B19/54B6 K61B19/54T K61B19/56 K61B19/56B K61B19/56D K61B19/56F K61F2/30A3W32S K61F2/30L2S9P K61F2/38 K61F2/38F K61F2/38T K61F2/38U K61F2/46D K61F2/46M K61F2/46T

US class: 128/898 378/205 378/205P 600/424 600/424P 600/426 600/426S 600/427 600/427S 600/587 606/13 606/130 606/130P 606/130S 606/72 606/86.00RS 606/86R 606/87 606/87S 606/88 606/88P 606/88S 606/89 606/96 606/96P 703/1

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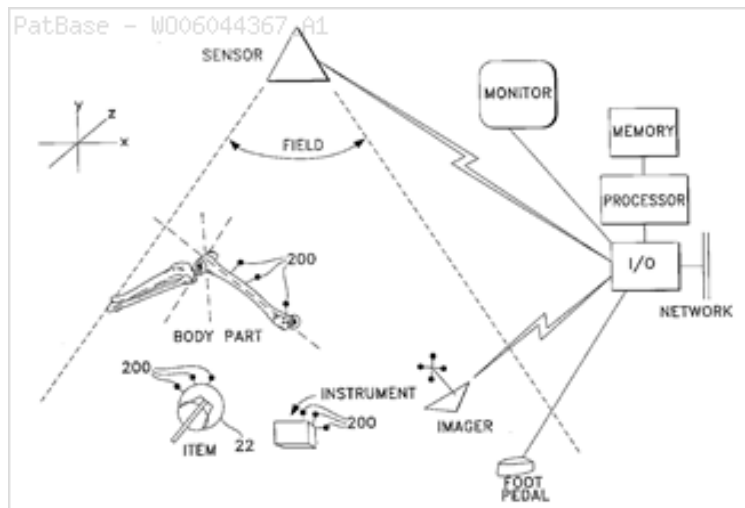
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Abstract:

Source: US2002133175A Systems and processes for tracking anatomy, instrumentation, trial implants, implants, and references, and rendering images and data related to them in connection with surgical operations, for example unicompartmental knee arthroplasties ("UKA"). These systems and processes are accomplished by using a computer to intraoperatively obtain images of body parts and to register, navigate, and track surgical instruments.



0) US4620533A – EXTERNAL BONE FIXATION APPARATUS

40) Family number: 23434775 (US4620533A)

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Title: External bone fixation apparatus

Priority: CA19860518047 19860912 EP19860306947 19860909 EP19860306947 19860909
US19850776259 19850916

Family:

Publication number	Publication date	Application number	Application date
<u>AT64083 E</u>	19910615	AT19860306947T	19860909
<u>AU198662698 A1</u>	19870319	AU19860062698	19860915
<u>AU569664 B2</u>	19880211	AU19860062698	19860915
<u>BRPI8604413 A</u>	19870512	BR1986PI04413	19860915
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<u>DE3679624 D1</u>	19910711	DE19863679624	19860909
<u>DK169511 B1</u>	19941114	DK19860004399	19860915
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<u>EP0216563 A1</u>	19870401	EP19860306947	19860909
<u>EP0216563 B1</u>	19910605	EP19860306947	19860909
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<u>FI863727 A0</u>	19860915	FI19860003727	19860915
<u>FI93606 B</u>	19950131	FI19860003727	19860915
<u>FI93606 C</u>	19950510	FI19860003727	19860915
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<u>IE59031 B</u>	19931215	IE19860002431	19860911
<u>IE862431 L</u>	19870316	IE19860002431	19860911
<u>IL80019 A0</u>	19861231	IL19860080019	19860912
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<u>JP62066850 A2</u>	19870326	JP19860215584	19860912
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<u>NO175962 C</u>	19950111	NO19860003669	19860915
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<u>NZ217569 A</u>	19891128	NZ19860217569	19860912
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<u>US4620533 A</u>	19861104	US19850776259	19850916
<u>ZA8606992 A</u>	19880427	ZA19860006992	19860915

Probable Assignee: HOWMEDICA OSTEONICS CORP

Assignee(s):^(std): HOWMEDICA ; PFIZER HOSPITAL PROD ; PFIZER HOSPITAL PRODUCTS GROUP INC

Assignee(s): STRYKER INT INC ; PFIZER HOSPITAL PRODUCTS GROUP INC NEW YORK N Y US ; BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIA ; MTG DIVESTITURES INC ; HOWMEDICA INC ; HOWMEDICA OSTEONICS CORP ; HOWMEDICAL LEIBINGER INC ; PFIZER HOSPITAL PROD GROUP INC ; MEARS

DANA C ; STRYKER TECHNOLOGIES CORP ; STRYKER CORP ; STRYKER FAR EAST INC ; STRYKER INT ; PHYSIOTHERAPY ASSOCIATES INC ; STRYKER PUERTO RICO INC ; STRYKER SALES CORP ; STRYKER FOREIGN HOLDCO INC ; SMD CORP

Inventor(s):^(std): MEARS DANA CHRISTOPHE ; MEARS DANA C ; MEARS D C ; DANA KURISUTOFUAA MEAZU ; DANA CHRISTOPHER MEARS ; CHRISTOPHER MEARS DANA ; MEARS DANA CHRISTOPHER

Inventor(s): MEARS DANA CHRISTOPHER OAKMONT PENNSYLVANIA US

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR; LUZZATTO AND LUZZATTO

Designated states: AT BE CH DE FR GB IT LI LU NL SE

International class
(IPC 8-9): A61B17/56 A61B17/60 A61B17/64 A61B17/86 A61B19/00 A61F2/28 A61F5/00 A61F5/04 (Advanced/Invention);
A61B17/60 A61B17/86 A61B19/00 A61F2/28 (Advanced/Non-invention);
A61B17/56 A61B17/60 A61F2/28 A61F5/04 (Core/Invention);
A61B17/68 A61B19/00 (Core/Non-invention)

International class
(IPC 1-7): A61B17/56 A61B17/60 A61F17/58 A61F5/00 A61F5/04

CPC: A61B17/645 A61B17/6466 A61B17/8695 A61B2017/00902

European class: A61B17/64H A61B17/64M K61B17/00S25 K61B17/86W

US class: 128/92Z 606/54

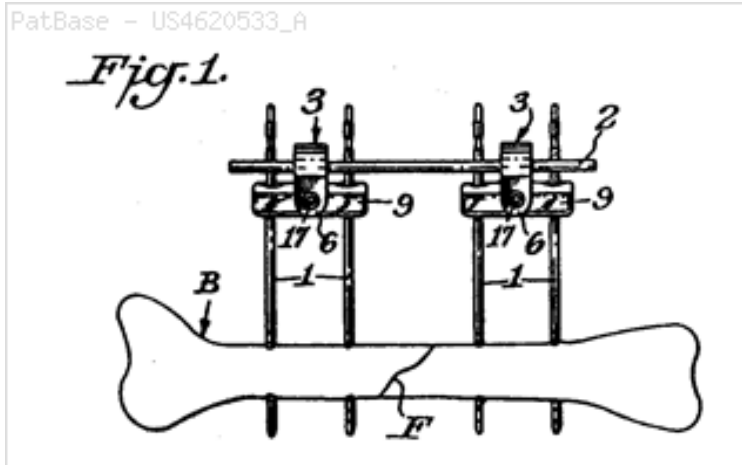
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Forward Citations: WO9922661, WO9815231, WO9626680, WO9626679, WO9626678, WO9412113, WO9400066, WO9214426, WO8905126, WO8807357, WO8801152, WO16138220, WO15014441, WO07045702, WO0217802, WO0038585, USRE40914, USD720853, USD704840, USD683461, USD682426, USD663030, USD633208, US9642649, US9622780, US9579131, US9554837, US9549762, US9545266, US9539030, US9532805, US9517089, US9510859, US9498370, US9439679, US9408635, US9402651, US9370380, US9351764, US9301783, US9277937, US9259242, US9186179, US9155577, US9149296, US9138260, US9089368, US9084631, US9084630, US9060815, US9050135, US9039706, US8992579, US8945129, US8888777, US8864763, US8840653, US8840611, US8827999, US8827998, US8808291, US8758343, US8734446, US8728078, US8696668, US8685023, US8657857, US8657819, US8523923, US8523858, US8506602, US8486069, US8382757, US8382755, US8372073, US8366710, US8361073, US8303587, US8277448, US8241285, US8235994, US8147490, US8123747, US8034085, US7938829, US7931650, US7887537, US7758582, US7736380, US7731738, US7717916, US7708736, US7699848, US7608074, US7588571, US7575575, US7572277, US7507240, US7261713, US7241074, US7147640, US7147640, US7048735, US7041103, US7004943, US6793655, US6702814, US6652523, US6616664, US6565564, US6514254, US6491694, US6248104, US6221072, US6206879, US6171309, US6171308, US6162224, US6159210, US6129727, US6001097, US5976136, US5976125, US5971984, US5961515, US5797908, US5776134, US5769851, US5743898, US5728095, US5702389, US5662650, US5653707, US5601551, US5591164, US5562661, US5501684, US5496319, US5443464, US5393161, US5358504, US5222954, US5152280, US5098432, US5074866, US5062844, US5062415, US5047029, US4978348, US4941481, US4920959, US4895141, US2016278813, US2016192964, US2016157891, US2015351800, US2014303622, US2014303621, US2014276815, US2013158551, US2013116692, US2013006244, US2012089142, US2012004659, US2011245883, US2011172663, US2011098707, US2011098706, US2011087226, US2010234845, US2010160972, US2010100096, US2010087819, US2010076436, US2009299368, US2009287212, US2009254086, US2009088751, US2009048599, US2009036891, US2008275510, US2008247818, US2008221571, US2008200952, US2007293860, US2007249979, US2007233061, US2007231059, US2006155276, US2006079892, US2006039750, US2005277920, US2005240181, US2005154388, US2004044344, US2003191468, US2003181911, US2003109879, JP6165788, JP4226654, JP3380589, JP3330383, GB2290616, GB2290616, GB2255284, GB2213733, FR2831792, FR2725613, FR2698534, FR2674120, FR2665353, ES2246744, ES2059272, ES2056027, EP2526196, EP2526196, EP2030583, EP2030583, EP1987792, EP1229846, EP1184000, EP0784962, EP0707832, EP0578320, EP0567423,

Abstract:

Source: US4620533A An apparatus for the external fixation and stabilization of a bone fracture comprising fixation pins attached to at least one rigid bar through adjustable clamps which are translatable along said rigid bar wherein the attachment of the pins and bar to the clamps is through articulating balls which allow universal rotational adjustment of each pin or bar. A method for the external fixation and stabilization of a bone fracture utilizing said apparatus is also disclosed.



41) Family number: 31575473 (US2005038432A)

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Title: ARTICULATING SPINAL FIXATION ROD AND SYSTEM**Priority:** US20030462098 20030613 US20030465902P 20030425 US20030642399 20030815
WO2004US26112 20040812 US20060428269 20060630**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2004266653 AA</u>	20050303	AU20040266653	20040812
<u>AU2004266653 BB</u>	20100415	AU20040266653	20040812
<u>CA2535797 AA</u>	20060214	CA20042535797	20040812
<u>CN100553573 C</u>	20091028	CN200480027587	20040812
<u>CN1893880 A</u>	20070110	CN200480027587	20040812
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<u>EP1663028 A4</u>	20081029	EP20040780882	20040812
<u>JP2007502662 T2</u>	20070215	JP20060523927T	20040812
<u>US2005038432 AA</u>	20050217	US20030642399	20030815
<u>US2007016194 AA</u>	20070118	US20060428269	20060630
<u>US7083621 BB</u>	20060801	US20030642399	20030815
<u>US8211153 BB</u>	20120703	US20060428269	20060630
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Probable Assignee: WARSAW ORTHOPEDIC INC**Assignee(s):^(std):** MEDTRONIC VERTELINK INC ; MEDTRONIC VERTELINK INK ; NGUYEN THANH V ; NGUYEN THANH VAN ; PHAM TO V ; SHAOLIAN SAMUEL M ; TEITELBAUM GEORGE P ; SDGI HOLDINGS INC ; SDGI HOLDING INC ; WARSAW ORTHOPEDIC INC**Assignee(s):** VERTELINK CORP ; VERTILINK CORP**Inventor(s):^(std):** GEORGE P TEITELBAUM ; NGUYEN THANH V ; NGUYEN THANH VAN ; SHAOLIAN SAMUEL M ; SHAOLIAN SAMUEL M NGUYEN THANH ; PHAM TO V ; SAMUEL M SHAOLIAN ; TEITELBAUM GEORGE P ; THANH VAN NGUYEN ; TO V PHAM**Inventor(s):** SHAOLIAN SAMUEL ; SHAOLIAN SAMUEL M NGUYEN THANH VAN PHAM TO V ; SHAOLIAN SAMUEL M NGUYEN THANH VAN PHAM TO V TEITE ; TEITELBAUM GEORGE ; PHAM TO ; NGUYEN THANH**Agent(s):** FB RICE; SMART AND BIGGAR; KOBAYASHI YASUSHI; CHIBA AKIO; SAKUMA SHIGERU; KANDA FUJIHIRO; ONO SHINJIRO; HASHIMOTO MASAO; TAKEUCHI SHIGEO; SHAMOTO ICHIO; TOMITA HIROYUKI; UCHIDA HIROSHI; ITO TAKAMI; KNOBBE MARTENS OLSON AND BEAR LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
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A61B17/22 A61B17/34 A61B17/86 A61B17/90 (Advanced/Non-invention);
A61B17/16 A61B17/56 A61B17/58 A61B17/70 A61B17/88 A61F2/30 A61F2/44 (Core/Invention);
A61B17/22 A61B17/34 A61B17/68 (Core/Non-invention)**International class**
(IPC 1-7): A61B17/56**CPC:** A61B17/1671 A61B17/1615 A61B17/1642 A61B17/1757 A61B17/3468 A61B17/3472 A61B17/7001 A61B17/7004 A61B17/7005 A61B17/7011 A61B17/7019 A61B17/702

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European class: A61B17/16S4 A61B17/17S4 A61B17/70B A61B17/70B1R A61B17/70B5F A61B17/70T2D
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US class: 606/256 606/256S 606/259 606/259S 606/260 606/279 606/61 606/73 606/86.00A
606/86.00AP 606/86A

Classification Explorer

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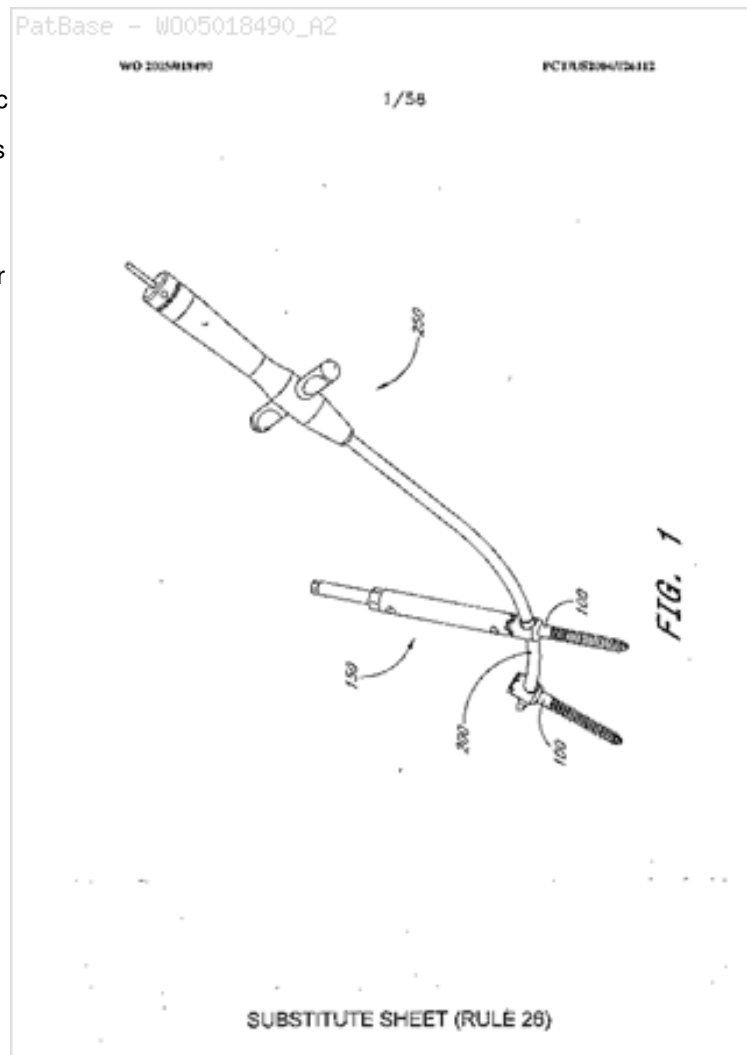
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Abstract:

Source: US2005038432A The present invention relates generally to systems and methods for aligning and implanting orthopedic fixation or stabilization implants within the body. In one embodiment, the system includes at least two bone anchors, at least one of which is provided with a transverse portal and a locking member. In one aspect, the system also includes at least one linkage rod, for linking two or more bone anchors through their respective locking members. The linking rod may include at least one angularly adjustable joint, which may be fixed by actuating the locking member. The bone anchors and the linkage rod may be locked into place to form a spinal fusion or fixation prosthesis.



42) Family number: 52816290 (US2013018428A)

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Title: ORTHOPEDIC FIXATION DEVICES AND METHODS OF INSTALLATION THEREOF

Priority: US20110183965 20110715 US20140514796 20141015 US20150849736 20150910
 US20160193289 20160627 US20160378157 20161214 US20170409600 20170119
 WO2012US46829 20120715

Family:	Publication number	Publication date	Application number	Application date
	EP2731525 A1	20140521	EP20120815294	20120715
	EP2731525 A4	20151007	EP20120815294	20120715
	JP2014527851 T2	20141023	JP20140521683T	20120715
	US2013018428 AA	20130117	US20110183965	20110715
	US2015032165 AA	20150129	US20140514796	20141015
	US2015374413 AA	20151231	US20150849736	20150910
	US2016302831 AA	20161020	US20160193289	20160627
	US2017119437 AA	20170504	US20160378157	20161214
	US2017128104 AA	20170511	US20170409600	20170119
	US8888827 BB	20141118	US20110183965	20110715
	US9549763 BB	20170124	US20140514796	20141015
	WO13012763 A1	20130124	WO2012US46829	20120715

Probable Assignee: GLOBUS MEDICAL INC

Assignee(s):^(std) GEORGE MILAN ; GLOBUS MEDICAL INC ; HARPER MICHAEL ; MANNINEN KATHERINE ; PERKINS JOHN

Inventor(s):^(std) CIANFRANI JASON ; GEORGE MILAN ; HARPER MICHAEL ; MANNINEN KATHERINE ; NICHOLS JEFF ; HANSELL NOAH ; PERKINS JOHN ; SPANGLER DANIEL

Agent(s): MORABITO SARA; HARAKENZO WORLD PATENT AND TRADEMARK; CASTELLANO KRISTINA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A61B17/68](#) [A61B17/70](#) [A61B17/86](#) [A61B17/88](#) (Advanced/Invention)
 (IPC 8-9).

CPC: [A61B2017/681](#) [A61B2017/567](#) [A61B17/7037](#) [A61B17/7056](#) [A61B17/7082](#) [A61B17/888](#)
[A61B17/8695](#) [A61B17/8685](#) [A61B17/8605](#) [A61B17/7049](#) [A61B17/7035](#) [A61B17/7032](#)

US class: [606/266](#) [606/267](#) [606/270](#) [606/272](#) [606/278](#) [606/279](#) [606/305](#)

[Classification Explorer](#)

Cited documents: WOUS10319, WO9827884 A1, WO04089245 A2, USRE42932 E, US9526529 BB, US9510863 BB, US9498254 BB, US9480501 BB, US9445847 BB, US9445844 BB, US9387013 BA, US9364262 BB, US9320543 BB, US9289249 BB, US9289245 BB, US9283000 BB, US9259247 BB, US9186484 BB, US9084634 BA, US9060813 BA, US8998922 BB, US8951294 BB, US8911479 BB, US8888827 BB, US8876869 BA, US8771320 BB, US8556941 BB, US8337530 BB, US8328850 BB, US8167916 BB, US8167911 BB, US8167910 BB, US8162990 BB, US8137387 BB, US8137386 BB, US8128667 BB, US8092502 BB, US8021397 BB, US7972364 BB, US7967846 BB, US7942911 BB, US7942910 BB, US7914558 BB, US7875065 BB, US7837716 BB, US7833252 BB, US7833250 BB, US7811310 BB, US7789900 BB, US7789896 BB, US7780703 BB, US7776067 BB, US7686834 BB, US7662175 BB, US7625396 BB, US7572279 BB, US7513905 BB, US7513239 BB, US7491218 BB, US7476239 BB, US7338491 BB, US7322981 BB, US7306603 BB, US7294128 BB, US7291153 BB, US7291151 BB, US7250052 BB, US7235075 BA, US7223268 BB, US7214227 BB, US7144396 BB, US7141051 BB, US7125426 BB, US7087057 BB, US7081117 BB, US7081116 BA, US6997927 BB, US6918911 BB, US6896677 BA, US6893443 BB,

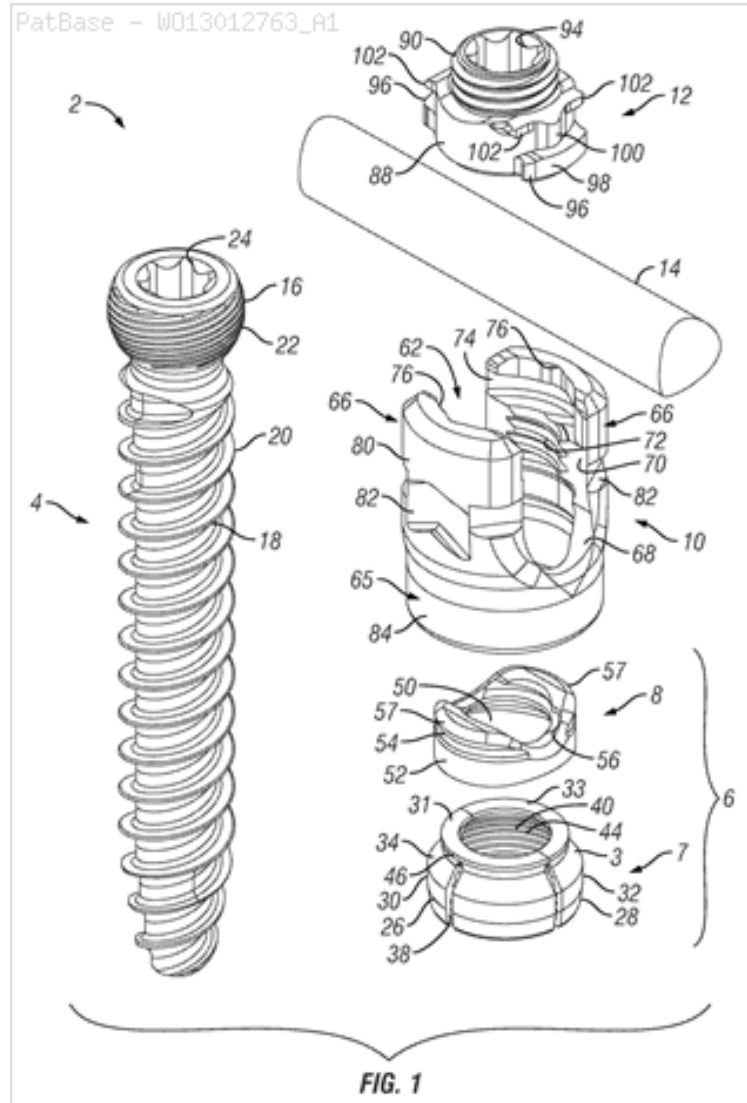
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Forward Citations:

WO15092300, US9526553, US9526535, US9510867, US9498253, US9439680, US9364266, US9113960, US2016262803, US2015374413, US2015313645, US2015282855, US2015012042, US2014018866, US2013345761, US2013338721, US2012150239, US2011301649, FR3015220, EP2918236, EP2829243,

Abstract:

Source: US2013018428A The present invention is generally directed to orthopedic fixation devices that comprise a coupling element and a bone fastener, whereby the bone fastener can be loaded into the coupling element through the bottom of a bore in the coupling element.



43) Family number: 52218696 (US2012277749A)

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Title: HINGED FIXATION DEVICES FOR COMBINED UPPER JAW CORRECTION

Priority: EP20120718851 20120426 JP20140508533T 20120426 US20110479135P 20110426
US20110514321P 20110802 US20120456337 20120426 JP20160131458 20160701
WO2012US35089 20120426 US20160004111 20160122

Family:	Publication number	Publication date	Application number	Application date
	EP2701620 A1	20140305	EP20120718851	20120426
	EP3064160 A1	20160907	EP20160163304	20120426
	JP2014519360 T2	20140814	JP20140508533T	20120426
	JP2016185391 A2	20161027	JP20160131458	20160701
	TW201313207 A	20130401	TW20120114895	20120426
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	US2016135859 AA	20160519	US20160004111	20160122
	WO12149087 A1	20121101	WO2012US35089	20120426
	WO12149087 A4	20130131	WO2012US35089	20120426

Probable Assignee: DEPUY SYNTHES PRODUCTS INC

Assignee(s):^(std): LIU ERIC ; MOOTIEN AZAGEN ; NOON JOHN M ; RICHTER JENS ; LUI ERIC ;
SYNTHES GMBH ; SYNTHES USA LLC ; DEPUY SYNTHES PRODUCTS INC

Assignee(s): DEPUY SYNTHES PRODUCTS LLC ; HAND INNOVATIONS LLC ; DEPUY SPINE LLC

Inventor(s):^(std): AZAGEN MOOTIEN ; ERIC LIU ; JOHN M NOON ; LIU ERIC ; LUI ERIC ; MOOTIEN
AZAGEN ; NOON JOHN M ; RICHTER JENS

Agent(s): KLUNKER SCHMITT NILSON HIRSCH; KATO MASANOBU; BAILEY DAVID R ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
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NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM
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International class [A61B17/66](#) [A61B17/68](#) [A61B17/80](#) [A61B17/88](#) [A61C7/00](#) (Advanced/Invention)
(IPC 8-9):

CPC: [A61B17/8023](#) [A61B17/8009](#) [A61B17/663](#) [A61B17/666](#) [A61B17/8071](#) [A61B17/8875](#)

European class: [A61B17/66J](#) [A61B17/66J2](#) [A61B17/80A1](#) [A61B17/80H4](#) [A61B17/88S](#)

US class: [606/281](#) [606/286](#) [606/289](#) [606/70](#) [606/71](#)

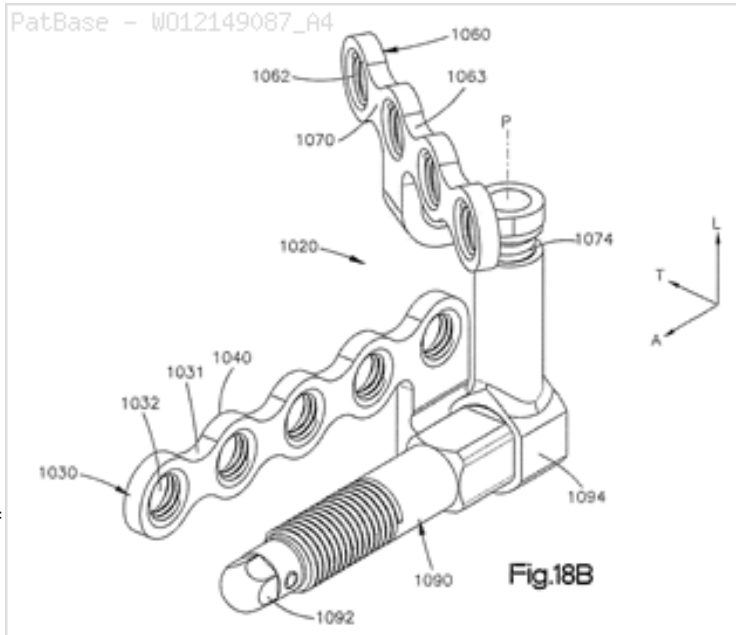
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JP2005523765 T2, JP2001037767 A2, CH693557,

Forward Citations: WO16197328, WO16197327, WO15065306, US9566443, US9247972, US9086198,
US8764441, US2016270884, US2016120582, US2014309638, US2012022604,
EP2735276, CN104665901,

Abstract:

Source: US2012277749A Instrumentation and methods are provided for upper jaw correction surgery. The application discloses an orthopedic system and method that can be used to perform both a first distraction (for example a maxillary distraction) and a second distraction (for example a maxillary expansion) within the same surgical procedure. The instrumentation for separating first and second bone segments can include a first footplate; a second footplate; an actuator arranged to vary a distance between the first and second footplates; and a hinge that rotatably attaches the first and second footplates such that the first and second footplates can be angularly adjusted relative to each other about a pivot axis. Additionally, instrumentation and methods are provided for a hinged fixation device capable of securing and adjusting both the linear separation and angular orientation of bone structures.



0) US2004039384A – DEVICE AND METHOD FOR PERTCUTANEOUS PLACEMENT O...

44) Family number: 30317130 (US2004039384A)

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Title: DEVICE AND METHOD FOR PERTCUTANEOUS PLACEMENT OF LUMBAR PEDICLE SCREWS AND CONNECTING RODS

Priority: EP20030793332 20030821 US20020320989 20021217 US20020405261P 20020821
US20060463546 20060809 US20060463539 20060809 US20060463543 20060809
WO2003US26435 20030821

Family:	Publication number	Publication date	Application number	Application date
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	AU2003260019 BB	20080424	AU20030260019	20030821
	CA2496371 AA	20050221	CA20032496371	20030821
	CA2496371 C	20121030	CA20032496371	20030821
	CN1700889 A	20051123	CN20038024485	20030821
	DE60325242 D1	20090122	DE20036025242	20030821
	EP1545355 A2	20050629	EP20030793332	20030821
	EP1545355 B1	20081210	EP20030793332	20030821
	EP2111809 A2	20091028	EP20080171095	20030821
	EP2111809 A3	20100113	EP20080171095	20030821
	MXPA05002050 A1	20050608	MX2005PA02050	20030821
	US2004039384 AA	20040226	US20020320989	20021217
	US2007016188 AA	20070118	US20060463546	20060809
	US2007016198 AA	20070118	US20060463539	20060809
	US2007016199 AA	20070118	US20060463543	20060809
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Probable Assignee: THEKEN SPINE LLC

Assignee(s):^(std): BENEDETTA MELNICK ; BOEHM FRANK H ; BOEHM FRANK H JR ; BOEHM JR FRANK H ; MELNICK BENEDETTA D ; INNOVATIVE SPINAL TECHNOLOGIES ; FRANK BOEHM JR ; MELNICK BENEDETTA B ; THEKEN SPINE LLC

Assignee(s): WELLS FARGO BANK NATIONAL ASSOCIATION ; GE BUSINESS FINANCIAL SERVICES INC ; INNOVATIVE SPINAL TECHNOLOGIES INC ; GE BUSINESS FINANCIAL SERVICES INC F K A MERRILL L ; GE BUSINESS FINANCIAL SERVICES INC F K A MERRILL LYNCH BUSINESS FINANCIAL SERVICES INC A LENDER AS ; SILICON VALLEY BANK AS AGENT AND AS A LENDER ; SILICON VALLEY BANK AGENT AND A LENDER AS ; MEINICK BENEDETTA D

Inventor(s):^(std): BOEHM FRANK H ; BOEHM FRANK H JR ; BOEHM FRANK H MELNICK BENEDETT ; BOEHM JR FRANK H ; MELNICK BENEDETTA B ; MELNICK BENEDETTA D ; THEKEN SPINE LLC

Inventor(s): BENEDETTA D MELNICK ; BOEHM FRANK ; FRANK H ; FRANK H JR BOEHM ; MEINICK BENEDETTA D ; MELNICK BENEDETTA ; BOEHM FRANK HJR

Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; MCFADDEN FINCHAM; GASTLE AND ASSOCIATES; OLSSON JAN; CARR LLP (IST); CARR LLP IST; CARR LLP; MIDDLETON REUTLINGER; ROBERT H; SCOTT W; CHAD D

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW

HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
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International class
(IPC 8-9): A61B17/17 A61B17/56 A61B17/70 A61B17/88 A61F2/30 (Advanced/Invention);
A61B17/32 A61B17/90 (Advanced/Non-invention);
A61B17/16 A61B17/56 A61B17/70 A61B17/88 A61F2/30 (Core/Invention);
A61B17/32 (Core/Non-invention)

International class
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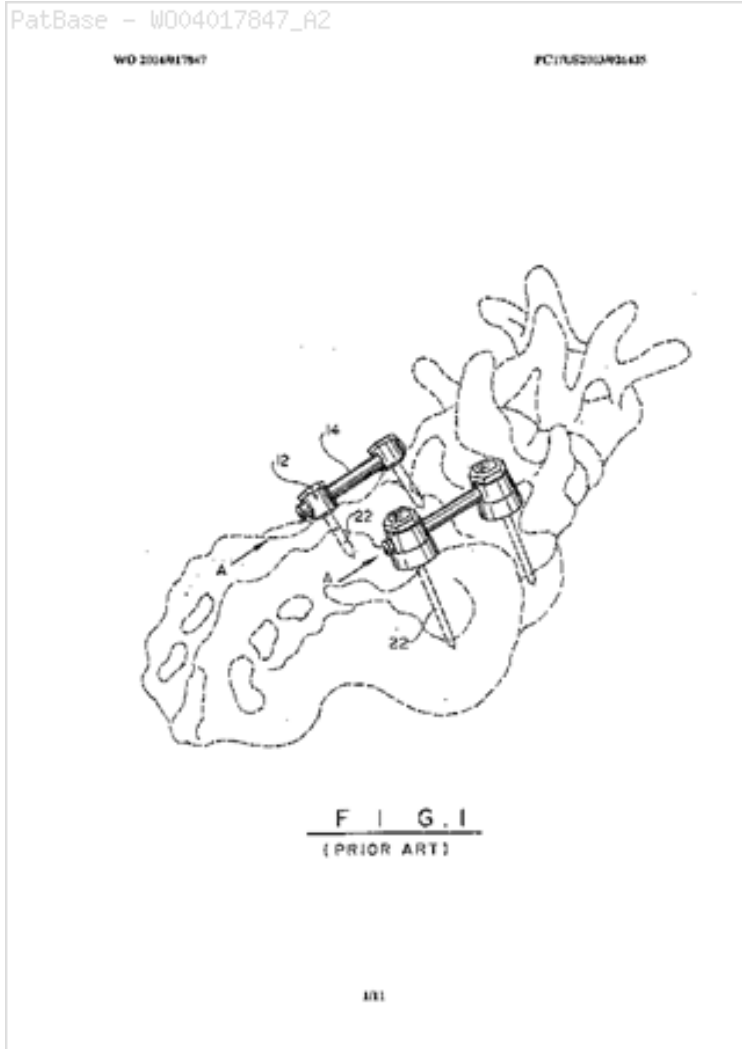
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Abstract:

Source: US2004039384A A minimally invasive method for stabilizing adjacent vertebrae to be fused is accomplished with a device configured to interlink the pedicles of the adjacent vertebrae and including multiple pedicle screws. Each of the pedicle screws has a screw head configured to receive a connecting rod in a position, in which the rod and the receiving pedicle screw are vertically aligned.



45) Family number: 30953273 (US2004181221A)

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Title: EXTERNAL FIXATOR**Priority:** US20030454217P 20030312 US20030734017 20031210 WO2004US07505 20040311**Family:**

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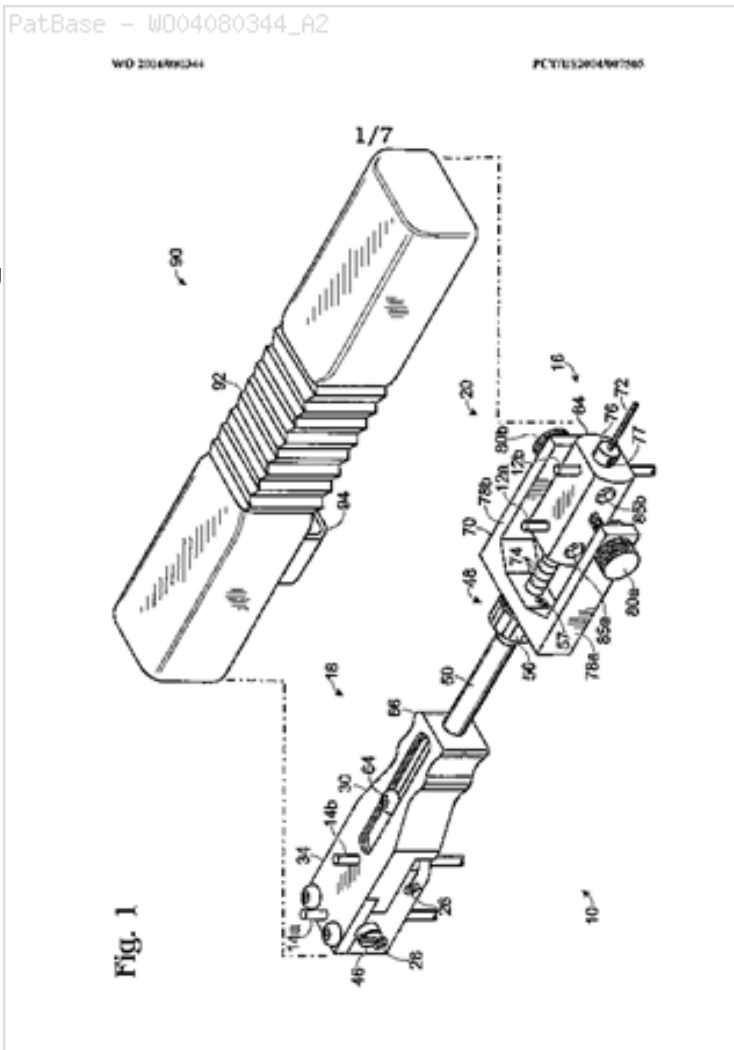
Probable Assignee: ACUMED LLC**Assignee(s):**^(std) ACUMED LLC ; HORST STEVEN P ; HUEBNER RANDALL J**Inventor(s):**^(std) HORST STEVEN P ; HUEBNER RANDALL J ; HUEBNER RANDALL JOSEPH**Inventor(s):** RANDALL JOSEPH HUEBNER ; STEVEN P HORST**Agent(s):** KOLISCH HARTWELL PC**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
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A61B17/58 A61B17/60 (Core/Invention)**International class**
^{(IPC 1-7):} A61B17/56 A61F**CPC:** A61B17/6425**European class:** A61B17/64D**US class:** 606/59[Classification Explorer](#)**Cited documents:** WO9635385, US6203548 BA, US6171309 BA, US6162224 A, US6162223 A, US5941877 A, US5897555 A, US583455 A, US583455, US5743898 A, US5718669 A, US5709681 A, US5624440 A, US5620442 A, US5601551 A, US5593405 A, US5437667 A, US5407241 A, US5383844 A, US5380322 A, US5376067 A, US5352228 A, US5342360 A, US5342288 A, US5334202 A, US5330474 A, US5320623 A, US5320622 A, US5314426 A, US5304177 A, US5300072 A, US5295958 A, US5292322 A, US5288286 A, US5286249 A, US5284468 A, US5281224 A, US5275599 A, US5267951 A, US5254078 A, US5209750 A, US5207676 A, US5203783 A, US5171310 A, US5167661 A, US5167628 A, US5160335 A, US5152771 A, US5152280 A, US5133342 A, US5125400 A, US5122140 A, US5108404 A, US5108396 A, US5108394 A, US5108393 A, US5102411 A, US5100403 A, US5098432 A, US5089015 A, US5080660 A, US5047041 A, US5042508 A, US5033457 A, US5032128 A, US5026372 A, US5026366 A, US5024618 A, US5019077 A, US5014681 A, US5011488 A, US5007896 A, US5003969 A, US4998935 A, US4994077 A, US4988349 A, US4979939 A, US4978348 A, US4976712 A, US496604 A, US496604, US4942872 A, US4941481 A, US4936843 A, US4923458 A, US4922896 A, US4913137 A, US4895141 A, US4883458 A, US4875495 A, US4869242 A, US4862879 A, US4859516 A, US4848368 A, US4823781 A, US4799629 A, US478899 A, US478899, US478495 A, US478495, US4777951 A,

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WO12024078, WO12024078, US9517093, US9414871, US9351763, US9259250, US9220533, US9155574, US9101398, US9060820, US8961518, US8961516, US8945128, US8906022, US8906020, US8870742, US8858555, US8834467, US8758343, US8591532, US8591395, US8506607, US8439917, US8382755, US8377079, US8337389, US8287541, US8287539, US8287538, US8233995, US8221439, US8192350, US8187163, US8187162, US8152710, US8142452, US8128559, US8114345, US8100870, US8066629, US8057492, US8034065, US8016745, US8016744, US7942875, US7927270, US7914533, US7909825, US7846162, US7844342, US7775966, US7775215, US7658196, US7396360, US2015283680, US2011015642, US2009018588, US2008200952, US2008039850, US2007012372, US2006085010, US2006084977, JP2011517998,

Source: US2004181221A Bone fixators for securing and/or repairing fractures and/or other defects of a distal radius and wrist. The bone fixators may include, among others, (1) a distal mounting element configured to be mounted in a metacarpal bone, or other hand bone, (2) a proximal mounting element configured to be mounted in the radius, the ulna, or other arm bone, (3) a distal member configured to be secured to the distal mounting element, (4) a proximal member configured to be secured to the proximal mounting element, and/or (5) a coupling, connecting the proximal member and the distal member, configured to allow immobilization, as well as adjustable flexion, rotation, and/or translation of the distal member relative to the proximal member.



46) Family number: 48873596 (US2011112639A)

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Title: POSITIONING SYSTEMS AND METHODS FOR IMPLANTING AN ENERGY ABSORBING SYSTEM**Priority:** EP20100828955 20101101 US20090259052P 20091106 US20120564095 20120801
US20100915606 20101029 US20120653230 20121016 US20120653221 20121016
WO2010US54999 20101101 US20120653249 20121016**Family:**

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AU2010315377 BB	20151015	AU20100315377	20101101
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US9526552 BB	20161227	US20120653230	20121016
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WO11056756 A3	20110901	WO2010US54999	20101101
WO14022055 A1	20140206	WO2013US49373	20130703

Probable Assignee: MOXIMED INC**Assignee(s):**^(std) CLIFFORD ANTON G ; LANDRY MICHAEL ; LANDRY MICHAEL E ; LOWE DAVID ;
MOXIMED INC ; SLONE CLINTON N ; O CONNELL MARY ; REGALA ALAN C ; SCHIFF
EZRA T ; RODE MICHAEL**Inventor(s):**^(std) CLIFFORD ANTON G ; LANDRY MICHAEL ; LANDRY MICHAEL E ; LOWE DAVID ; O
CONNELL MARY ; REGALA ALAN C ; RODE MICHAEL ; SCHIFF EZRA T ; SLONE
CLINTON N**Inventor(s):** O'CONNELL MARY**Agent(s):** GRIFFITH HACK; OYEN WIGGS GREEN AND MUTALA LLP; JANSEN CORNELIS
MARINUS; VO; INO SARI; KURASAWA ICHIRO; MATSUSHITA MITSURU; DESHIMARU
TAKESHI; KUMAKURA YOSHIO; ADAM J; CERMAK NAKAJIMA AND MCGOWAN LLP;
HANLEY JOHN V; CERMAK ADAM J ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
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ZW**International class** [A61B17/00](#) [A61B17/17](#) [A61B17/56](#) [A61B17/88](#) [A61B17/90](#) [A61F2/08](#) [A61F2/30](#) [A61F2/38](#)
^(IPC 8-9) [A61F2/46](#) (Advanced/Invention);
[A61B17/17](#) [A61B17/80](#) [A61B19/00](#) [A61F2/30](#) [A61F2/38](#) (Advanced/Non-invention)**CPC:**

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A61B2019/461 A61B2090/061

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K61F2/38D

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623/18.110S 623/20.14

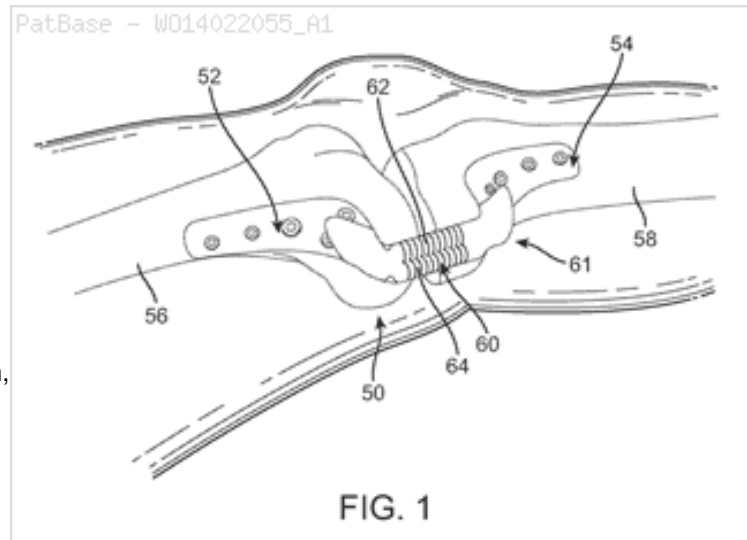
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Cited documents: WO024306, WO200909618, WO12024306 A2, WO09134446 A2, WO09134446, WO09009618 A1, WO04084740 A1, US7763020 BB, US7678147 BB, US7294133 BB, US6656189 BA, US6030386 A, US5928234 A, US2011112639 AA, US2010198275 AA, US2010063549 AA, US2009276054 AA, US2009024131 AA, US2009018665 AA, US2009018656 AA, US2009014016 AA, US2008287954 AA, US2008275560 AA, US2008262500 AA, US2008255575 AA, US2008082171 AA, US2006173463 AA, US2006122624 AA, US2005085920 AA, US2004243138 AA, US2004167533 AA, US2003055503 AA, US2002151903 AA, US2002147450 AA, US07294133, JP2009518134 T2, JP2009518134, JP2008508941 T2, JP2008508941, CA2725389 AA,

Forward Citations: WO14022055, WO13184481, WO13026786, US9622805, US9532804, US9526552, US9468466, US9314341, US9282996, US9278004, US9114016, US8845724, US8795287, US2015282848, US2015209092, US2014277446, US2014156005, US2013325122, US2008281331, FR2979056,

Abstract:

Source: US2011112639A Positioning instruments and related methods are described for implanting an energy absorbing system for treating joints. The positioning instruments and methods allow the energy absorbing system to be positioned at a joint such that the desired motion will occur for the particular design of a particular energy absorbing system which is to be implanted. The positioning instruments include a locating instrument for locating an anatomical feature and a target location for implantation of the energy absorbing system, a verification instrument for verification of the target location, a placement guide for guiding placement of a part of the energy absorbing system, and positioning device for aligning portions of the energy absorbing system.



47) Family number: 43941757 (WO0182677A2)

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Title: SYSTEM AND METHOD FOR JOINT RESURFACE REPAIR

Priority: EP20010997077 20011217 EP20120002103 20011217 US20000201049P 20000501
 US20010024077 20011217 US20020162533 20020604 WO2001US48821 20011217
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Family:

Publication number	Publication date	Application number	Application date
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AU2001259327 BB	20050217	AU20010259327	20010501
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AU2002248198 AA	20030630	AU20020248198	20011217
AU2002248198 BB	20070503	AU20020248198	20011217
AU2002357284 AA	20030630	AU20020357284	20021217
AU2002357284 BB	20070816	AU20020357284	20021217
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Probable Assignee: STD MFG INC**Assignee(s):^(std):** ARTHRO SURFACE INC ; ARTHROSURFACE INC ; EK STEVEN W ; STD MFG INC ; TALLARIDA STEVEN J**Inventor(s):^(std):** EK STEVEN ; EK STEVEN W ; TALLARIDA STEVEN ; TALLARIDA STEVEN J**Inventor(s):** STEVEN J TALLARIDA ; STEVEN W EK**Agent(s):** PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; KIERDORF THEODOR; POLYPATENT; KIERDORF RITSCHEL**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW

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International class
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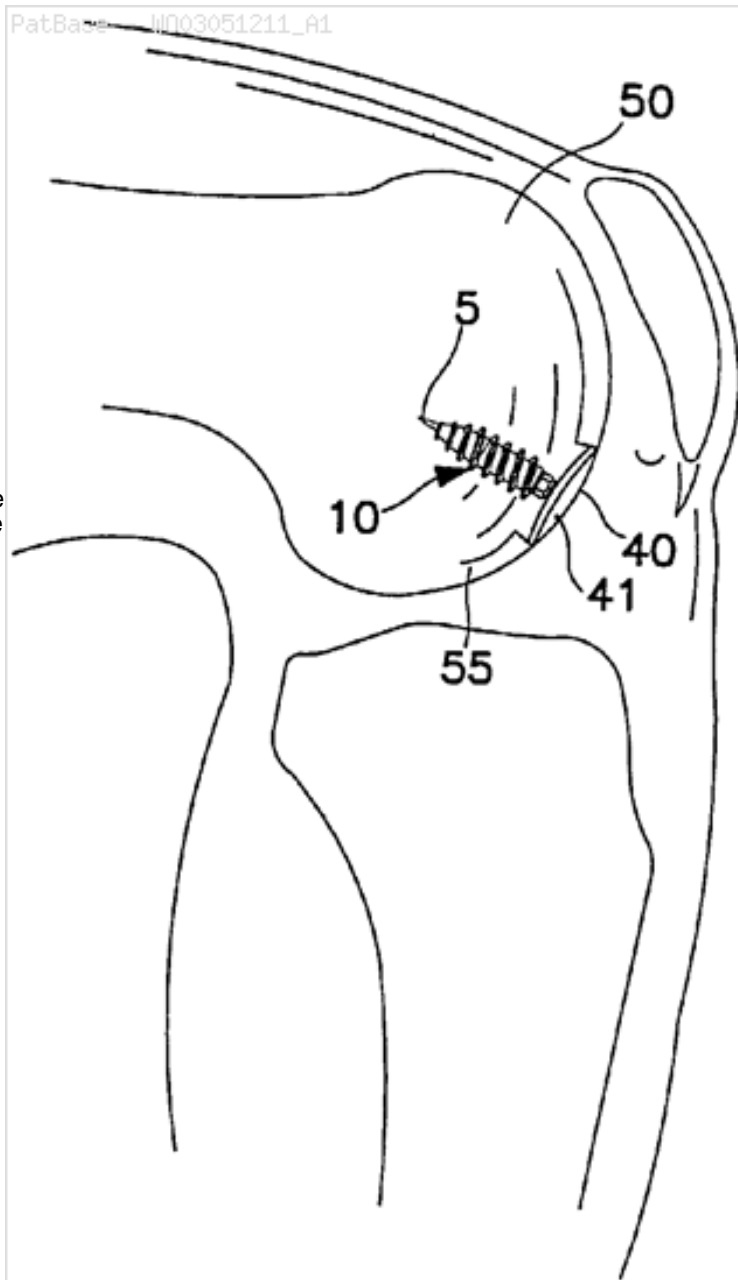
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US7618462, US7604641, US7588578, US7578824, US7534263, US7510558,
US7507242, US7488347, US7468075, US7462199, US7029479, US6679917,
US6610067, US6520964, JP2014147719, JP2013534153, JP2013531515,
JP2013526387, JP2013526386, JP2013526385, JP2013521888, JP2010524522,
JP2010227577, JP2009195705, JP2008526427, JP2008507354, JP2008073526,
JP2005144180, EP2389900, EP2324799, EP2233100, EP1980216, EP1686931,
EP1686931, EP1488745, EP1455666, EP1455665, CN104739548, CN103961171,
CN102405032, CN101879080, CN101879080, AU2009219482,

Abstract:

Source: WO0182677A2 The present invention provides tools and methods for mapping and measuring the articular surface of a joint (or of any bony surface) and for fabricating a prosthetic device based on this recorded data. In one embodiment, once the defect of the chondral surface has been identified, a guide pin (20) is inserted arthroscopically. A fixation screw (10) is driven into the subchondral bone in relation to a reference axis that is approximately central to the defect, the fixation device also serving to define a tangent point to the surrounding articular surface. A measuring tool (70) having a static post that establishes the axial location of origin is inserted on the reference axis. Data recorded during the mapping procedure is entered into parametric engineering design software of similar algorithm to define a three dimensional surface matched to the bearing surface geometry to be implanted and reproduce the anatomic contours mapped.



48) Family number: 1859858 (US4628919A)

© PatBase

Title: Dynamic external fixator and method of use

Priority: CA19840462535 19840906 US19830530608 19830909

Family:

Publication number	Publication date	Application number	Application date
BRPI8404487 A	19850730	BR1984PI04487	19840906
CA1232804 A1	19880216	CA19840462535	19840906
ES535749 A1	19860401	ES19840535749	19840907
ES8605968 A1	19861001	ES19840535749	19840907
FR2551650 A1	19850315	FR19840013791	19840907
GB2146533 A1	19850424	GB19840022534	19840906
GB2146533 B2	19860917	GB19840022534	19840906
GB8422534 A0	19841010	GB19840022534	19840906
IT1176675 A	19870818	IT19840022567	19840907
IT8422567 A0	19840907	IT19840022567	19840907
JP1840808 C3	19940425	JP19840188771	19840908
JP5047214 B4	19930716	JP19840188771	19840908
JP60077747 A2	19850502	JP19840188771	19840908
US4628919 A	19861216	US19830530608	19830909

Probable Assignee: ZIMMER TECHNOLOGY INC**Assignee(s):**^(std): TERII EI KURAIBAAN ; CLYBURN T A ; CLYBURN TERRY**Assignee(s):** CLYBURN TERRY A ; A CLYBURN TERRY ; TERRY A CLYBURN ; ZIMMER TECHNOLOGY INC**Inventor(s):**^(std): CLYBURN TERRY A ; TERII EI KURAIBAAN**Inventor(s):** TERRY A CLYBURN**Agent(s):** GOWLING LAFLEUR HENDERSON LLP

International class [A61B17/58](#) [A61B17/60](#) [A61B17/64](#) [A61F13/10](#) [A61F2/30](#) (Advanced/Invention);
^{(IPC 8-9):} [A61B17/58](#) [A61B17/60](#) [A61F2/30](#) (Core/Invention)

International class [A61B17/58](#) [A61B17/60](#) [A61B19/00](#) [A61F13/10](#) [A61F2/30](#) [A61F5/04](#)
^{(IPC 1-7):}

CPC: [A61B17/6425](#) [A61B17/6491](#)**European class:** [A61B17/64D](#) [A61B17/64P](#)**US class:** [128/92](#) [128/92ZK](#) [128/92ZZ](#) [606/55](#) [606/57](#)[Classification Explorer](#)**Cited documents:** US4554915 A, US4548199 A, US4312336 A, JP55081650 A2, GB2077847 A1, GB2001533 A1, GB1582133 A, EP0011258 B1, DE2718515 A1,

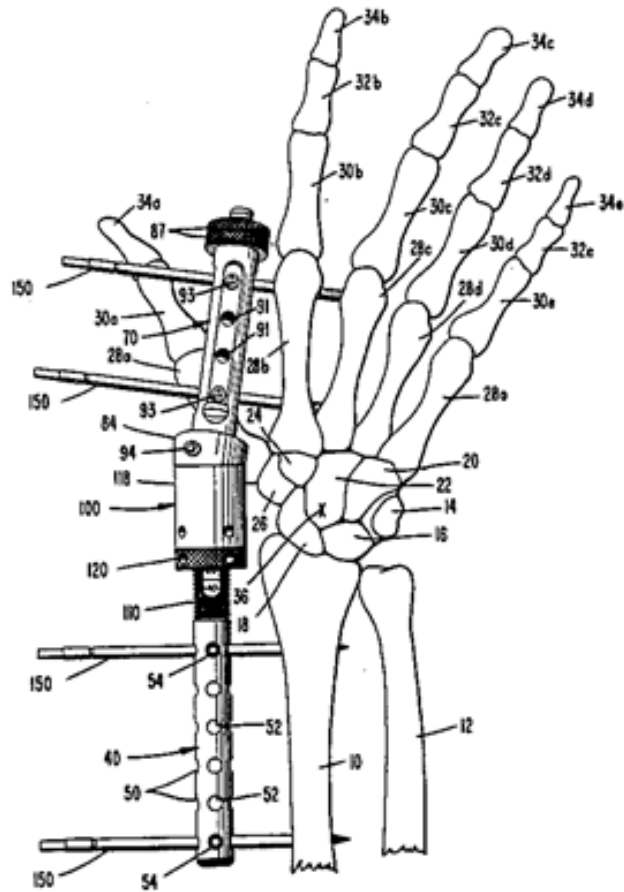
Forward Citations: WO9405227, WO9309726, WO8911254, WO8905126, WO17037733, WO09059119, WO03030759, WO03030759, WO0053109, WO0038585, US9649136, US9622781, US9498370, US9492199, US9408635, US9339306, US9155561, US9084632, US8808291, US8758343, US8585702, US8486069, US8419732, US8388619, US8382757, US8277448, US8235994, US8147519, US8137347, US8057473, US7985221, US7731738, US7699848, US7632271, US7588571, US7575575, US7507240, US7479142, US7291148, US7282052, US7261713, US7147640, US7147640, US7041103, US6746448, US6678562, US6652524, US6652523, US6565564, US6537275, US6530925, US6500177, US6428540, US6423061, US6340361, US6283964, US6245071, US6176860, US6171309, US6171308, US6162224, US6162223, US6056748, US6010501, US6004324, US5976134, US5976133, US5976125, US5968043, US5941877, US5897555, US5803924, US5766173, US5746741, US5743898, US5681309, US5662650, US5662649, US5658283, US5624440, US5545162, US5437667, US5429637, US5397322,

US5320623, US5122140, US5057109, US4978348, US4969886, US4968316, US4919119, US4895141, US4893618, US4782842, US2016022315, US2014066989, US2013218217, US2013018421, US2011103676, US2010100096, US2009118733, US2009099565, US2009012539, US2008221571, US2008200952, US2008021451, US2007282338, US2006177264, US2005203509, US2004097944, US2004097922, US2004059331, US2003191468, US2002164905, JP62286455, JP62277954, JP62066850, JP60190940, JP5602633, JP4240354, JP2016041268, JP2015013176, JP2014514024, JP2014514024, JP2011502028, JP2002058677, GB2280608, FR2824468, FR2787697, FR2559379, ES2064278, EP3162311, EP2214602, EP2214602, EP1434531, EP0845245, EP0397059, EP0261252, EP0261252, EP0248138, DE9419514, CN104837422, AU2014224096, AU2008318535,

Abstract:

Source: US4628919A A dynamic external fixator is disclosed which is designed to be applied externally along side the wrist by way of elongated bone fixation pins. The fixator includes two elongated legs connected by a universal joint. The proximal leg includes a series of holes for receipt of the bone fixation pins and associated threaded retainers to retain the bone fixation pins in the desired orientations. The distal leg includes a pistoning device which allows adjustability of the length thereof and further includes at least one set screw which reciprocates in a slot formed in the leg to enable the adjustment of the extension of the pistoning device thereof. The distal leg further includes a series of holes which receive the elongated bone fixation pins and further includes threaded members usable to maintain the bone fixation pins in a desired orientation. The universal joint includes means associated therewith which enables adjustment of the degree of movement of the proximal leg with respect to the distal leg and may also include means for indicating the degree of range of movement allowed in various adjusted positions thereof.

PatBase - US4628919_A



49) Family number: 29520468 (US5304177A)

© PatBase

Title: AUXILIARY DEVICE FOR OSTEOSYNTHESIS

Priority: CA19932099240 19930625 DE19924220936 19920626 DE19930020834U 19930622
 EP19930912613 19930622 DE19930020849U 19930622 DE19935005741 19930622
 WO1993DE00546 19930622 US19930077803 19930621 US19930058502 19930505

Family:

Publication number	Publication date	Application number	Application date
<u>AR248346 A1</u>	19950818	AR19930325266	19930625
<u>AT149813 E</u>	19970315	AT19930912613T	19930622
<u>AU199343074 A1</u>	19940124	AU19930043074	19930622
<u>AU659022 B2</u>	19950504	AU19930043074	19930622
<u>CA2099240 AA</u>	19931227	CA19932099240	19930625
<u>CA2099240 C</u>	19960716	CA19932099240	19930625
<u>DE4220936 C1</u>	19930916	DE19924220936	19920626
<u>DE59305741 D1</u>	19970417	DE19935005741	19930622
<u>DE9320834 U1</u>	19950316	DE19930020834U	19930622
<u>DE9320849 U1</u>	19950420	DE19930020849U	19930622
<u>DK0601152 T3</u>	19970901	DK19930912613T	19930622
<u>EP0601152 A1</u>	19940615	EP19930912613	19930622
<u>EP0601152 B1</u>	19970312	EP19930912613	19930622
<u>ES2099443 T3</u>	19970516	ES19930912613T	19930622
<u>GR3023313 T3</u>	19970829	GR19970400970T	19970502
<u>JP3306064 B2</u>	20020724	JP19940501945T	19930622
<u>JP6509970 T2</u>	19941110	JP19940501945T	19930622
<u>MX9303763 A1</u>	19940131	MX19930003763	19930623
<u>NO310055 B1</u>	20010514	NO19940000651	19940225
<u>NO940651 A</u>	19940225	NO19940000651	19940225
<u>NO940651 A0</u>	19940225	NO19940000651	19940225
<u>TR26959 A</u>	19940912	TR19930000571	19930624
<u>US5304177 A</u>	19940419	US19930077803	19930621
<u>WO9400067 A1</u>	19940106	WO1993DE00546	19930622
<u>ZA9304580 A</u>	19940629	ZA19930004580	19930625

Probable Assignee: PENNIG DIETMAR DR MED PRIV DOZ 5000 KOELN DE**Assignee(s):^(std):** PENNIG DIETMAR ; DIETMAR PENNIG DR MED

Assignee(s): DR MED DIETMAR PENNIG ; DR MED PENNIG DIETMAR ; DIETMAR PENNIG ;
 PENNIG DIETMAR DR MED ; PENNIG DIETMAR DR MED PRIV DOZ ; PENNIG
 DIETMAR DR MED PRIV DOZ 5000 KOELN DE ; PENNIG DIETMAR DR MED PRIV
 DOZ 50935 KOELN DE

Inventor(s):^(std): DIETMAR PENNIG ; PENNIG DIETMAR DR MED ; PENNIG DIETMAR**Inventor(s):** PENNIG DIETMAR DR MED PRIV DOZ**Agent(s):** GRIFFITH HACK; OGILVY RENAULT LLP SENCRL SRL**Designated states:** AT AU BE CH DE DK ES FR GB GR IE IT JP LI LU MC NL NO PT SE

International class A61B17/02 A61B17/60 A61B17/64 A61B17/66 (Advanced/Invention);
^{(IPC 8-9):} A61B17/02 A61B17/60 A61B17/66 (Advanced/Non-invention);
A61B17/60 (Core/Invention);
A61B17/02 (Core/Non-invention)

International class A61B17/16 A61B17/56 A61B17/60 A61B17/64 A61F5/04 B61B
^{(IPC 1-7):}

CPC: A61B17/6416 A61B17/6466 A61B17/6475 A61B17/66 A61B2017/0256 Y10T403/32311 Y10T403/7067 Y10T403/7171

European class: A61B17/64C A61B17/64M K61B17/02J2 K61B17/64M2 K61B17/66

US class: 403/374 403/374.3 403/396 403/90 606/58 606/59

[Classification Explorer](#)

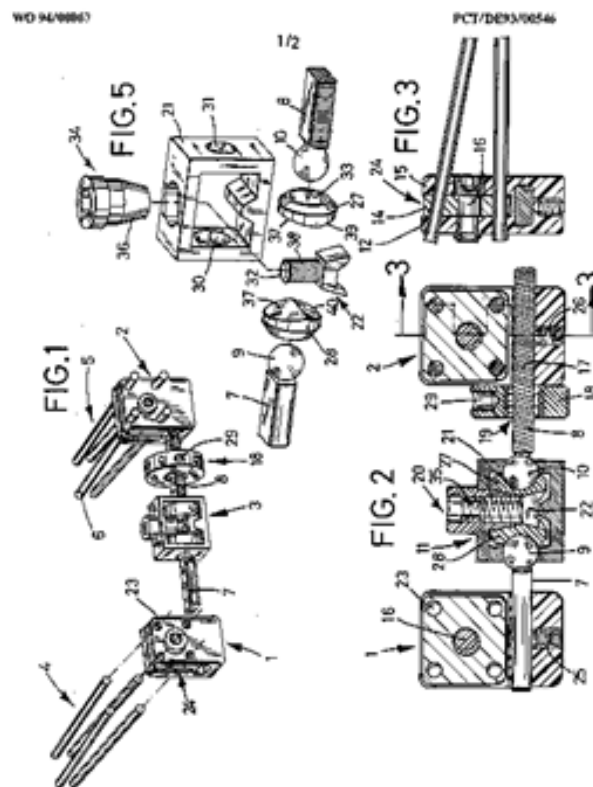
Cited documents: WO8805287 A1, USRE31809 E, US4988349 A, US4244360 A, US2391693 A, US2346346 A, SU1333327 T, GB2240043 A1, FR2628627 A1, FR2574653 A1, FR2531332 A1, EP0517939 A1, EP0490812 A1, EP0420813 A1, EP0024256 A2, EP0011258 B1, EP0011258 A1, DE3701533 C2, AU657574 B2, AU654908 B2, AU4046978 A1,

Forward Citations: WO9958072, WO9904714, WO9814130, WO9635385, WO15183226, WO12076695, WO05115260, WO03030759, WO03030759, USD720853, USD704840, USD683461, USD682426, USD663030, US9629663, US9517086, US9486247, US9402651, US9387014, US9259242, US9155562, US9050135, US8961572, US8945129, US8920470, US8920469, US8870921, US8827998, US8808289, US8758343, US8685023, US8603090, US8591550, US8585703, US8556937, US8382757, US8382755, US8372119, US8361117, US8192471, US8172840, US8123747, US8075560, US7993069, US7967845, US7887537, US7789897, US7758582, US7731738, US7717939, US7717938, US7645294, US7608074, US7588571, US7575575, US7507240, US7261713, US7147640, US7066938, US7056322, US7048735, US7004943, US6585736, US6533785, US6428540, US6413258, US6340361, US6245071, US6171309, US6171308, US6162224, US6024745, US5976134, US5976133, US5976125, US5951556, US5746741, US5743898, US5662650, US5662649, US5658283, US5624440, US5562737, US5545162, US2016022315, US2014324045, US2013110110, US2011066151, US2010191289, US2010076436, US2010076434, US2009136290, US2007270810, US2007255280, US2007162028, US2007123857, US2007123856, US2007100346, US2006271045, US2006229605, US2006229604, US2006229603, US2006229602, US2006162126, US2006064091, US2006058789, US2005245939, US2005228377, US2005119656, US2004215204, US2004181221, US2004138659, US2004049188, US2003149430, US2003149429, US2003114853, US2003069580, MY119587, KR101606292, JP2012081268, JP2008500089, ITMO20120160, EP2438869, EP1434531, EP1076527, EP1041936, EP0832613, DE29619711, AU2011226864, AU2002342011,

Abstract:

Source: US5304177A An external fixator for osteosynthesis features application to the fixation of fractures of small bones such as those of the hand or foot. A small central unit contains two ball joints which are releasably clamped via a single actuation. Bone fasteners, such as bone pins or bone screws are releasably clamped, via a single actuation at each of two clamping units, and each of the clamping units is adjustably clamped to a carrier rod within a wide range of selected positions, which extends to the smallest of offsets from the central double-ball joint unit, by reason of the fact that the ball of each ball joint is the inner end of one of the respective carrier rods.

PatBase - W09400067_A1



50) Family number: 32503847 (US2004073146A)

© PatBase

Title: PORTABLE DEVICE FOR THE ENHANCEMENT OF CIRCULATION AND FOR THE PREVENTION OF STASIS RELATED DVT

Priority: IL20010141824 20010305 IL20040160185 20040202 IL20040160214 20040204
 IL20050167733 20050329 US20030469685 20030903 IL20040164286 20040926
 US20050101069 20050406 IL20040162373 20040606 IL20050167734 20050329
 WO2005IL00447 20050501 WO2005IL00445 20050501 WO2005IL01029 20050926
 WO2005IL00448 20050501 WO2005IL00150 20050206 US20050576008 20050926
 WO2002IL00157 20020303 WO2004IL00487 20040609 US20120674122 20121112
 US20060569808 20061130

Family:

Publication number	Publication date	Application number	Application date
AT449588 E	20091215	AT20020701517T	20020303
AU2002234848 AA	20020919	AU20020234848	20020303
AU2002234848 BB	20070215	AU20020234848	20020303
AU2002234848 CA	20071108	AU20020234848	20020303
BRPI0207632 A	20040601	BR2002PI07632	20020303
CA2440062 AA	20031223	CA20022440062	20020303
CA2440062 C	20090623	CA20022440062	20020303
CA2555187 AA	20060801	CA20042555187	20040609
CN1265777 C	20060726	CN20028005945	20020303
CN1536981 A	20041013	CN20028005945	20020303
CN1879586 A	20061220	CN200610088525	20020303
CN1968669 A	20070523	CN200480042381	20040609
DE60234507 D1	20100107	DE20026034507	20020303
EP1367976 A1	20031210	EP20020701517	20020303
EP1367976 B1	20091125	EP20020701517	20020303
EP1713428 A1	20061025	EP20040736447	20040609
EP1713428 A4	20120905	EP20040736447	20040609
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EP1718261 A4	20090520	EP20050703193	20050206
EP1753424 A2	20070221	EP20050738972	20050501
EP1765253 A2	20070328	EP20050735111	20050501
EP1765253 A4	20090819	EP20050735111	20050501
EP1804756 A2	20070711	EP20050788477	20050926
HK1067296 A1	20061006	HK20050100887	20050203
HK1067296 A3	20050408	HK20050100887	20050203
IL141824 A0	20020310	IL20010141824	20010305
IL141824 A1	20081103	IL20010141824	20010305
IL160185 A0	20040725	IL20040160185	20040202
IL160214 A0	20040725	IL20040160214	20040204
IL162373 A0	20051120	IL20040162373	20040606
IL164286 A0	20051218	IL20040164286	20040926
IL167733 A0	20060312	IL20050167733	20050329
IL167734 A0	20060312	IL20050167734	20050329
IN01182KN2003 A	20050930	IN2003KN01182	20030916
IN233773 B	20090410	IN2003KN01182	20030916
JP2004521688 T2	20040722	JP20020569059T	20020303
JP2007519464 T2	20070719	JP20060550482T	20040609

<u>MXPA03007973 A1</u>	20041015	MX2003PA07973	20020303
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<u>US2004073146 AA</u>	20040415	US20030469685	20030903
<u>US2006074362 AA</u>	20060406	US20050101069	20050406
<u>US2007173886 AA</u>	20070726	US20060597613	20061117
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<u>US2008146980 AA</u>	20080619	US20050570307	20050501
<u>US2008255494 AA</u>	20081016	US20050569808	20050501
<u>US2008269543 AA</u>	20081030	US20050570311	20050501
<u>US2013072837 AA</u>	20130321	US20120674122	20121112
<u>US8079969 BB</u>	20111220	US20050570307	20050501
<u>US8100841 BB</u>	20120124	US20050576008	20050926
<u>US8142374 BB</u>	20120327	US20050101069	20050406
<u>US8157754 BB</u>	20120417	US20020469685	20020303
<u>WO02069879 A1</u>	20020912	WO2002IL00157	20020303
<u>WO05072674 A1</u>	20050811	WO2004IL00487	20040609
<u>WO05074376 A2</u>	20050818	WO2005IL00150	20050206
<u>WO05074376 A3</u>	20060601	WO2005IL00150	20050206
<u>WO05120424 A2</u>	20051222	WO2005IL00445	20050501
<u>WO05120424 A3</u>	20060420	WO2005IL00445	20050501
<u>WO05120500 A2</u>	20051222	WO2005IL00447	20050501
<u>WO05120500 A3</u>	20070705	WO2005IL00447	20050501
<u>WO05122269 A2</u>	20051222	WO2005IL00448	20050501
<u>WO05122269 A3</u>	20060713	WO2005IL00448	20050501
<u>WO06033115 A2</u>	20060330	WO2005IL01029	20050926
<u>WO06033115 A3</u>	20060511	WO2005IL01029	20050926

Probable Assignee: FLOWMEDIC LTD

Assignee(s):^(std): AVNI YUVAL ; BARAK CHEN ; BENNY ROUSSO ; D WEINTRAUB ; FLOWMEDIC ISRAEL LTD ; DAVID URI ; FLOWMEDIC LTD ; ELIACHAR ELIAHU ; LILACH NIR ; AVINI YUVAL ; DAVID WEINTRAUB ; FLOWMEDIC LTD ; ROUSSO BENNY ; TAICHMAN MICHAL ; YUVAL AVNI ; WEINTRAUB D ; WEINTRAUB DAVID

Assignee(s): NIR LILACH ; ROUSSO BENNY AVNI YUVAL ; WEINTRAUB A DAVID ; WEINTRAUB DAVID AND AVNI YUVAL ; ELIAHU ELIACHAR ; MICHAL TAICHMAN ; FLOWMEDIC LIMITED ; AVNI A YUVAL ; FLOWMEDIC LIMITED

Inventor(s):^(std): AVNI D WEINTRAUB Y ; AVNI Y ; AVNI YUVAL ; BARAK CHEN ; D WEINTRAUB ; DAVID URI ; ELIACHAR ELIAHU ; LILACH NIR ; NIR ELIACHAR ELIAHU AVNI YUVAL ; ROUSSO BENNY ; TAICHMAN MICHAL ; WEINTRAUB D ; WEINTRAUB DAVID ; Y AVNI ; YUVAL AVNI ; YUVAL WEINTRAUB DAVID AVNI

Inventor(s): WEINTRAUB DAVID AVNI YUVAL ; NIR LILACH ; ELIACHAR ELIAHU AVNI YUVAL ROUSSO BENNY LILACH NIR ; ELIAHU ELIACHAR ; DAVID WEINTRAUB ; D WEINTRAUB Y AVNI ; BENNY ROUSSO

Agent(s): ALLENS PATENT AND TRADE MARK ATTORNEYS; ALLENS ARTHUR ROBINSON PATENT AND TRADE MARKS ATTORNEYS; SHAPIRO COHEN; GOWLING LAFLEUR HENDERSON LLP; CUMMINGS SEAN PATRICK; SOROKER AGMON; KATORI TAKAO; WOLF BLOCK SHORR AND SOLIS-COHEN LLP; WOLF BLOCK SHORR AND SOLIS COHEN LLP; PEARNE AND GORDON LLP; ALSTON AND BIRD LLP; MOORE AND VAN ALLEN PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/00 A61F13/00 A61F13/06 A61H1/00 A61H11/00 A61H11/02 A61H19/00 A61H23/00 A61H23/02 A61H23/04 A61H7/00 A61K31/44 A61M1/10

H01L29/24 (Advanced/Invention);
A61H23/02 A61H7/00 (Advanced/Non-invention);
A61B17/00 A61F13/00 A61F13/06 A61H11/00 A61H19/00 A61H23/00 A61H23/02
A61H23/04 A61H7/00 A61K31/44 A61M1/10 H01L29/02 (Core/Invention);
A61H23/02 A61H7/00 (Core/Non-invention);
A61B A61H (Subclass/Invention)

International class
(IPC 1-7):

A61B A61H11/02 A61H19/00 A61H23/02 A61H23/04 A61H7/00 A61K31/44 H01L29/24

CPC:

A61F5/0104 A61F5/30 A61H2201/1215 A61H2201/1664 A61H1/008 A61F13/06
A61H2230/04 A61H2230/08 A61H2230/50 A61B17/1322 A61B17/1325 A61B17/1355
A61H2230/06 A61H2205/106 A61H7/001 A61H23/02 A61H2205/06 A61K31/44
A61H23/0254 A61H11/02 A61H2011/005 A61H2201/0169 A61H2201/14 A61H2201/1418
A61H2201/1436 A61H2201/149 A61H2201/1642 A61H2201/165 A61H2205/10
A61H2209/00

European class:

A61F13/06 A61F5/01D1 A61F5/30 A61H11/02 A61H23/02R A61H7/00B A61K31/44
K61B17/132G K61B17/132G2 K61B17/135B K61H11/00A K61H201/01K2 K61H201/14
K61H201/14C K61H201/14E K61H201/14M2 K61H201/16A16A K61H201/16A20
K61H205/06 K61H205/10 K61H205/10L K61H209/00 K61H23/02 K61H23/02R
K61H230/04 K61H230/06 K61H230/08 K61H230/50 K61H7/00B

US class:

600/16 600/16P 601/134 601/134P 601/134S 601/143 601/144 601/144S 601/148
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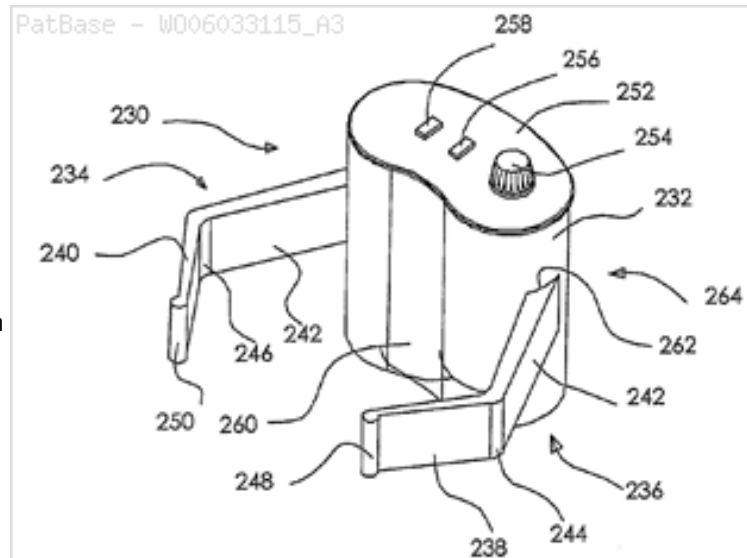
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Abstract:

Source: US2004073146A The present invention provides a portable device and method for enhancing blood flow in a limb and for reducing the risk of Deep Vein Thrombosis (DVT) formation by applying periodic squeezing forces on a limb, in particular a lower limb. The device comprises a flask-like casing box and a strap connected to opposite sides of said casing such as to form a closed loop around the limb. Said box contains machinery for actuating periodical change in the circumference of said closed loop between a contracted and a relaxed positions.



0) US2009306671A – FACET JOINT IMPLANTS AND DELIVERY TOOLS

51) Family number: 44112484 (US2009306671A)

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Title: FACET JOINT IMPLANTS AND DELIVERY TOOLS

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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: PROVIDENCE MEDICAL TECHNOLOGY

Assignee(s):^(std): CARVER JONATHAN ; DRUKER JOSHUA ; EYSTER EDWARD FLETCHER ; LEUGERS MARTIN ; LIOU EDWARD ; PROVIDENCE MEDICAL TECHNOLOGY ; MCCORMACK BRUCE M ; SMITH JEFFREY D ; LOMBROZO PETER ; TU KURIN ; TANAKA SHIGERU ; PROVIDENCE MEDICAL TECHNOLOGY INC ; PROVIDENCE MEDICAL TECH INC

Assignee(s): PROVIDENCE TECHNOLOGY INC ; SPECK PRODUCT DESIGN INC

Inventor(s):^(std): CARVER JONATHAN ; DRUKER JOSHUA ; EYSTER EDWARD FLETCHER ; LEUGERS MARTIN ; LIOU EDWARD ; LOMBROZO PETER ; MCCORMACK BRUCE M ; PROVIDENCE MEDICAL TECHNOLOGY INC ; SCHUMMERS DAVID MICHAEL ; SMITH JEFFREY D ; TANAKA SHIGERU ; TU KURIN

Agent(s): SMART AND BIGGAR; RUHRMANN ANDREA ELIZABETH; MILLER JAMES LIONEL WOOLVERTON; LLOYD ROBIN; DORSEY AND WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT; POLSINELLI SHUGHART PC; POLSINELLI PC; DORSEY AND WHITNEY LLP; SCOTT M; JOHNSON WADE S; SMITH SCOTT M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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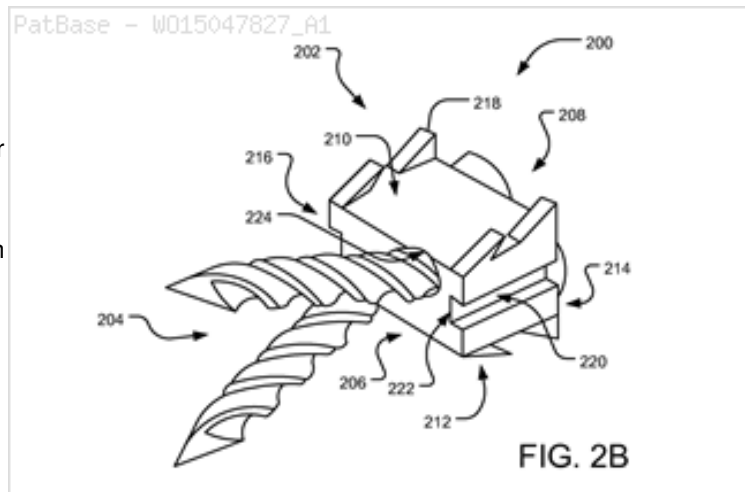
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Abstract:

Source: US2009306671A A spinal joint distraction system is disclosed and may include a driver assembly with a tubular shaft, a pair of implant holder arms, an implant distractor, an internal actuator, and a distractor knob, the system also including a delivery device with a tubular shaft, a receiving assembly, and a pair of forks, where the delivery device is adapted for slidable insertion of the driver assembly, the system also including an implant, a chisel, and an injector. Several embodiments of an implant are disclosed as well a method of placing an implant.



52) Family number: 30395401 (US6709433B)

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Title: Bridging/non-bridging external bone fixator**Priority:** US20010028810 20011220

Family:	Publication number	Publication date	Application number	Application date
	<u>US6709433 BA</u>	20040323	US20010028810	20011220

Probable Assignee: BIOMET INC**Assignee(s):^(std):** BIOMET INC**Assignee(s):** BIOMET MFG ; BIOMET MFG CORP ; BIOMET MFG LLC ; LVB ACQUISITION INC ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURE ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURED PARTIES AS**Inventor(s):^(std):** SCHOENEFELD RYAN J**International class**
(IPC 8-9): A61B17/64 (Advanced/Invention);
A61B17/60 (Core/Invention)**International class**
(IPC 1-7): A61B17/66**CPC:** A61B17/6425**European class:** A61B17/64D**US class:** 606/54 606/57 606/59[Classification Explorer](#)**Cited documents:** US6197027 BA, US6171309 BA, US6162223 A, US5951556 A, US5897555 A, US5891144 A, US5683389 A, US5620442 A, US5376091 A, US4922896 A, US4919119 A, US4730608 A, US4611586 A, US1789060 A,**Forward Citations:** WO09134446, WO09134446, WO06013670, US9517093, US9498370, US9463045, US9393045, US9066757, US8961518, US8906022, US8758343, US8721566, US8425616, US8382755, US8287538, US8025681, US7887537, US7854752, US7846211, US7758582, US7731738, US7608074, US7588571, US7575575, US7507240, US7048735, US7004943, US2012226277, US2012123301, US2011071643, US2009276054, US2009125068, US2009018665, US2009014016, US2008300596, US2008065073, US2007255280, US2007249979, US2007233094, US2007162028, US2006229605, US2006229604, US2006229603, US2006229602, US2005245939, US2005119656, US2004138659, US2003149430, US2003149429, TWI563961,

Abstract:

Source: US6709433B An external bridging/non-bridging bone fixation device including at least a first member and a second member. The first member is implanted substantially permanently on an arm bone during an entire healing process. Whereas the second member is adapted to be substantially temporarily implanted and affixed between the first member and a metacarpal of the associated hand. The second member may be a singular rigid piece or may be formed of several modular pieces affixed together. In particular, the second member may be hinged to allow for an offset or angled implantation. Also, the second member may include a plurality of pieces that are rigidly held together after implantation to allow for high selectivity by a physician. The bridging/non-bridging bone fixation device allows for a bridging adaptation during an initial portion of healing and a non-bridging adaptation during the extended healing process to reduce the possibility of stiffness and plaques due to prolonged periods of immobility.

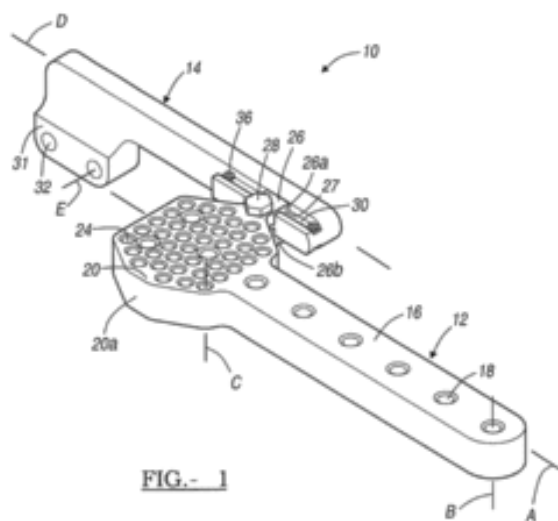
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U.S. Patent

Mar. 23, 2004

Sheet 1 of 4

US 6,709,433 B1



0) US2003220691A – ARTIFICIAL INTERVERTEBRAL DISC DEVICE

53) Family number: 30064213 (US2003220691A)

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Title: ARTIFICIAL INTERVERTEBRAL DISC DEVICE

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Agent(s): GRIFFITH HACK; MACRAE AND CO; HOFFMANN EITLE; FITCH EVEN TABIN AND FLANNERY; FITCH EVEN TABIN AND FLANNERY LLP; KRATZ RUDY I; KRATZ RUDY ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/56 A61B17/70 A61B17/88 A61F2/00 A61F2/30 A61F2/32 A61F2/38 A61F2/42 A61F2/44 A61F2/46 A61F2/62 A61F2/64 A61L27/18 A61L27/34 (Advanced/Invention); A61B17/86 A61F2/00 A61F2/02 A61F2/30 A61F2/34 A61F2/36 A61F2/46 A61F2/48 (Advanced/Non-invention); A61B17/56 A61F2/00 A61F2/30 A61F2/32 A61F2/38 A61F2/44 A61F2/60 (Core/Invention); A61F2/00 A61F2/30 (Core/Non-invention); A61F (Subclass/Invention)

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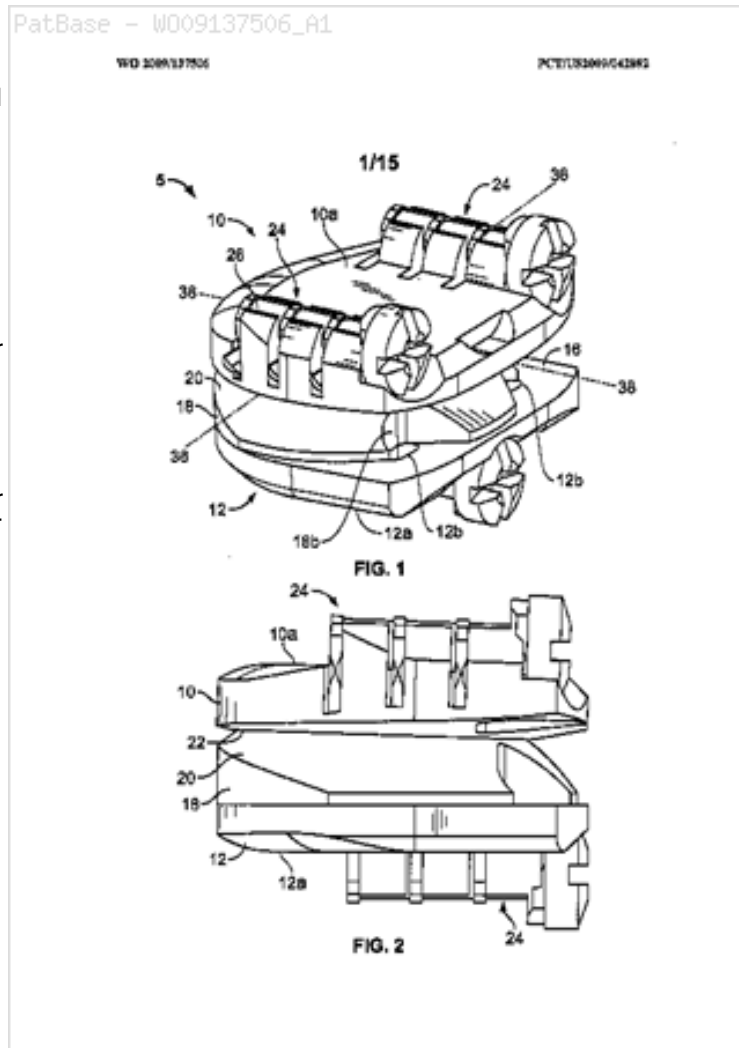
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JP2014121615, JP2014008156, JP2013535246, JP2012511408, JP2011511698, JP2011092740, JP2009529934, JP2008536582, JP2008532642, JP2008517672, JP2007526802, GB2496633, FR3029770, FR3016281, FR2948869, FR2943530, FR2936703, FR2865629, EP3162324, EP3024419, EP3020374, EP3010449, EP3010449, EP2890332, EP2467098, EP2420208, EP2379017, EP2370026, EP2363087, EP2319462, EP2161008, EP2155125, EP2155125, EP2113227, EP2099389, EP2099389, EP2063819, EP2063817, EP2063817, EP1998720, EP1945148, EP1682035, EP1682035, CN105708584, CN105310802, CN105147420, CN105030385, CN104921845, CN104812338, CN104411272, CN103957845, CN103732185, CN103732185, CN103479451, CN103251465, CN102917671, CN102917671, CN102232879, CN101961270, AU2012338555, AU2010237755, AU2009324608, AU2007220362, AU2006308801, AU2005211222,

Abstract:

Source: US2003220691A Artificial disc devices are disclosed that restore correct anatomical intervertebral spacing for damaged discs while maintaining a substantially normal range of biomechanical movement for the vertebrae between which they are implanted. The disc devices include center bearing and outer or annular bearing portions with the center bearing portion including generally axially extending locating surfaces which cooperate with the facing vertebral surfaces to resist migration. The outer bearing portion is for load bearing or load sharing with the center bearing portion and includes surfaces that extend radially toward the periphery of the vertebrae so that subsidence about the center bearing portion is minimized. Alternate forms of the disc devices include one with an axially enlarged center ball bearing having an annular ring bearing extending thereabout and another having upper and lower plate members with a central bumper member and a surrounding resilient annular member therebetween.



54) Family number: 41930476 (US2008312693A)

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Title: POSTERIOR FUNCTIONALLY DYNAMIC STABILIZATION SYSTEM

Priority: CN200780045505 20071207 EP20070865393 20071207 JP20600869342 20061210
 US20060869342P 20061210 US20070914360P 20070427 US20070952575 20071207
 WO2007US86800 20071207 US20140585097 20141229 US20160383536 20161219

Family:

Publication number	Publication date	Application number	Application date
AR064204 AA	20090318	AR2007P105504	20071207
AU2007333199 AA	20080619	AU20070333199	20071207
AU2007333199 BB	20140417	AU20070333199	20071207
CA2671868 AA	20090604	CA20072671868	20071207
CN101573081 A	20091104	CN200780045505	20071207
CN101573081 B	20120222	CN200780045505	20071207
CN102525623 A	20120704	CN201110438899	20071207
CN102525623 B	20150429	CN201110438899	20071207
DE102007055745 A1	20080731	DE200710055745	20071210
EP2120748 A1	20091125	EP20070865393	20071207
EP2120748 B1	20160824	EP20070865393	20071207
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HK1138168 A1	20121207	HK20100104299	20100430
HK1170141 A1	20160324	HK20120110986	20121101
IL198962 A0	20100217	IL20070198962	20071207
JP2010512228 T2	20100422	JP20090541493T	20071207
KR20090097909 A	20090916	KR20097014142	20071207
MX2009005843 A1	20090616	MX20090005843	20071207
TW200843691 A	20081116	TW20070146803	20071207
US2008312693 AA	20081218	US20070952575	20071207
US2015216567 AA	20150806	US20140585097	20141229
US2017095274 AA	20170406	US20160383536	20161219
US8920473 BB	20141230	US20070952575	20071207
US9522018 BB	20161220	US20140585097	20141229
WO08073830 A1	20080619	WO2007US86800	20071207
WO08073830 A9	20090115	WO2007US86800	20071207
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Probable Assignee: PARADIGM SPINE LLC**Assignee(s):**^(std) BERTAGNOLI RUDOLF ; EISEN GUNTMAR H ; HOLTKAMP BERNHARD ; LOWERY GARY L ; PARADIGM SPINE LLC ; SALVERMOSER MARKUS ; TRAUTWEIN FRANK T**Assignee(s):** SIGULER GUFF DISTRESSED OPPORTUNITIES FUND III LP ; PDL BIOPHARMA INC ; FIFTH THIRD BANK ; FOURTH DIMENSION SPINE LLC ; HAYFIN SERVICES LLP**Inventor(s):**^(std) BERNHARD HOLTKAMP ; BERTAGNOLI RUDOLF ; BERTAGNOLI RUDOLPH ; EISEN GUNTMAR H ; HOLTKAMP BERNHARD ; LOWERY GARY L ; MARKUS SALVERMOSER ; RUDOLF BERTAGNOLI ; SALVERMOSER MARKUS ; TRAUTWEIN FRANK ; TRAUTWEIN FRANK T**Inventor(s):** FRANK T TRAUTWEIN ; GARY L LOWERY ; GUNTMAR H EISEN**Agent(s):** CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; TORYS LLP; MOLNIA DAVID; TEMINO IGNACIO; FINNEGAN HENDERSON FARABOW GARRETT AND DUNNER LLP; MH2 TECHNOLOGY LAW GROUP LLP; MCDONELL LESLIE A**Designated states:**

AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM
CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM
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International class
(IPC 8-9): A61B17/00 A61B17/04 A61B17/16 A61B17/17 A61B17/58 A61B17/70 A61B17/88
A61B19/00 A61F2/36 (Advanced/Invention);
A61B17/00 A61B17/16 A61B17/17 A61B17/88 A61B19/00 A61F2/36 (Advanced/Non-invention);
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A61F2/36 (Core/Invention);
A61B17/00 A61B17/16 A61B17/88 A61B19/00 A61F2/36 (Core/Non-invention);
A61B (Subclass/Invention)

International class
(IPC 1-7): A61B17/70

CPC: A61B17/7014 A61B17/7026 A61B17/7037 A61B17/1757 A61B17/7007 A61B17/7025
A61B17/708 A61B17/8863 A61B17/7023 A61B2090/037 A61B2090/061 A61B17/7029
A61B2017/681 A61B17/701 A61B17/8897

European class: A61B17/17S4 A61B17/70B1C4 A61B17/70B1R10 A61B17/70B1R6 A61B17/70B1R8
A61B17/70T2B5 A61B17/88F K61B17/70B1L K61B17/70B5B K61B17/88S K61B17/88T
K61B19/30H K61B19/46B

US class: 606/246 606/246P 606/254 606/257 606/259 606/264 606/264S 606/279 606/301
606/301S

[Classification Explorer](#)

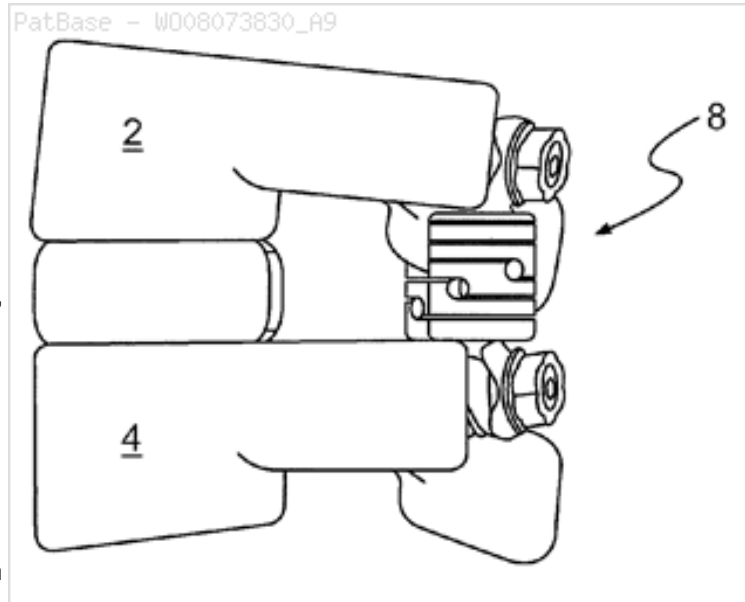
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Forward Citations: WO14052115, WO12177412, WO12177412, WO12109475, WO12109475, US9642651,
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Abstract:

Source: US2008312693A A functionally dynamic stabilization unit and system for treatment of spinal instability are provided. Each unit, and collectively, the system, is configured to control flexion, extension and translation of the affected unstable vertebral area, thereby stabilizing the vertebral segments by restoring normal function. This is achieved by providing a unit and system that allow for lateral bending, axial compression, rotation, anterior segmental height adjustment, and posterior segmental height adjustment. The unit and system provide sufficient segmental stiffness, while also limiting, or controlling, the range of motion (i.e., sufficient stiffness in the neutral or active zone, while limiting or preventing motion outside of the active zone) to stabilize the vertebral segments. In use, the system mimics the natural movement of the normal spine. Furthermore, the system includes a rigid, fusion-promoting coupler configured for use in an adjacent level, or as a substitute for the functionally dynamic unit. The modularity of the system allows adjustment over time and easier revision surgery, and is configured for minimally-invasive, delivery or implantation.



55) Family number: 61841800 (US2016066956A)

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Title: EXTERNAL FIXATION SYSTEM**Priority:** US20140048074P 20140909 US20150849163 20150909

Family:	Publication number	Publication date	Application number	Application date
	<u>US2016066956 AA</u>	20160310	US20150849163	20150909
	<u>WO16040491 A2</u>	20160317	WO2015US49199	20150909

Probable Assignee: INTEGRA LIFESCIENCES CORP**Assignee(s):**^(std) INTEGRA LIFESCIENCES CORP**Inventor(s):**^(std) MATERNA PETER ; SPITLER JAMES ; SIEMER MICHAEL ; SCHUMACHER BRIAN ; COOPER PAUL**Agent(s):** EICHENBERGER ROBERT H ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/62 A61B17/64 (Advanced/Invention)
(IPC 8-9):**CPC:** A61B17/62 A61B17/6416 A61B17/66**US class:** 606/56[Classification Explorer](#)**Cited documents:** WO9857686 A1, US8057474 BB, US6860883 BB, US4915627 A, US2838948 A, US2011208187 AA, US2010191239 AA, US2009036892 AA, US2002010465 AA,**Forward Citations:** US2015257788,

Abstract:

Source: US2016066956A In embodiments of the invention, there is provided an external fixation system comprising a first plate and a second plate and connectors therebetween. Some or all of the connectors may be adjustable in length or angular position or both. Angular adjustment may comprise a fixed amount of friction and an adjustable amount of friction, and the permitted angular deflection can vary around the perimeter of the angular joint. An adjustable-length connector may comprise a tiltable nut that can either engage or not engage a threaded rod to provide both coarse adjustment and fine adjustment. Tactile or audible feedback may be provided. Other accessories may include: provisional alignment clamps to position parts of the patient's body; a K-wire alignment guide; a K-wire support post; a universal fixation bolt; a plurality of half-pins that can be used with a common support post or block; and a resilient retention device.

PatBase - W016040491_A2

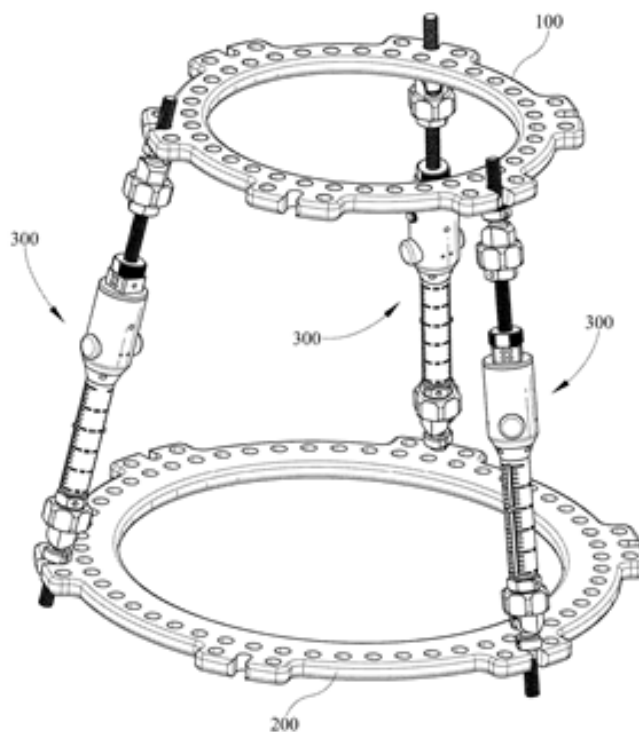


FIG. 1

56) Family number: 24709917 (US5836863A)

© PatBase

Title: Hearing aid transducer support**Priority:** US19960695099 19960807 US19970908233 19970807 WO1997US13808 19970807
US20000551480 20000418 US19980188769 19981109 US19990245231 19990205
WO2000US02741 20000204 WO1998US16499 19980807

Family:	Publication number	Publication date	Application number	Application date
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	AU200027530 A5	20000829	AU20000027530	20000204
	EP0920786 A1	19990609	EP19970935315	19970807
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	US6001129 A	19991214	US19970908233	19970807
	US6050933 A	20000418	US19980188769	19981109
	US6325755 BA	20011204	US19990245231	19990205
	US6488616 BA	20021203	US20000551480	20000418
	WO0048426 A2	20000817	WO2000US02741	20000204
	WO0048426 A3	20010111	WO2000US02741	20000204
	WO9806237 A1	19980212	WO1997US13808	19970807
	WO9907311 A1	19990218	WO1998US16499	19980807

Probable Assignee: ENVOY MEDICAL CORP**Assignee(s):^(std):** ST CROIX MEDICAL INC**Assignee(s):** ST CROIX MEDICAL INC ; ENVOY MEDICAL CORP ; GAT FUNDING LLC ; SAINT CROIX MEDICAL INC**Inventor(s):^(std):** BUSHEK DONALD J ; GRANT IAIN ; KROLL KAI ; MADSEN CLAIR ; MADSEN CLAIR W**Inventor(s):** IAIN GRANT ; KAI KROLL ; CLAIR W MADSEN ; DONALD J BUSHEK**Designated states:** AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW**International class**
(IPC 8-9): [A61F2/18 A61N1/36 H04R25/00](#) (Advanced/Invention);
[A61F2/18 A61N1/36 H04R25/00](#) (Advanced/Non-invention);
[A61F2/18 H04R25/00](#) (Core/Invention);
[A61N1/36](#) (Core/Non-invention)**International class**
(IPC 1-7): [A61B19/00 A61F2/18 A61N1/08 H04R25/00](#)**CPC:** [H04R25/606 A61F2002/183 A61N1/36032 A61F2/18](#)**European class:** [A61F11/04M A61F2/18 H04R25/60D1 K61F2/18E K61N1/36F T04R25/60D1](#)**US class:** [128/898 181/135 381/312 381/326 600/25 606/130 623/10](#)[Classification Explorer](#)**Cited documents:** WO9806237 A1, WO9806235 A1, WO9417645 A1, WO9208330 A1, US6001129 A, US5993376 A, US5836863 A, US5788711 A, US5624376 A, US5558618 A, US5554096 A, US5531787 A, US5498226 A, US5496226 A, US5456654 A, US5411467 A, US5370689 A, US5360388 A, US5344422 A, US5338287 A, US5282858 A, US5277694 A, US5163957 A, US5015225 A, US5015224 A, US5012520 A, US4988333 A, US4969900 A, US4957507 A, US4957478 A, US4850962 A, US4840178 A, US4817607 A, US4776322 A, US4774933 A, US4756312 A, US4729366 A, US4728327 A, US4628907 A, US4606329 A, US4601723 A, US4498461 A, US4315433 A, US4150262 A, US3992725 A, US3931648 A, US3882285 A, US3870832 A, US3764748 A, US3712962 A, US3594514 A, US3557775 A, EP0520153 A1, EP0263254 A1, EP0231162

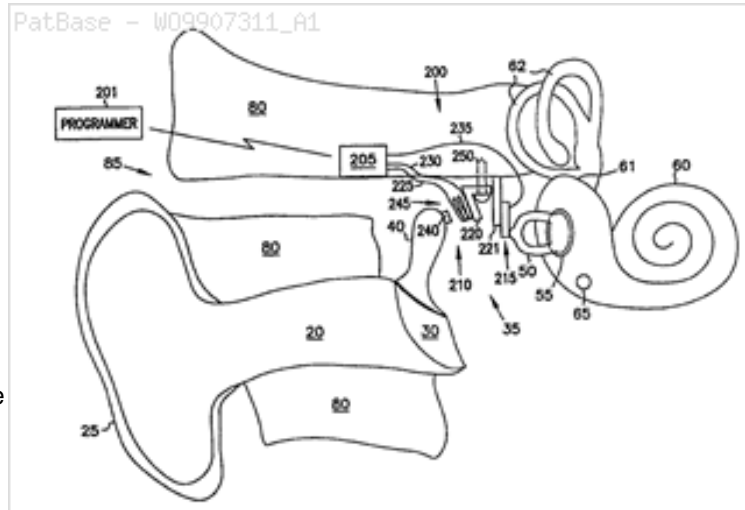
A1, DE3918329 A1, DE2834891 A1, DE19638159 A1, DE19638158 A1, DE19618961 A1,

Forward Citations:

WO9904600, WO16168245, WO13023693, WO11047495, WO10133704, WO10133704, WO10017579, WO10008630, WO09062172, WO06031767, WO06031767, WO04043290, WO04043290, WO02098506, WO0048426, WO0047017, WO0047017, WO0022875, WO0022875, US9635472, US9591409, US9572746, US9544700, US9479879, US9456953, US9392377, US9277335, US9226083, US9192407, US9155887, US9154891, US9056204, US9055379, US9049528, US8986187, US8920496, US8864645, US8845705, US8824715, US8787609, US8771166, US8731205, US8715154, US8715153, US8715152, US8696541, US8657734, US8644935, US8586865, US8532322, US8512264, US8469908, US8401214, US8401212, US8396239, US8295523, US8144909, US8142344, US8105229, US8088382, US7867160, US7822479, US7722525, US7668325, US7582052, US7481761, US7447319, US7427292, US7326171, US7289639, US7226406, US7197152, US7137946, US6879693, US6755778, US6730015, US6712754, US6629922, US6592512, US6585637, US6554762, US6554761, US6547715, US6540662, US6540661, US6537200, US6537199, US6517476, US6491622, US6488616, US6482144, US6398717, US6390971, US6387038, US6334072, US6325755, US6315710, US6293903, US6261223, US6198971, US6176879, US6077215, US2012241188, US2011144719, US2011142274, US2011106254, US2011106188, US2011077453, US2011034755, US2010317914, US2010317913, US2010312040, US2010202645, US2010048983, US2010048982, US2009187233, US2009124849, US2009097681, US2009092271, US2009082705, US2009043149, US2008139874, US2008004486, US2007249890, US2007142697, US2007055092, US2006269076, US2006251278, US2006247488, US2006189841, US2006058819, US2005163333, US2005131272, US2005113633, US2004243125, US2004158940, US2004088797, US2003163021, US2003161492, US2003161482, US2003161481, TWI318539, KR101223700, GB2363542, EP1792519, EP1430855, EP1191816, EP1179969, EP1043914, DE19935029, DE19914993, DE102014114494, AU2011202466, AU2003291324, AU2003291324,

Abstract:

Source: US5836863A A support for input and output transducers of a hearing aid is implanted in the middle ear. The support, which is attached to the mastoid bone, can be a single component or comprise two adjustable components. In one embodiment, an arm extends from the proximal end of the support towards an access hole created behind the outer ear, where the arm is attached for further stability. In another embodiment, the arm extends outside the access hole, where it is mounted subcutaneously to the mastoid bone with a mechanical fastener. The support provides positional adjustability, stability, and is invisible externally.



57) Family number: 28626353 (US2003075180A)

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Title: MASK ASSEMBLY

Priority:

AU20020301370	20020906	AU20030257270	20030905	AU20030257271	20030905
AU20080258157	20081216	AU20100201443	20100412	AU20120233050	20121003
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Agent(s): HALFORDS IP; VOSSIUS AND PARTNER PATENTANWAELTE RECHTSANWAELTE MBB; MILANOV NINA VENDELA MARIA ET AL; VOSSIUS AND PARTNER; VOSSIUS AND PARTNER PATENTANWAELTE RECHTSANWAELTE MBB; DE ELZABURU ALBERTO; NIXON AND VANDERHYE PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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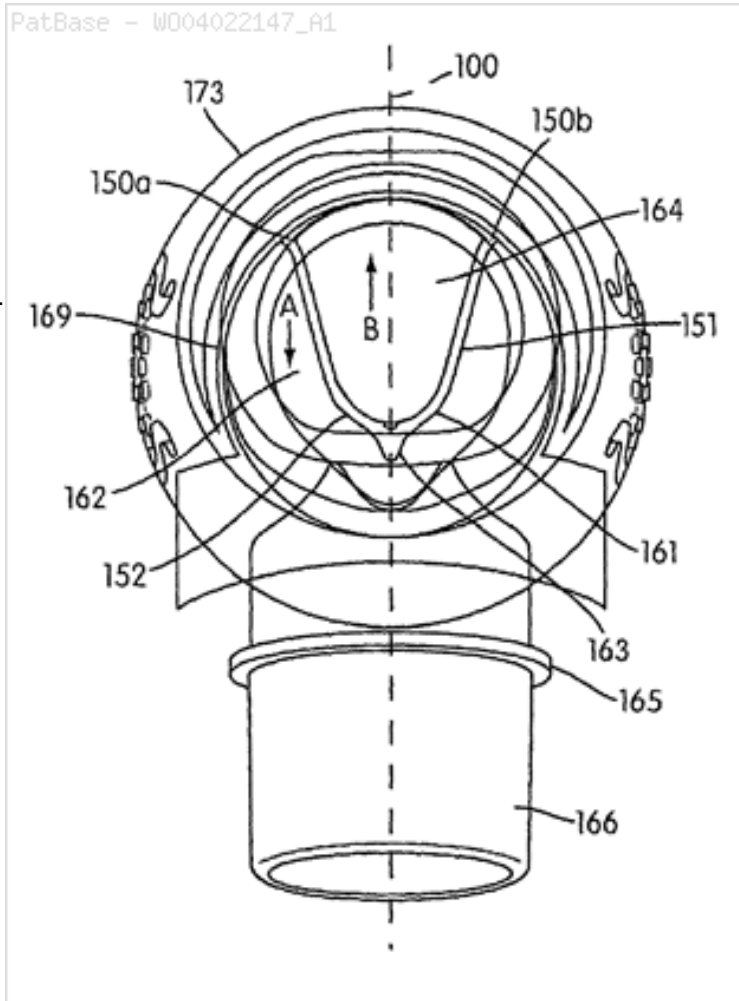
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Abstract:

Source: US2003075180A A respiratory mask assembly for use in the delivery of non-invasive positive airway pressure to a user. The assembly includes a rigid shell having a channel portion defined by an inner wall, an outer wall and a channel floor, a face-contacting cushion acting to space the shell away from the user's face and a sealing tab extending from the cushion to engage a portion of the shell to provide a continuous airtight seal between the cushion and the shell. A retaining ring within the mask assembly is configured to secure the cushion to the shell. The retaining ring has a first portion including at least one clip configured to pass through at least one slot portion such that an underside surface of the at least one clip engages a section of the shell when the retaining ring is positioned within the channel.



58) Family number: 30266055 (US2002019641A)

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Title: TRAJECTORY GUIDE

Priority: CA19982289449 19980515 CA19982686281 19980515 US19970856664 19970515
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Family:

Publication number	Publication date	Application number	Application date
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<u>CA2289449 AA</u>	19991109	CA19982289449	19980515
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Probable Assignee: REGENTS OF THE UNIVERSITY OF MINNESOTA

Assignee(s):^(std): BAUER DEBRA F ; IMAGE GUIDED NEUROLOGICS INC ; LIU HAIYING ; UNIV MINNESOTA ; UNIVERSITY OF MINNESOTA ; TRUWIT CHARLES L ; REGENT OF UNIV OF MI ; REGENTS OF THE UNIVERSITY OF MINNESOTA

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Agent(s): GOWLING LAFLEUR HENDERSON LLP

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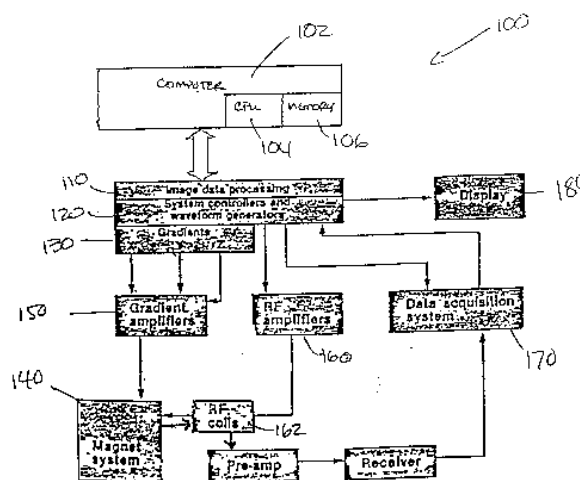
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Abstract:

Source: US2002019641A A surgical method and apparatus for accurately aligning the trajectory of, guiding of, and introducing or withdrawal of an instrument is disclosed. The apparatus includes a base which has a movable member movably attached to the base. The movable member has a passage therein which forms a portion of the trajectory path. A positioning stem further includes a first locator and a second locator. The first and second locators are associated with two different portions of the positioning stem so that they are essentially two points on a line. The first and second locators are also locatable by a scanning or imaging system. The positioning stem is removably attached to said movable member and used to position the movable member. Moving the movable member also moves the passage therein to different trajectories. Once the passage within the movable member more or less is aligned with a target within the body, a locking member locks the movable member into a fixed position. The movable member can be moved to different trajectories using a first hydraulic system. A second hydraulic system can be used to introduce or withdraw an instrument to or from the patient. A mechanical advancement tool can be substituted for the second hydraulic system. The surgical instrument may also be provided with a remote portion for controlling the instrument from a remote location. The instrument can also be computer controlled.

FIG. 1

Title: SYSTEMS AND METHODS FOR OPERATING A PLURALITY OF WELLS THROUGH A SINGLE BORE

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Probable Assignee: BRUCE TUNGET

Assignee(s):^(std): BRUCE TUNGET ; TUNGET BRUCE A ; TUNGET BRUCE ARNOLD ; TUNGET BRUCE ; ARNOLD TUNGET BRUCE ; BRUCE A TUNGET ; TANDZHET BRJUS EH ; TANDZHET BRJUS EHRNOL D ; TANDZHET BRYUS E

Assignee(s): BRUCE ARNOLD TUNGET

Inventor(s):^(std): TANDZHET BRJUS EHRNOL D ; TANDZHET BRYUS E ; TUNGET BRUCE ; TUNGET BRUCE ARNOLD ; TUNGET BRUCE A ; TANDZHET BRJUS EH ; ARNOLD TUNGET BRUCE ; BRUCE A TUNGET

Inventor(s): BRUCE ARNOLD TUNGET

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; NORTON ROSE OR SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; NORTON ROSE CANADA SENCRL SRL LLP; R WILLIAM WRAY AND ASSOCIATES; CANZLER AND BERGMEIER PATENTANWALTE; WIGHTMAN DAVID ALEXANDER; JOHNSON YVONNE CATHERINE; Wightman David Alexander; THE MATTHEWS FIRM; MATTHEWS FIRM; MATTIS JACOB S; MATTIS JACOB; MCCUTCHEON TERRY L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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E21B43/00 (Core/Invention)

International class
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CPC: E21B33/138 B02C13/24 E21B21/00 E21B34/14 E21B43/121 E21B43/25 E21B29/00 E21B21/10 E21B34/02 E21B43/12 E21B43/14 E21B43/38 E21B23/002 E21B43/00 E21B29/10 E21B17/10 E21B7/00 E21B33/068 E21B41/0092 E21B43/16 E21B17/00 E21B7/061 E21B33/13 E21B41/0035 E21B34/06 E21B17/18 E21B21/12 E21B43/006 E21B43/29 E21B43/10 E21B23/14 E21B29/005 E21B29/06 E21B41/00 E21B33/047 E21B2033/005 E21B41/0007 E21B43/28 E21F17/16

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US class: 1/1 166/207 166/242.2 166/250.01 166/285 166/292 166/298 166/298S 166/305.1 166/311 166/313 166/316 166/373 166/379 166/384 166/387 166/387S 166/50 166/52 166/53 166/54.1 166/54.100S 166/55.8 166/55.800S 166/67 166/90.1 166/90.100S 175/315 175/320 175/67 175/67S 30/103 405/53 405/53P 405/55 405/59

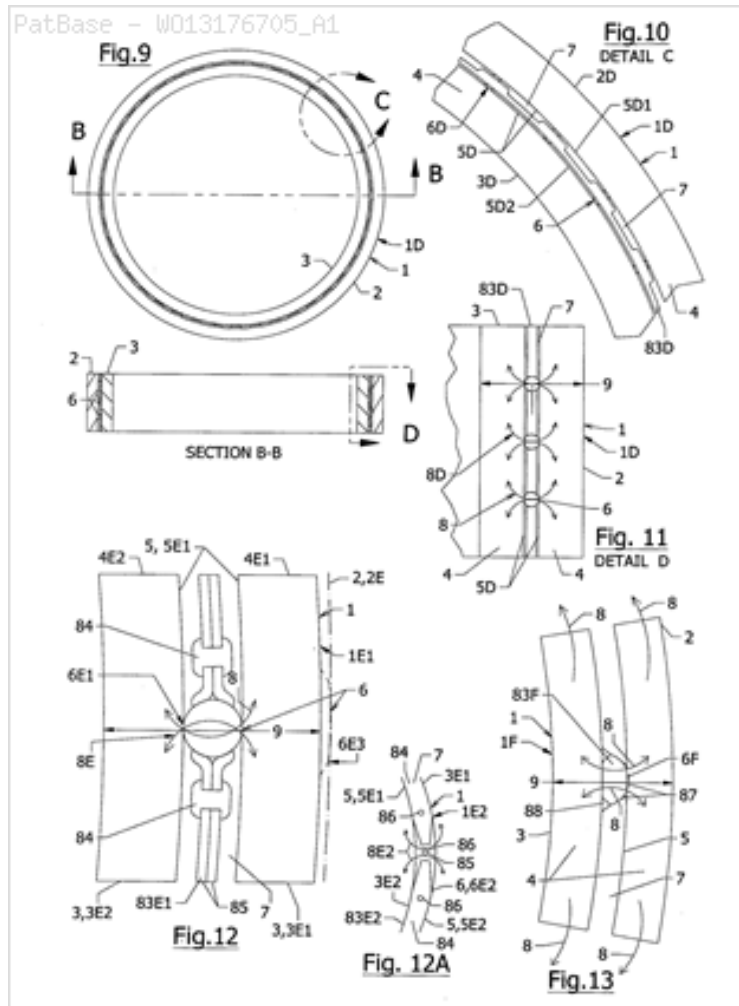
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Abstract:

Source: US2010126729A Systems and methods usable to operate on a plurality of wells through a single main bore are disclosed herein. One or more chamber junctions are provided in fluid communication with one or more conduits within the single main bore. Each chamber junction includes a first orifice communicating with the surface through the main bore, and one or more additional orifices in fluid communication with individual wells of the plurality of wells. Through the chamber junctions, each of the wells can be individually or simultaneously accessed. A bore selection tool having an upper opening and at least one lower opening can be inserted into the chamber junction such that the one or more lower openings align with orifices in the chamber junction, enabling selected individual or multiple wells to be accessed through the bore selection tool while other wells are isolated from the chamber junction.



60) Family number: 30545142 (US2001053911A)

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Title: REPOSITIONING INSTRUMENT TO FIXATE BONE–FRACTURES**Priority:** BR1998PI16017 19980917 DE19982004268U 19980311 DE19995013861 19990216
WO1999CH00074 19990216 WO1998CH00399 19980917 EP19980942440 19980917**Family:**

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Probable Assignee: SYNTHES USA**Assignee(s):^(std):** ACKERET ROMAN ; AMBUEHL RUEDI ; AMBUHL RUEDI ; DELL OCA ALBERTO FERNANDEZ ; HEHLI MARCUS ; HEHLI MARKUS ; HUNGERBUEHLER RUTH ; SYNTHES USA ; SYNTHES AG ; SENN PETER ; SYNTHES AG CHUR ; SYNTHES U S A ; SYNTHES GMBH**Assignee(s):** SYNTHES AG CHUR CHUR ; SYNTHES AG CHUR CHUR GRAUBUENDEN CH ; SYNTHES AKTIENGESSELLSCHAFT ; SYNTHES USA LLC ; SYNTHES ; SYNTHES (USA) ; SYNTHES CHUR CHUR AG ; SYNTHES CHUR CHUR GRAUBUENDEN CH AG ; SYNTHES CHUR AG ; SYNTHES U SA ; HUNGERBUEHLER RUTH**Inventor(s):^(std):** ACKERET ROMAN ; ALBERTO FERNANDEZ DELL OCA ; AMBUEHL RUEDI ; AMBUHL RUEDI ; DELL OCA ALBERTO FERNANDEZ ; DELL OCA FERNANDEZ ; FERNANDEZ

DELL OCA ALBERTO ; HEHLI MARCUS ; HEHLI MARKUS ; HL RUEDI AMB ;
HUNGERBUEHLER RUTH ; HUNGERBUHLER RUTH ; MARKUS HEHLI ; OCA
ALBERTO FERNANDEZ DELL ; RUEDI AMBUHL ; SENN PETER

Inventor(s): RUTH HUNGERBUEHLER ; PETER SENN ; ROMAN ACKERET ; RUEDI AMB HL
Agent(s): PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP
Designated states: AT AU BE BR CA CH CY DE DK ES FI FR GB GR IE IT JP LI LU MC MX NL PT SE US
International class
(IPC 8-9): A61B17/17 A61B17/56 A61B17/58 A61B17/60 A61B17/64 A61B17/88
A61B17/90 (Advanced/Invention);
A61B17/58 A61B17/60 A61B17/64 A61B17/78 (Advanced/Non-invention);
A61B17/58 A61B17/60 A61B17/88 (Core/Invention);
A61B17/60 (Core/Non-invention)
International class
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US class: 606/205 606/208 606/53 606/54 606/60 606/67

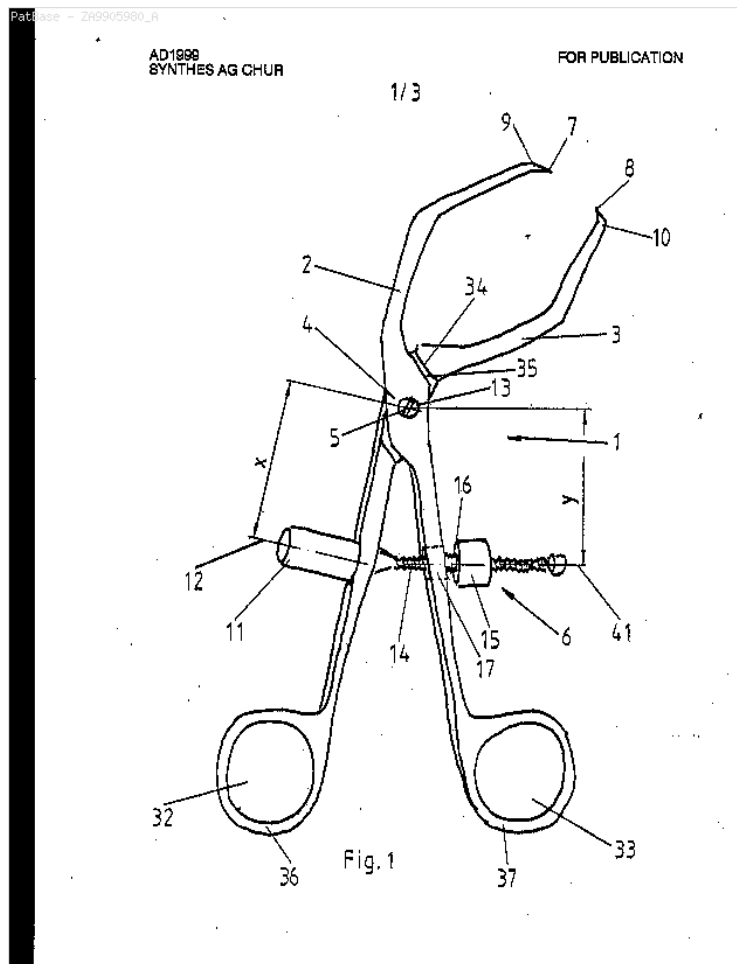
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DE4318150 A1, CH607915 A3, CH607915,

Forward Citations: WO15068434, WO12012625, WO04026155, US9622760, US9545266, US9480509,
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EP1779798, EP1779798, CN103976773, CN103976773, CN103462676,

Abstract:

Source: US2001053911A The present invention discloses bone grasping tongs for seizing bones or bone fragments. The tongs comprise two mutually pivotable tongs levers fitted with clamping tips at the ends of the tongs levers for seizing the bone. The tongs further comprise a locking element to detachably lock the relative position of the tongs levers and a connecting member to connect with an additional component within an external fixation device. The locking element is located at a distance from the axis of rotation and the longitudinal axis of the connecting member is situated in the plane of pivoting of the tongs lever. The present invention also discloses an external fixation device for externally fixating bone fractures. The device comprises at least one bone grasping tongs, one elongated support, and at least one clamp which detachably connects the connecting member of a bone grasping tongs and an elongated support in a mutually rotatable manner.



61) Family number: 55667446 (US2015150683A)

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Title: ORTHOPEDIC ANCHORING SYSTEM AND METHODS**Priority:** US20120674233P 20120720 US20130413318 20130719 US20130798922P 20130315
WO2013US51381 20130719

Publication number	Publication date	Application number	Application date
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<u>US9554909 BB</u>	20170131	US20130413318	20130719
<u>WO14015309 A1</u>	20140123	WO2013US51381	20130719

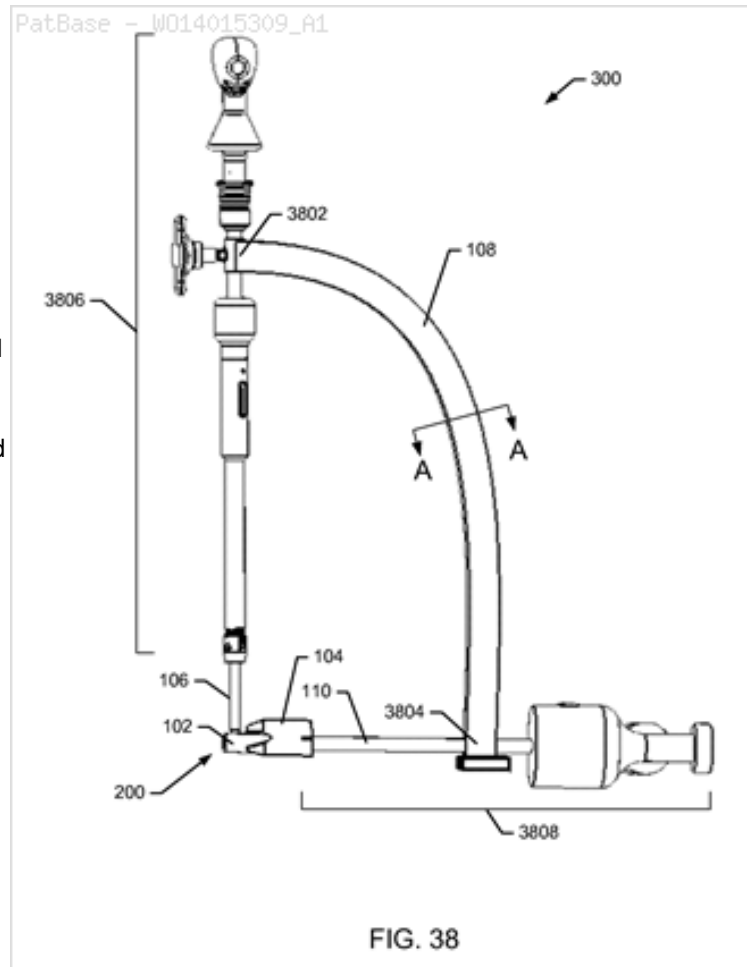
Probable Assignee: JCBD LLC**Assignee(s):**^(std): JCBD LLC**Inventor(s):**^(std): DONNER CHRISTOPHER THOMAS ; DONNER EDWARD JEFFREY**Agent(s):** SAMUEL WADE; POLSINELLI PC; JOSHUA J; MCCAY MICHAEL ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
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NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK
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ZW**International class**
(IPC 8-9): A61B17/17 A61B17/70 A61B17/84 A61B17/86 A61B17/90 A61F2/30
A61F2/46 (Advanced/Invention);
A61B17/15 A61B17/88 (Advanced/Non-invention)**CPC:** A61F2/30749 A61F2/30 A61F2/4637 A61F2002/30495 A61F2002/30617 A61F2002/4642
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A61B17/8875**US class:** 623/16.11[Classification Explorer](#)**Cited documents:** WO9848717, WO9531947, WO9523559, WO9308745 A1, WO14074853 A1,
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Forward Citations: US9421109, US9381045, US9333090, CN104434294,

Abstract:

Source: US2015150683A Systems and methods for performing orthopedic surgical procedures to treat a patient are presented herein. The orthopedic anchoring system may include an implant assembly and a delivery tool to perform the orthopedic surgical procedure. The implant assembly may include an implant outer layer, an implant body situated within the implant outer layer, and a fastener attached to a locking element of the implant body. The delivery tool may include a targeting arm, a fastener guide removably attached at a first end of the targeting arm and an implant guide removably attached to a second end of the targeting arm. The delivery tool may maintain a fixed spatial relationship between a longitudinal axis of the fastener and a longitudinal axis of the implant outer layer and implant body. The orthopedic anchoring system may be used to perform orthopedic surgical procedures related to joint reinforcement or immobilization.



62) Family number: 11140691 (US6245071B)

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Title: External fixation device for bone**Priority:** KR20017011362 20010907 US19990265584 19990310 WO2000CH00109 20000228
WO2000CH00109 20010907**Family:**

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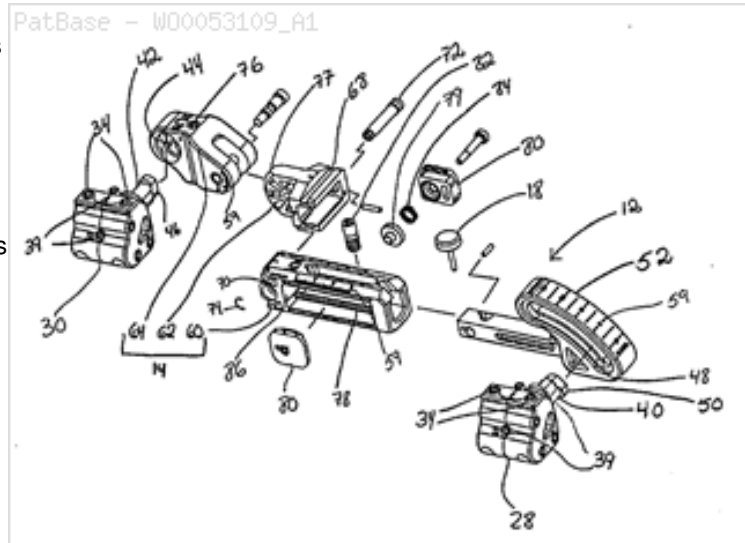
Probable Assignee: SYNTHES USA LLC**Assignee(s):**^(std): SYNTHES AG ; PIERSON GLEN J ; SYNTHES USA ; SYNTHES GMBH ; SYNTHES HOLDING AG**Assignee(s):** SYNTHES U S A ; SYNTHES USA LLC ; SYNTHES CHUR AG ; SYNTHES ; SYNTHES AG CHUR ; SYNTHES AG CHUR CHUR ; SYNTHES AKTIENGESELLSCHAFT**Inventor(s):**^(std): PIERSON GLEN J ; PIERSON J**Inventor(s):** GLEN J PIERSON ; J.**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP**Designated states:** AT AU BE CA CH CN CY DE DK ES FI FR GB GR IE IT JP KR LI LU MC NL NZ PT SE
US ZA**International class**
^{(IPC 8-9):} A61B17/60 A61B17/64 A61B17/66 A61F5/05 (Advanced/Invention);
A61B17/64 A61B17/66 (Advanced/Non-invention);
A61B17/60 (Core/Invention)**International class**
^{(IPC 1-7):} A61B A61B17/60 A61B17/66 A61F5/05**CPC:** A61B17/6425 A61B17/66**European class:** A61B17/66 K61B17/64D**US class:** 606/57 606/58[Classification Explorer](#)**Cited documents:** USRE34985 E, US6033412 A, US5843081 A, US5743898 A, US5683389 A, US5662649 A, US5601551 A, US5545162 A, US5437667 A, US5376091 A, US5320622 A,

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Forward Citations: WO14153008, WO14129995, WO14129995, WO13165589, WO02094112, US9474552, US9463045, US9398925, US9393045, US9351763, US9301782, US9220533, US9101398, US9078710, US9060809, US9028534, US8945128, US8906020, US8858555, US8834467, US8828067, US8758343, US8702768, US8679167, US8419732, US8388619, US8382757, US8382755, US8343166, US8109936, US7901412, US7731738, US7588571, US7575575, US7507240, US7291148, US7282052, US7261713, US6942664, US2016038185, US2016022315, US2014371796, US2014276816, US2011103676, US2011082458, US2010268285, US2009254129, US2009254089, US2009177199, US2009171403, US2009131991, US2009131990, US2009125068, US2009048606, US2008243191, US2008243132, US2007282338, US2007162028, US2006247629, US2006247622, US2006229605, US2006229604, US2006229603, US2006229602, US2006155276, US2004249375, US2004097922, US2004059331, US2003069580, KR101662668, JP2008539925, JP2007532209, EP1545350, CN103126755, CN102283732,

Abstract:

Source: US6245071B The present invention is directed to a device for fixation of a bone fracture. The device comprises at least one distal pin having a mounting end for insertion on a distal side of the fracture, at least one proximal pin having a mounting end for insertion on a proximal side of the fracture, a distal member attached to the distal pins, a proximal member attached to the proximal pins and slideably connected to the distal member for reducing or distracting the bone fracture, a distraction assembly for controlling the movement between the proximal and distal members, and a removable engagement element. The distraction assembly has two modes of operation: an active configuration and an inactive configuration. In the active configuration, incremental relative sliding movement between the proximal and distal members is allowed, and, in the inactive configuration, free relative sliding movement between the proximal and distal members is allowed. The engagement element operatively engages the distraction assembly in the inactive configuration. Removal of the engagement element places the distraction assembly in the active configuration.



0) US2006189998A – GUIDE ASSEMBLY FOR GUIDING CUTS TO A FEMUR AND ...

63) Family number: 33256023 (US2006189998A)

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Title: GUIDE ASSEMBLY FOR GUIDING CUTS TO A FEMUR AND TIBIA DURING A KNEE ARTHROPLASTY

Priority: AU20070212265 20070208 AU20130221945 20130828 AU20160203260 20160519
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Probable Assignee: G RASMUSSEN

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Inventor(s):^(std): LYNN RASMUSSEN G ; RASMUSSEN G L ; RASMUSSEN G LYNN

Inventor(s): RASMUSSEN GLYNN ; RASMUSSEN G ; G LYNN RASMUSSEN

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A61B17/00](#) [A61B17/02](#) [A61B17/15](#) [A61B17/17](#) [A61B17/32](#) [A61B17/56](#) [A61B17/58](#) [A61B17/60](#) [A61B17/72](#) [A61B17/74](#) [A61B17/76](#) [A61B17/78](#) [A61B17/88](#) [A61B17/90](#) [A61B19/00](#) [A61F2/00](#) [A61F2/28](#) [A61F2/38](#) [A61F2/46](#) [A61F5/00](#) (Advanced/Invention); [A61B17/72](#) (Advanced/Non-invention); [A61B17/14](#) [A61B17/56](#) [A61B17/58](#) [A61B17/68](#) [A61B17/88](#) [A61B19/00](#) [A61F2/38](#) [A61F5/00](#) (Core/Invention); [A61B](#) (Subclass/Invention)

International class
(IPC 1-7): [A61B17/58](#)

CPC: [A61B17/7266](#) [A61B17/8875](#) [A61B17/155](#) [A61B17/157](#) [A61B17/72](#) [A61B17/7283](#) [A61B2017/0268](#) [A61B17/32](#) [A61B2017/00792](#) [A61B2017/320052](#) [A61B17/1764](#) [A61B17/025](#) [A61B17/154](#)

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WO14188184, WO13063375, WO12066305, WO12066304, WO11126590, WO11126590, WO11049637, WO10019822, WO10019822, USD651317, USD651314, USD651313, US9649117, US9622761, US9566078, US9549742, US9504456, US9492180, US9492179, US9463032, US9433425, US9427240, US9398957, US9364243, US9314282, US9308006, US9204939, US9192459, US9168156, US9138237, US9119635, US9113957, US9113923, US9101443, US9101432, US9095352, US9060797, US8998911, US8974459, US8915918, US8900316, US8876831, US8858557, US8845645, US8840629, US8840616, US8834490, US8828013, US8808297, US8784495, US8758353, US8747410, US8728086, US8672946, US8652179, US8636741, US8628533, US8608783, US8506571, US8454616, US8435246, US8333772, US8317797, US8303597, US8226658, US8167888, US7959637, US7927336, US7842039, US7780671, US7641661, US2016270864, US2016174955, US2016174817, US2016051336, US2016030028, US2016015473, US2016007828, US2016007827, US2016007826, US2014324053, US2014288562, US2014228853, US2014194896, US2014194884, US2013338671, US2013172890, US2013096563, US2012271314, US2012245589, US2012101505, US2011230889, US2011190898, US2011106092, US2011106091, US2011106081, US2011093081, US2010331991, US2010331848, US2010331847, US2010305575, US2010292694, US2010286699, US2009306787, US2009281577, US2009275987, US2009275947, US2009043310, US2009043309, US2009018544, US2008228189, US2008177261, US2007173854, US2006036257, KR20160090007, KR20160090006, JP6092220, JP2014530649, JP2014018437, GB2525806, GB2525806, GB2445620, GB2445620, EP2581049, EP2422717, EP2116199, CN103945779, CN103945779, CN103637837, CN103220992, CN101884560, AU2011330978,

Abstract:

Source: US2006189998A An assembly for guiding resection of a femur and tibia of a knee joint in preparation for installing a femoral and tibial knee components. For example, the assembly can include tibial and femoral IM rods to which are connected through a torque bolt that allows controlled adjustment of the distraction of the tibia and femur during cut positioning in a range of flexion angles. Also, the assembly is usable with relatively small, noninvasive approaches to the knee joint by way of relatively narrow, low profile components that attach to tibial and femoral IM rods. Further, the assembly includes several quick-release components to allow fast assembly and disassembly in a surgical setting. Each of these aspects, along with the ability of the assembly to accurately guide initial reference cuts to the tibia and femur, promotes an improved outcome for the patient.

PatBase - W010019822_A9

W010019822

PCT/US2006/053785

1/47

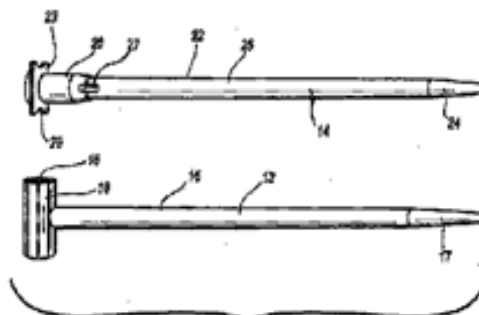


FIGURE 1

SUBSTITUTE SHEET (RULE 26)

64) Family number: 32882955 (US2006095038A)

© PatBase

Title: POLYAXIAL BONE SCREW**Priority:** US20040980534 20041103 US20090384498 20090406 US20110317156 20111011
US20130861108 20130411 US20130892470 20130513

Family:	Publication number	Publication date	Application number	Application date
	<u>US2006095038 AA</u>	20060504	US20040980534	20041103
	<u>US2009228050 AA</u>	20090910	US20090384498	20090406
	<u>US2012035669 AA</u>	20120209	US20110317156	20111011
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	<u>US2013296946 AA</u>	20131107	US20130892470	20130513
	<u>US7513905 BB</u>	20090407	US20040980534	20041103
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	<u>US8439958 BB</u>	20130514	US20110317156	20111011

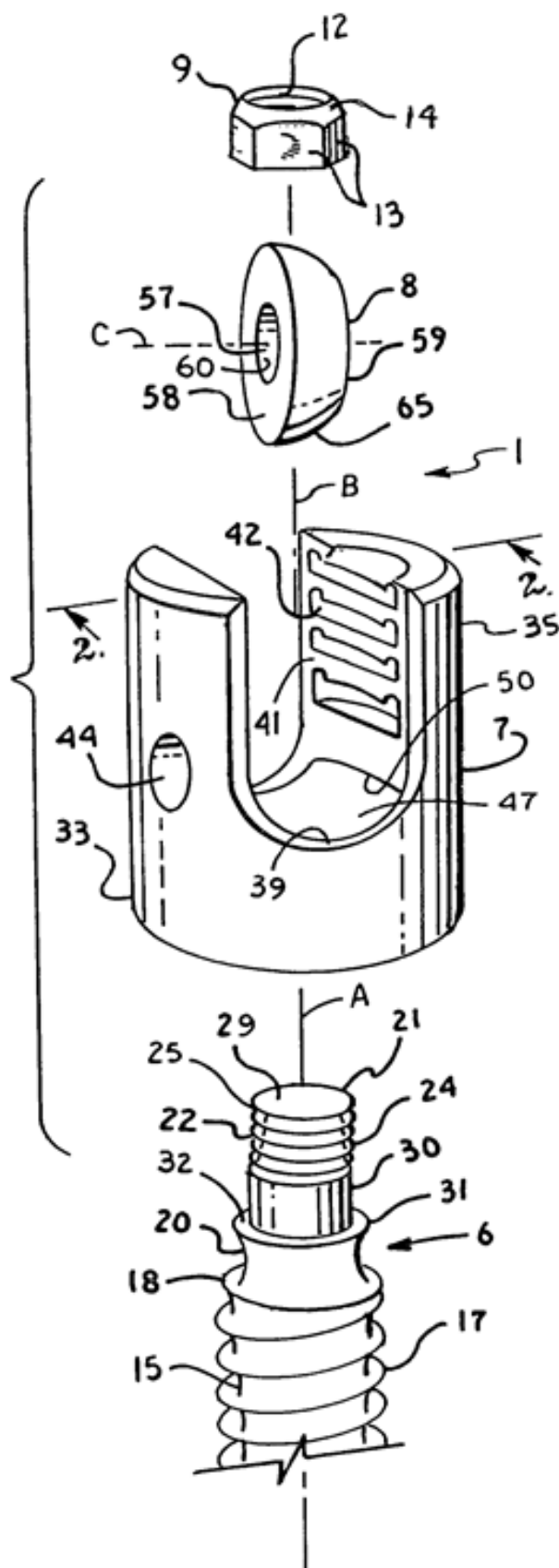
Probable Assignee: JACKSON ROGER P**Assignee(s):^(std):** JACKSON ROGER P**Inventor(s):^(std):** JACKSON ROGER P**Inventor(s):** JACKSON ROGER**Agent(s):** JOHN C MCMAHON; LAW OFFICE OF JOHN C MCMAHON; MCMAHON JOHN C;
JOHN C**International class** A61B17/04 A61B17/70 A61B17/86 A61F2/08 A61F2/30 B23P11/00 (Advanced/Invention);
(IPC 8-9); A61B17/68 A61B17/70 A61F2/30 (Core/Invention)**CPC:** A61B17/704 A61B17/7032 A61B17/7037 A61B2017/867 Y10T29/49826**European class:** A61B17/70B2 A61B17/70B5B K61B17/86N2**US class:** 29/428 29/428S 606/265 606/266 606/267 606/268 606/269 606/278 606/301 606/301P 606/305 606/305P 606/306 606/307 606/61[Classification Explorer](#)**Cited documents:** USRE37161 E, US6995843 BB, US6716214 BA, US6695843 BB, US6565585 BB, US6565567 BA, US6565565 BA, US6554834 BA, US6488681 BB, US6485494 BA, US6471705 BA, US6368321 BA, US6302888 BA, US6302868 BA, US6287311 BA, US6287308 BA, US6280442 BA, US6280440 BA, US6280422 BA, US6273888 BA, US6254602 BA, US6248105 BA, US6224596 BA, US6187005 BA, US6146383 A, US6132432 A, US6090111 A, US6090110 A, US6077262 A, US6074391 A, US6063090 A, US6053917 A, US6019759 A, US6010503 A, US5964760 A, US5891145 A, US5885286 A, US5879350 A, US5817094 A, US5800435 A, US5797911 A, US5782833 A, US5733286 A, US5728098 A, US5725528 A, US5690630 A, US5672176 A, US5669911 A, US5601553 A, US5591166 A, US5586984 A, US5584834 A, US5554157 A, US5476464 A, US5474555 A, US5466237 A, US5443467 A, US5429639 A, US5360431 A, US5312404 A, US5261912 A, US3456704 A, US2005143737 AA, US2004172022 AA, US2002183747 AA, US2002143341 AA, US2001001119 AA, US2001 A, EP1121902 A2, DE9202745 U, DE9202745, DE19507141 A1,**Forward Citations:** US9603629, US9597119, US9566092, US9549763, US9526531, US9522021, US9504496, US9456851, US9451993, US9439683, US9433440, US9421041, US9393047, US9387013, US9358047, US9259254, US9198694, US9198692, US9186187, US9179937, US9144444, US9113960, US9101426, US9060818, US9060813, US8998960, US8998959, US8956361, US8951294, US8936623, US8926672, US8926670, US8911478, US8894691, US8888827, US8876869, US8870928, US8852239, US8795338, US8790374, US8740947, US8636775, US8568451, US8562652, US8518085, US8465528, US8430916, US8394127, US8388659, US8372122, US8337536, US8333792, US8317836, US8308773, US8298267, US8298265, US8267979, US8257397, US8246659, US8216281, US8211155, US8211150, US8192469, US8182516, US8182515, US8177815, US8172882, US8172881, US8162987, US8147520, US8142480, US8118842, US8114134, US8114130, US8109970, US8105359, US8105356, US8097024,

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US2009062865, US2009036935, US2008208259, US2008009862, US2007244482,
US2007233063, US2005228379, US2004236330, US2004225289, JP5752756,
JP2013252445,

Abstract:

Source: US2006095038A A polyaxial bone screw assembly includes a threaded shank body having an upper capture structure, a head, a retaining ring and a nut. The external capture structure surface includes a threaded portion and a smooth portion; the smooth portion for slidably mating with the retaining ring and the threaded portion for rotatable attachment to the nut within a cavity of the head. The head has a U-shaped cradle defining a channel for receiving a spinal fixation rod. The head channel communicates with the cavity and further with a restrictive opening that allows for loading the capture structure into the head but prevents passage of the retaining ring out of the head. The retaining ring has an external substantially spherical surface that mates with an internal surface of the head, providing a ball joint, enabling the head to be disposed at an angle relative to the shank body. The nut fixes the retaining ring to the shank and also provides a tool engagement formation for driving the shank body into bone. The nut further includes a weakened area, providing for deformation and interlocking of threaded portions of the capture structure and the nut.

PatBase - US8439958_BB



65) Family number: 50473384 (US2013110110A)

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Title: POLYAXIAL EXTERNAL FIXATOR AND METHOD OF USING THE SAME
Priority: US20100361963P 20100707 US20110807983 20110707 WO2011IL00539 20110707
Family:

Publication number	Publication date	Application number	Application date
IL224110 A0	20130324	IL20110224110	20110707
IL224110 A1	20160831	IL20110224110	20110707
US2013110110 AA	20130502	US20110807983	20110707
WO12004798 A1	20120112	WO2011IL00539	20110707

Probable Assignee: GABRIEL WAISMAN**Assignee(s):**^(std): GABRIEL WAISMAN ; WAISMAN GABRIEL**Inventor(s):**^(std): WAISMAN GABRIEL**Agent(s):** GOLD PATENTS LTD; GOLD PATENTS AND FINANCIAL SERVICES LTD

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A61B A61B17/64](#) (Advanced/Invention);
 (IPC 8-9): [A61B](#) (Subclass/Invention)

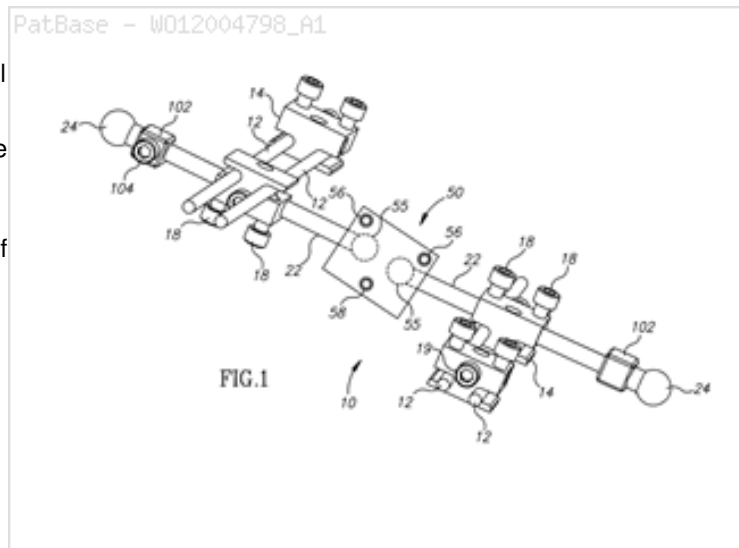
CPC: [A61B17/6458](#) [A61B17/6416](#) [A61B17/6441](#)**European class:** [A61B17/64K](#) [K61B17/64C](#) [K61B17/64G](#)**US class:** [606/59](#)[Classification Explorer](#)

Cited documents: US6264396 BA, US5803924 A, US5429637 A, US5320622 A, US5304177 A, US4628921 A, US4273116 A, US2005119656 AA, US2003229345 AA,

Forward Citations: WO15183226, US9301782, US2012143191, ITFR20120015,

Abstract:

Source: US2013110110A A flexible, light-weight, simple, modular-design Polyaxial External Fixator (PEF) for fixing bones is strong enough to hold the bones in their intended position. The fixator uses two or more preloaded pins or Kirschner-wires or non-preloaded screws. The PEF uses non-linear Kirschner-wires anchorage using external loading cages mounted in each arm of a polyaxial hinged external fixator. The hinges and the cages offer a high degree of configuration flexibility and modularity. The PEF may be provided in a kit of interchangeable parts. Most of the PEF parts are typically made of non-metallic radiolucent materials or made of any kind of metallic materials. Insertion and removal of Kirschner-wires is safe, fast and simple compare to screws.



0) US4836668A – SELF-SUPPORTED, ADJUSTABLE, CONDENSATION-FREE S...

66) Family number: 3350490 (US4836668A)

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Title: Self-supported, adjustable, condensation-free shower mirror

Priority: CA19880572618 19880721 US19860899265 19860822 US19890311744 19890217
US19870128995 19871204 US19890416985 19891002 US19870076494 19870722
US19890427862 19891027 WO1988US02501 19880722

Family:	Publication number	Publication date	Application number	Application date
	AT113388 E	19941115	AT19880907465T	19880722
	AU198822633 A1	19890213	AU19880022633	19880722
	AU595725 B2	19900405	AU19880022633	19880722
	CA1269554 A1	19900529	CA19880572618	19880721
	DE3851957 D1	19941201	DE19883851957	19880722
	EP0374171 A1	19900627	EP19880907465	19880722
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	EP0374171 B1	19941026	EP19880907465	19880722
	NZ225532 A	19911126	NZ19880225532	19880722
	US4836668 A	19890606	US19870128995	19871204
	US4904072 A	19900227	US19890311744	19890217
	US4993821 A	19910219	US19890416985	19891002
	US5032015 A	19910716	US19890427862	19891027
	WO8900706 A1	19890126	WO1988US02501	19880722

Probable Assignee: CHRISTIANSON THOMAS R

Assignee(s):^(std): CHRISTIANSON THOMAS R ; SHOWER TEK INC ; SHOWERTEK INC

Assignee(s): SHOWERTEK INC PALO ALTO CALIF US ; SHOWERTEK INC A CORP OF CA ; SHOWER TEK INC CORP OF CA ; CHRISTIANSON THOMAS R PALO ALTO CALIF US

Inventor(s):^(std): CHRISTIANSON THOMAS R ; SHOWERTEK INC

Inventor(s): SHOWERTEK INC PALO ALTO CALIF US ; THOMAS R CHRISTIANSON ; CHRISTIANSON THOMAS R PALO ALTO CALIF US

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GOWLING LAFLEUR HENDERSON LLP

Designated states: AT AU BE CH DE FR GB IT JP LI LU NL SE

International class
^(IPC 8-9): [A45D27/22](#) [A45D42/00](#) [A47G1/00](#) [A47G1/02](#) [A47G1/24](#) [G02B27/00](#) [G02B5/08](#) [G02B7/18](#) ^(Advanced/Invention);
[A45D27/00](#) [A45D42/00](#) [A47G1/00](#) [A47G1/16](#) [G02B27/00](#) [G02B5/08](#) [G02B7/18](#) ^(Core/Invention)

International class
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CPC: [A47G1/02](#) [G02B7/1815](#) [G02B27/0006](#)

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[Classification Explorer](#)

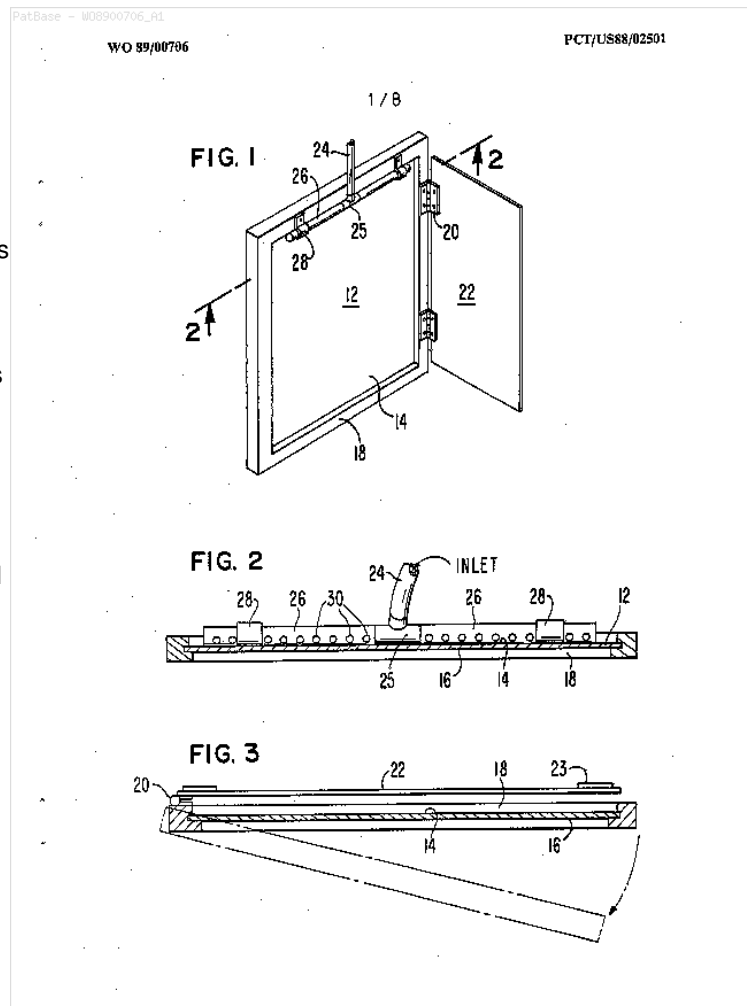
Cited documents: USRE32906 E, US964050 A, US683164 A, US4904072 A, US4836668 A, US4832475 A, US4733468 A, US4655559 A, US4643229 A, US4558929 A, US4557003 A, US4556298 A, US4548482 A, US4487196 A, US4327961 A, US4307754 A, US4150869 A, US408511 A, US4072397 A, US3708218 A, US3594063 A, US3530275 A, US291147 A, US2807432 A, US2759765 A, US1503743 A, US1210977 A, JP5232753 A2, JP52032753 A2, AU3243889 A1,

Forward Citations: USD745111, USD744614, USD744612, USD744611, USD744066, USD744065, USD744064, USD711506, USD711505, USD692111, USD678467, USD678463, USD674050, USD673649, USD666010, USD642383, USD641831, USD638631,

USD628410, USD625776, USD624156, USD618766, USD616061, USD606623, USD605731, USD603935, USD600777, USD592278, USD590048, USD582006, USD581482, USD581014, USD580513, USD580012, USD577793, USD577099, USD533253, USD529151, USD528631, USD527440, USD440641, US9636694, US9623425, US9623424, US9581255, US9441840, US9404243, US9347208, US9157218, US9138040, US9127794, US9066421, US8967497, US8905332, US8858001, US8794543, US8789218, US8757517, US8746901, US8733675, US8667623, US8621681, US8620152, US8616470, US8584972, US8371618, US8366024, US8348181, US8292200, US8197073, US8146838, US8132745, US8109450, US8046865, US8028935, US8024822, US8020788, US8020787, US7905429, US7789326, US7784141, US7770822, US7740186, US7657948, US7533906, US7520448, US7356869, US7249858, US7114666, US7111798, US7066411, US6799356, US6799335, US6789751, US6648376, US6641057, US6629651, US6626210, US6598838, US6581886, US6293785, US6238052, US6164570, US6042155, US6036110, US5997047, US5953157, US5865378, US5862816, US5847873, US5805765, US5604633, US5416635, US5313316, US5291337, US5251066, US5241714, US4993821, US2014117112, US2013312645, US2011170191, US2011089259, US2009067075, US2008295242, US2008178480, US2007180640, US2007000727, US2006231120, US2006200929, US2006179966, US2006100717, US2005195481, US2005068646, US2004188548, US2004156107, US2004151554, US2003129291, US2003084179, KR200475037, KR101146062, GB2369049, GB2346804, GB2297033, GB2244430, EP0871051, CN106510319, CN105124995, AU671479,

Abstract:

Source: US4836668A To prevent condensation on the mirror, it is heated with water from a supply tube connected from a showerhead pipe to a dispenser which disperses the heated water in either liquid or spray form, preferably from holes in a hose which is mounted in a rear temperature-control space and which surrounds the back of the mirror. The hose has an oval cross-section with holes on one of its flatter sides so that they will all face inward, toward the center of the mirror. Also the tube acts as a gasket to prevent the water from leaking through the mirror's front. The mirror is held by a flex-arm which includes breakaway flex-joints (hinge or ball), allowing rotational and translational movements. A supply tube is carried inside the flexarm, has a friction fit in the ends of the arm, and is connected to the dispenser hose by a T-fitting. A relief slot in the mirror end of the flex-arm allows water which enters the space in the flex-arm around the supply tube to leave such space. The mirror is mounted in a frame with a back plate which is slightly larger than the frame so that the back plate spreads the back of the frame, causing its front part to be compressed, thereby to squeeze the mirror into a concave, magnifying shape.



0) US2001043003A – BACK FOR SEATING UNIT

67) Family number: 30237023 (US2001043003A)

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Title: BACK FOR SEATING UNIT

Priority:

AU19990011013	19981019	AU20020048833	20020618	AU20040200744	20040225
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Family:

Publication number	Publication date	Application number	Application date
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DE69738088 T2	20080521	DE19976038088T	19981019
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International class
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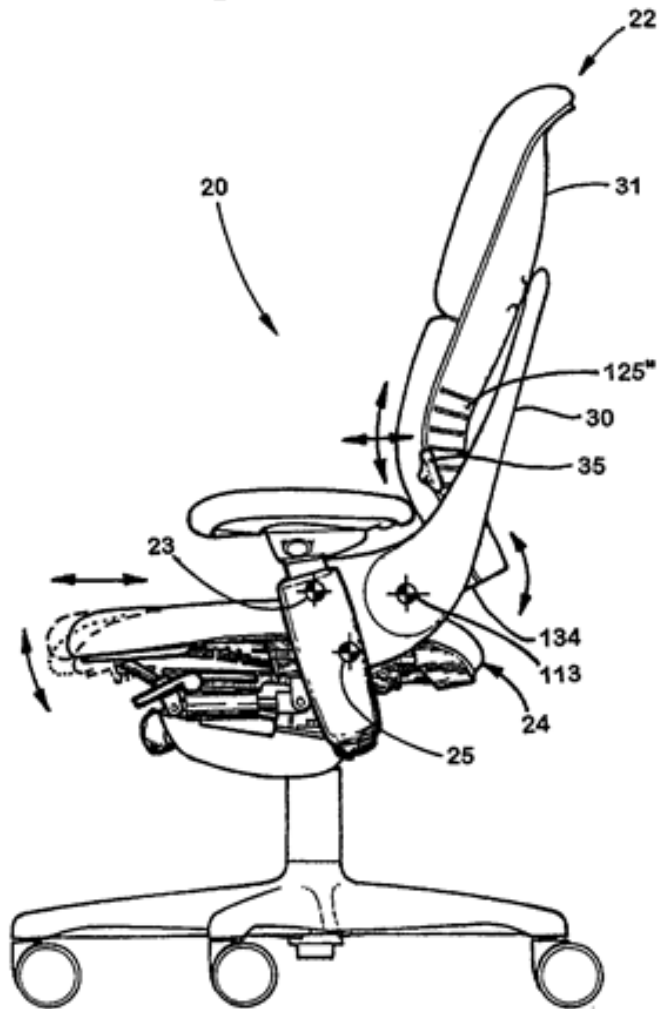
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Abstract:

Source: US2001043003A A back for a seating unit, such as a chair, includes a back frame and a compliant back that is flexibly bendable to define different curvilinear shapes for sympathetically and ergonomically supporting a seated user's back. The back includes a bracket with forwardly-extending flanges pivotally connecting the compliant back to the back frame at a bottom connection generally aligned with a seated user's hip joint. The back also includes a top connection pivotally connecting the back to the back frame above the first connection. An adjustable torsional force-generating mechanism is connected to the first connection that biases a lumbar portion of the compliant back forward with respect to the chair. The top and bottom connections, in combination with the adjustable force generating mechanism, constrain the compliant back to move over a range that provides excellent ergonomic lumbar support to a seated user.

PatBase - W09921456_A1

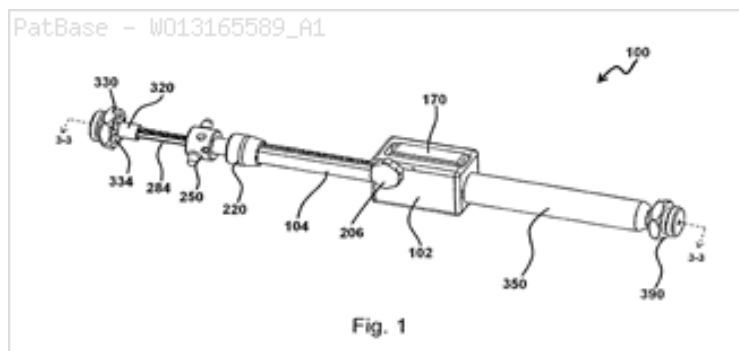


Title: RATCHETING STRUT**Priority:** US20120464502 20120504 WO2013US31539 20130314

Family:	Publication number	Publication date	Application number	Application date
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	US2013296857 AA	20131107	US20120464502	20120504
	US9474552 BB	20161025	US20120464502	20120504
	WO13165589 A1	20131107	WO2013US31539	20130314

Probable Assignee: BIOMET MFG LLC**Assignee(s):^(std):** BRINKER MARK R ; SLAGLE PAUL ; LESTER MARK ; FRANK PHILIP H ; BARNETT GARY D ; BIOMET MFG LLC**Assignee(s):** BIOMET TRAUMA LLC**Inventor(s):^(std):** BARNETT GARY D ; BRINKER MARK R ; CRESINA JEFFERY T ; FRANK PHILIP H ; LESTER MARK ; SLAGLE PAUL**Agent(s):** KILLOUGH KIERAN PAUL; SCHWEGMAN LUNDBERG AND WOESSNER PA; WILLIS RYAN L ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [A61B17/00](#) [A61B17/62](#) [A61B17/64](#) [A61B17/66](#) [A61B17/70](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [A61B17/6416](#) [A61B17/64](#) [A61B17/66](#) [A61B17/7014](#)**US class:** [1/1 606/57](#)[Classification Explorer](#)**Cited documents:** WO09102904 A1, WO06126167 A2, WO0053109 A1, US8439914 BB, US4308863 A, US2012203225 AA, US2011208187 AA, US2011137347 AA, US2009216231 AA, US2006217735 AA, US2006195087 AA,**Forward Citations:** WO16149470, WO14140879, WO14140855, WO14140844, WO14140831, US9427261, US2016338746, US2016030088, US2016022314, US2013338713, CN105286969,**Abstract:**

Source: US2013296857A A ratcheting strut comprising: (a) a ratchet box including a through passage; (b) a first tube sized to extend at least partially through the passage, the first tube including ratchet teeth that engage corresponding ratchet teeth of the ratchet box; (c) a second tube mounted to the ratchet box in parallel with the first tube, the second tube operatively coupled to a second fixation adapter; and (d) a threaded rod operatively coupled to a nut and a first fixation adapter, the threaded rod repositionably mounted to the first tube, where the nut is operatively coupled and repositionable with respect to the first tube.



69) Family number: 42135849 (US2008287970A)

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Title: REPAIR OF DEFECT IN INGUINAL CANAL AND OTHER MUSCULAR STRUCTURES

Priority: US20070013619P 20071213 US20070895039P 20070315 US20070934897 20071105
 US20080030439P 20080221 US20080204806 20080905 US20080183930 20080731
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Publication number	Publication date	Application number	Application date
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Probable Assignee: INSIGHTRA MEDICAL INC

Assignee(s):^(std): ADZICH VASO ; AMATO GIUSEPPE ; BELL STEPHEN G ; BELL STEPHEN GRAHAM ; D AFIERO ALESSANDRO ; INSIGHTRA MEDICAL INC ; INSIGHTRA MEDICAL INC ; INSIGHTRA MEDICAL ; NODA WAYNE ; NODA WAYNE A

Assignee(s): INSIGHTRA MEDICAL INC200 – 9200 IRVINE CENTER DRIVEIRVINECA92618US ; GPB LIFE SCIENCE HOLDINGS LLC

Inventor(s):^(std): ADZICH VASO ; AMATO GIUSEPPE ; BELL STEPHEN G ; BELL STEPHEN GRAHAM ; D AFIERO ALESSANDRO ; NODA WAYNE ; NODA WAYNE A

Inventor(s): STEPHEN GRAHAM BELL ; D'AFIERO ALESSANDRO ; GIUSEPPE AMATO ; BELL STEPHEN GRAHAMIT ; AMATO GIUSEPPEIT

Agent(s): BALDWIN INTELLECTUAL PROPERTY; SMART AND BIGGAR; O NEILL AOIFE; KOHLER SCHMID MOEBUS; SCHUETTE GEAROID; DEVILE JONATHAN MARK; SHOBAYASHI MASAYUKI; ROGITZ AND ASSOCIATES; SCOTT EVANS; JOHN L; JOHN M; ROGITZ JOHN L; HACKLER WALTER A

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A61B A61B17/00 A61B17/03 A61B17/04 A61B17/08 A61B17/10 A61B17/34 A61B17/58 A61B19/00 A61B19/08 A61F13/00 A61F13/36 A61F2/00 A61F2/02 A61F2/04 A61F2/08 A61M29/02 A61M39/02 A61M39/06 (Advanced/Invention); A61B17/00 A61B17/02 A61B17/06 A61B17/062 A61B17/34 (Advanced/Non-invention); A61B17/00 A61B17/03 A61B17/58 A61B19/00 A61F2/00 A61F2/02 A61F2/04 A61M29/02 E21B49/00 G01V1/40 G01V3/38 (Core/Invention); A61B (Subclass/Invention)

CPC: A61B17/0218 A61B2017/00557 A61B2017/00637 A61B2017/00659 A61F2250/006 A61B2017/00592 A61B2017/00623 A61B2017/00641 A61B2017/00654 A61M2005/31508 A61M39/02 A61B2017/3419 A61M2039/066 A61M39/0613 A61B17/3468 A61B2017/00889 A61B2017/00951 A61B2017/3466 A61F2002/0072 A61M2039/0673 A61B17/0485 A61B17/06109 A61B2017/00349 A61B2017/00632 A61B46/30 A61B2090/309 A61B2017/00358 A61B2017/00362 A61F2/0045 A61B17/0293 A61B17/06066 A61B17/0625 A61B17/3423 A61B2017/003 A61B2017/00438 A61B2017/00477 A61B2017/00805 A61B17/00234 A61B17/0057 A61B17/0401 A61B17/0487 A61F2/0063 A61B19/5202 F04C2270/0421 A61B90/30

European class: A61B17/00E A61B17/00P A61B17/02E A61B19/08G A61F2/00B6B4 A61F2/00H K61B17/00E3G K61B17/00E9 K61B17/00G6 K61B17/00K K61B17/00N8 K61B17/00P11G K61B17/00P11J K61B17/00P5E K61B17/00P5R K61B17/00P7 K61B17/00P9 K61B17/00R9 K61B17/02R K61B17/04A K61B17/04K K61B17/062N K61B17/06N K61B17/34G4A K61F2/00H6

US class: 1/1 128/834 128/898 600/37 600/37P 604/256 606/151 606/151P 606/153 606/153P 606/191 606/191S 606/213 606/230 606/99 623/23.72

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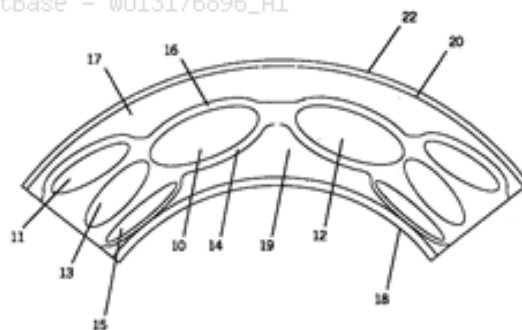
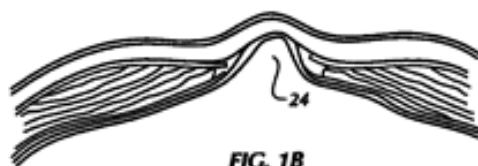
Forward Citations:

WO17013320, WO16187081, WO13176896, WO13122700, WO12170471, WO12129391, WO11095176, WO11095176, WO11042553, USRE45426, USD772410, USD734458, USD673677, US9642690, US9622844, US9622843, US9592109, US9554887, US9554885, US9510927, US9498893, US9492261, US9439746, US9439643, US9414902, US9402986, US9398944, US9398943, US9393093, US9393007, US9393002, US9364310, US9345563, US9301826, US9282994, US9248580, US9247932, US9216075, US9186053, US9179994, US9149352, US9125716, US9125647, US9107726, US9078648, US9044235, US9044225, US9039721, US9034002, US9005308, US9005241, US8961560, US8940017, US8932621, US8932328, US8916077, US8915943, US8906045, US8888811, US8876865, US8876693, US8875607, US8852232, US8821540, US8808314, US8795332, US8793863, US8790356, US8777988, US8777987, US8771313, US8764776, US8758373, US8758220, US8753359, US8747437, US8734485, US8734473, US8721681, US8721664, US8641732, US8615856, US8585581, US8579924, US8480558, US8398659, US8317808, US8257366, US8226686, US2014350580, US2014276996, US2014187854, US2014128891, US2014094830, US2014025094, US2013296898, US2013296657, US2013245650, US2013190572, US2012215237, US2011263930, US2011224698, US2011224697, US2011130774, US2011105836, US2011077598, US2011054249, US2010268018, US2010262020, US2010191046, US2010191045, US2010191044, US2009216253, US2009192530, US2009012560, US2008177132, US2008082105, JP6122943, JP6088525, JP5842036, JP5703300, JP2015512304, JP2014531938, JP2014223452, JP2013507161, ITMI20122192, FR3039057, FR2951069, EP2839808, EP2830532, EP2763600, EP2688524, EP2688524, EP2666440, CN104755044, CN104203123, CN103476364, CN102481185,

Abstract:

Source: US2008287970A A space in a muscle wall such as the inguinal canal is dilated to break up fibrotic bands by divulsion. While the space is dilated a dynamic plug is advanced into it, with the plug expanding and contracting with the space. Shields may be placed against opposite sides of the wall surrounding the space.

PatBase - W013176896_A1

**FIG. 1A****FIG. 1B**

70) Family number: 30051875 (US2003225407A)

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Title: APPARATUS FOR DYNAMIC EXTERNAL FIXATION OF DISTAL RADIUS AND WRIST FRACTURES

Priority: US20020360443P 20020228 US20030377094 20030228 US20080115073 20080505

Family:

Publication number	Publication date	Application number	Application date
<u>US2003225407 AA</u>	20031204	US20030377094	20030228
<u>US2009125068 AA</u>	20090514	US20080115073	20080505
<u>US7367977 BB</u>	20080506	US20030377094	20030228

Probable Assignee: ESTRADA JR HECTOR MARK

Assignee(s):^(std): ESTRADA JR HECTOR MARK

Assignee(s): ESTRADA HECTOR MARK

Inventor(s):^(std): ESTRADA HECTOR MARK ; ESTRADA JR HECTOR MARK

Agent(s): GREG GOSHORN PC; GOSHORN GREGORY K; GREGORY K

International class
(IPC 8-9): A61B17/64 A61B17/70 A61F2/42 (Advanced/Invention);
A61B19/00 (Advanced/Non-invention);
A61B17/60 A61B17/70 A61F2/42 (Core/Invention);
A61B19/00 (Core/Non-invention)

International class
(IPC 1-7): A61B17/56

CPC: A61B2090/067 A61B17/6416 A61B17/6425 A61B17/6491

European class: A61B17/64C A61B17/64D K61B17/64P K61B19/46J

US class: 606/280 606/280P 606/286 606/286S 606/53 606/54 606/54P 606/55 606/56 606/57 606/58 606/59

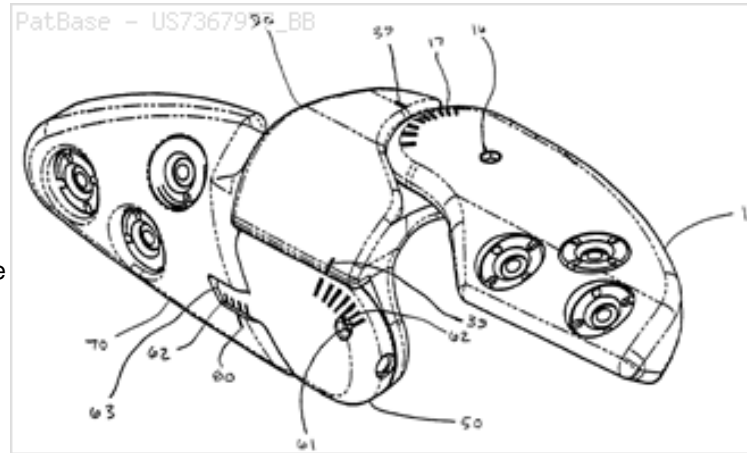
[Classification Explorer](#)

Cited documents: US6709433 BA, US6652524 BA, US6613049 BB, US6491694 BA, US6482206 BB, US6245071 BA, US6217577 BA, US6171309 BA, US6171309 B1, US6171308 BA, US6019769 A, US6001097 A, US5976136 A, US5976134 A, US5976125 A, US5973125 A, US5728095 A, US5725526 A, US5683389 A, US5676664 A, US5630815 A, US5443464 A, US5437667 A, US5429637 A, US5152280 A, US5122140 A, US4988349 A, US4919119 A, US4893618 A, US4782842 A, US4730608 A, US4714076 A, US4611586 A, US4548199 A, US2391537 A, US2006155276 AA, US2004133200 AA,

Forward Citations: WO11019367, WO10077309, WO10077309, US9649141, US9642582, US9517093, US9351742, US9295506, US9066766, US9066757, US8961605, US8961518, US8915924, US8906022, US8628530, US8603148, US8591554, US8439956, US8419733, US8382755, US8377061, US8287538, US8282636, US8262657, US8123747, US7717916, US2016022315, US2015313654, US2015073425, US2014147803, US2012071979, US2011144647, US2010318084, US2010082028, US2010076436, US2009048599, US2007293865, US2007225819, US2007055233, US2006155276, JP5788406, JP2013513424, CN103445888, CN102652002, CN102652002,

Abstract:

Source: US2003225407A The fixator is an apparatus for repairing fractures of the distal radius and wrist. Distal, pivot, distraction, and radial members provide an anatomically contoured, radiolucent apparatus that permits the wrist to move through a substantially normal range of motion. A means for distraction of the bones by the fixator is also provided. The fixator may be affixed to the lower arm and hand by spaced-apart elongate distal mounting pins with lower ends adapted or mounting in the metacarpal bone and by spaced-apart elongate radial mounting pins with lower ends adapted for mounting in the radius.



71) Family number: 11657656 (US5339533A)

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Title: SYSTEM FOR MEASURING STIFFNESS OF A FRACTURED BONE**Priority:** US19930086147 19930701 US19930163426 19931208

Family:	Publication number	Publication date	Application number	Application date
	<u>US5339533 A</u>	19940823	US19930163426	19931208

Probable Assignee: RICHARDSON JAMES B**Assignee(s):^(std):** RICHARDSON JAMES B**Inventor(s):^(std):** RICHARDSON JAMES B

International class A61B19/00 A61B5/103 (Advanced/Invention);
 (IPC 8-9): A61B17/60 (Advanced/Non-invention);
A61B19/00 A61B5/103 (Core/Invention);
A61B17/60 (Core/Non-invention)

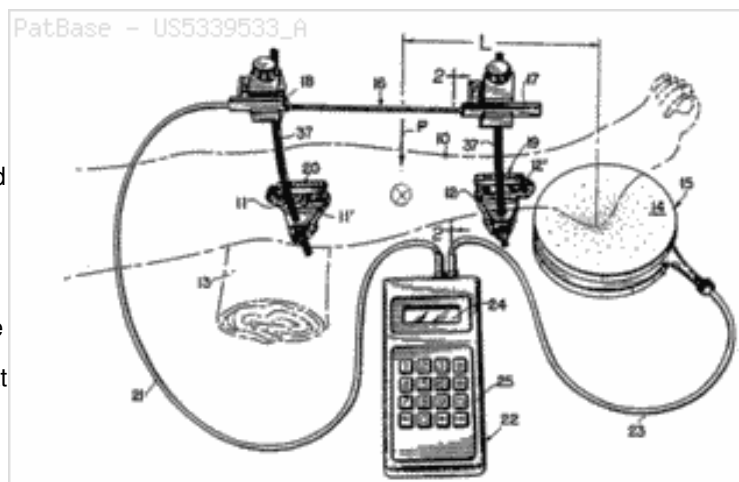
International class A61B5/103
 (IPC 1-7):

CPC: A61B5/4504 A61B17/60 A61B90/06**European class:** A61B19/46 A61B5/45B K61B17/60**US class:** 128/782 33/512 600/595[Classification Explorer](#)**Cited documents:** WO8601588 A1, US5171248 A, US5163228 A, US5121753 A, US5082003 A, US4033043 A, US3229372 A, US2333033 A, EP0324279 A1,

Forward Citations: WO9535062, WO9535062, WO9535061, WO9535061, WO06119322, WO06119322, WO06038822, US7661309, US5697165, US5493788, US2009216126, US2008186793, US2005251066, US2005056075, JP2008539879, GB2290616, GB2290616,

Abstract:

Source: US5339533A A bone-stiffness measuring instrument comprises a set or kit of readily assembled and adjusted components, namely a goniometer, a light-weight load cell, and a small computer package, adapted to continuously respond to the outputs of the load cell and goniometer and to display and/or record (i.e., store) measured stiffness data; plus hardware in duplicate, namely, a bone-screw clamp and bracket for fixed reference to bone-screws that are externally exposed on each of the respective sides of the fracture (following removal of an external fixator), a stiff arcuate arm member of radius at least twice the diameter of the fractured bone, and a goniometer-end mount. The arcuate arm member is adjustably fixed to the bracket for bone-screw reference, and the goniometer-end mount is also adjustably fixed to the arcuate arm member, with a releasably lockable ball-joint connection for adjusted orientation of an end mounting to the goniometer.



0) US2002010479A – MEDICAL DEVICE INTRODUCER

72) Family number: 28292838 (US2002010479A)

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Title: MEDICAL DEVICE INTRODUCER

Priority: US20000195663P 20000407 US20010827266 20010405 US20010828451 20010406
 US20020175668 20020620 US20070768065 20070625 US20070768077 20070625
 US20070768741 20070626 US20070768760 20070626 WO2001US40458 20010406
 US20070768554 20070626 WO2001US11178 20010406 US20100899674 20101007
 US20100899677 20101007 US20140570718 20141215

Family:

Publication number	Publication date	Application number	Application date
AT384483 E	20080215	AT20010924746T	20010406
AU2001251371 AA	20011023	AU20010251371	20010406
AU2001289311 AA	20011023	AU20010289311	20010406
AU200151371 A5	20011023	AU20010051371	20010406
AU200189311 A5	20011023	AU20010089311	20010406
CA2405224 AA	20021007	CA20012405224	20010406
CA2405224 C	20100223	CA20012405224	20010406
DE60132569 D1	20080313	DE20016032569	20010406
DE60132569 T2	20090219	DE20016032569T	20010406
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US2007250077 AA	20071025	US20070768554	20070626
US2007255275 AA	20071101	US20070768741	20070626
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US2015100064 AA	20150409	US20140570718	20141215
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WO0176498 A3	20020418	WO2001US11178	20010406
WO0176498 B1	20020627	WO2001US11178	20010406
WO0176498 C2	20031009	WO2001US11178	20010406
WO0176676 A2	20011018	WO2001US40458	20010406
WO0176676 A3	20020321	WO2001US40458	20010406

Probable Assignee: MEDTRONIC IMAGE GUIDED NEUROLOGICS INC

Assignee(s):^(std): IMAGE GUIDED NEUROLOGICS INC ; DAVID JOHN ; HATCHER DAVID ; MAYO FOUNDATION ; MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH ; SKAKOON JAMES G ; PARMER KARI ; MAZZOCCHI RUDY A ; MURDOCK FRANK ; MILLER THOMAS I ; PARMER TIMOTHY ALAN ; MILLS GERALD W ; MEDTRONIC IMAGE GUIDED NEUROLO ; MEDTRONIC INC ; WHAREN ROBERT ; SOLAR MATTHEW S ; TRUWIT CHARLES L

Assignee(s): THOMAS I MILLER ; TIMOTHY ALAN PARMER ; MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH IMAGE GUIDED NEUROLOGICS INC ; MAYO FOUNDATION FOR MEDICAL EDUCATION RESEARCH IMAGE GUIDED NEUROLOGICS INC ; CHARLES L TRUWIT ; DAVID HATCHER ; RUDY A MAZZOCCHI ; ROBERT WHAREN ; MAYO FOUNDATION FOR MEDICAL EDUCATION RESEARCH IMA ; MEDTRONIC IMAGE GUIDED NEUROLOGICS INC ; JOHN DAVID ; KARI PARMER ; JAMES G SKAKOON ; MATTHEW S SOLAR ; FRANK MURDOCK

Inventor(s):^(std): DAVID JOHN ; HATCHER DAVID ; MAZZOCCHI RUDY A ; MILLER THOMAS I ; MILLER THOMAS ; MAZZOCCHI RUDY ; SKAKOON JAMES G ; SOLAR MATTHEW S ; PARMER KARI ; MURDOCK FRANK ; PARMER TIMOTHY ALAN ; TRUWIT CHARLES L ; MILLS GERALD W ; PARMER TIMOTHY A ; TRUWIT CHARLES ; SOLAR MATTHEW ; PARMER TIMOTHY ; SKAKOON JAMES ; WHAREN ROBERT

Inventor(s): CHARLES L TRUWIT ; DAVID HATCHER ; THOMAS I MILLER ; TIMOTHY ALAN PARMER ; RUDY A MAZZOCCHI ; ROBERT WHAREN ; JOHN DAVID ; KARI PARMER ; JAMES G SKAKOON ; MATTHEW S SOLAR ; FRANK MURDOCK ; GERALD W MILLS

Agent(s): GOWLING LAFLEUR HENDERSON LLP; COLLINS JOHN DAVID; SCHWEGMAN LUNDBERG AND WOESSNER PA; SCHWEGMAN LUNDBERG WOESSNER AND KLUTH PA; HARNESS DICKEY AND PIERCE PLC; SCHWEGMAN LUNDBERG WOESSNER AND KLUTH PA

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class
(IPC 8-9): A61B17/34 A61B18/18 A61B19/00 A61F11/00 A61M1/00 A61N1/00 A61N1/05 (Advanced/Invention);
A61B17/00 A61B17/34 (Advanced/Non-invention)

International class
(IPC 1-7): A61B17/34 A61B19/00 A61B6/00 A61M1/00 A61M25/00

CPC: A61B2017/0023 A61B2017/00398 A61B2017/00911 A61B2017/3407 A61B2017/3409 A61B2017/3411 A61B2017/347 A61N1/0539 A61N1/0534 A61B34/20 A61B90/11 A61B2034/2051 A61B2034/2055 A61B2090/103 A61B2090/363 A61B2090/374 A61B2090/3762 A61B2090/3983

European class: A61B19/20B K61B17/00D K61B17/00F4 K61B17/00S25M K61B17/34D1B K61B17/34D1D K61B17/34D1P K61B17/34K K61B19/20H K61B19/52H12 K61B19/52H12B4 K61B19/52H12B6 K61B19/52H8 K61B19/52J K61B19/54T

US class: 128/898 128/898S 600/417 600/424 600/431 600/431P 604/174 604/263 606/108 606/129 606/129P 606/129S 606/13 606/130 606/130P 606/130S 606/41 606/41P 607/116 607/116S

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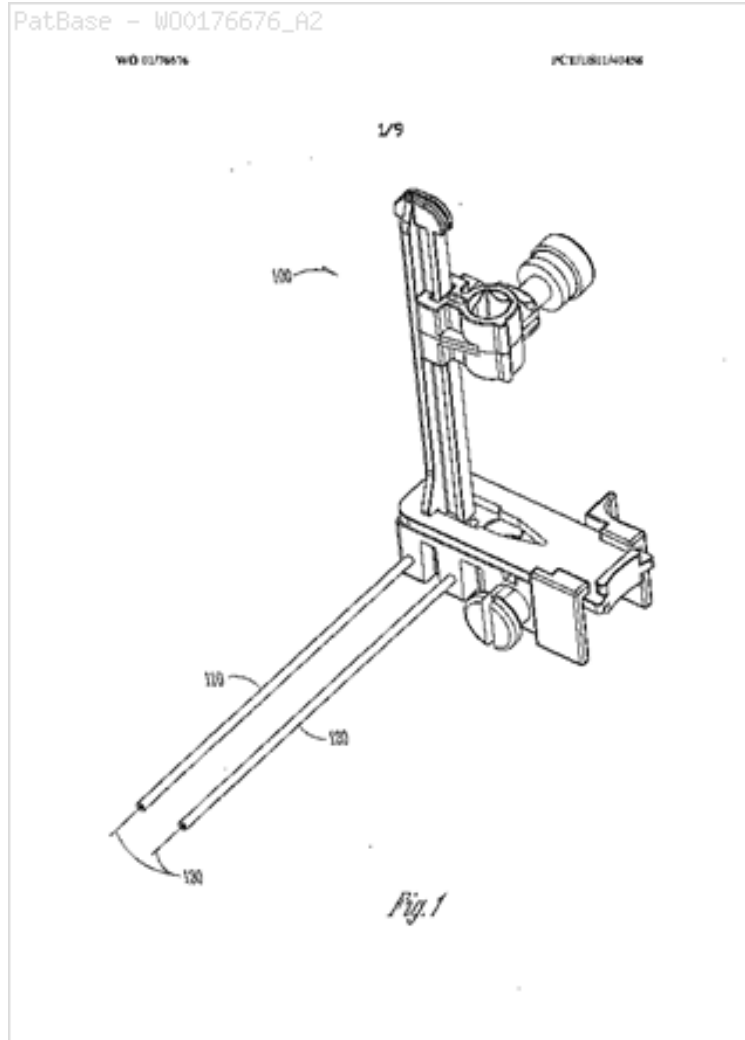
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Abstract:

Source: US2002010479A An introducer is described that is coupled to a patient, specifically a patient's skull. The introducer may include an advancer that is remote from the patient, the advancer communicating with the introducer by means of a cable system. The introducer may also include a local position sensor that indicates the position of the primary medical device being introduced. The introducer may also include a frameless reference system that locates the primary medical device relative to a table that the patient is fixed to.



73) Family number: 20322962 (US2002038118A)

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Title: MINIATURE BONE-ATTACHED SURGICAL ROBOT

Priority: EP20020735926 20020522 US20000220155P 20000724 US20100725481 20100317
 US20100725487 20100317 US20040965100 20041015 US20010912687 20010724
 WO2002IL00399 20020522

Family:	Publication number	Publication date	Application number	Application date
	<u>AT541529 E</u>	20120215	AT20020735926T	20020522
	<u>CA2454861 AA</u>	20040123	CA20022454861	20020522
	<u>CA2454861 C</u>	20110426	CA20022454861	20020522
	<u>DE60242018 D1</u>	20120308	DE20026042018	20020522
	<u>EP1414362 A1</u>	20040506	EP20020735926	20020522
	<u>EP1414362 B1</u>	20120118	EP20020735926	20020522
	<u>JP2004535884 T2</u>	20041202	JP20030515165T	20020522
	<u>US2002038118 AA</u>	20020328	US20010912687	20010724
	<u>US2005171557 AA</u>	20050804	US20040965100	20041015
	<u>US2010198230 AA</u>	20100805	US20100725481	20100317
	<u>US2010204714 AA</u>	20100812	US20100725487	20100317
	<u>US6837892 BB</u>	20050104	US20010912687	20010724
	<u>US8571638 BB</u>	20131029	US20100725481	20100317
	<u>WO03009768 A1</u>	20030206	WO2002IL00399	20020522

Probable Assignee: MAZOR ROBOTICS LTD**Assignee(s):**^(std) MASOR ROBOTICS LTD ; MAZOR ROBOTICS LTD ; MAZOR SURGICAL TECH LTD ; SHOHAM MOSHE**Assignee(s):** MAZOR SURGICAL TECHNOLOGIES LTD ; MAZOR SURGICAL ROBOTICS LTD**Inventor(s):**^(std) SHOHAM MOSHE**Agent(s):** ROBIC; MARKS AND CLERK LUXEMBOURG LLP; WHITE DUNCAN ROHAN; SUGHRUE MION PLLC; DANIEL FEIGELSON; MORGAN LEWIS AND BOCKIUS LLP; DANIEL**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW**International class**
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^(IPC 1-7) A61B17/00 A61B17/56 A61B19/00 A61B6/00 A61B6/03 A61F5/00**CPC:** Y10T74/20305 A61B6/583 A61B34/30 A61B34/70 A61B34/72 A61B2034/742 A61B17/1757**European class:** A61B17/17S4 A61B19/22 A61B19/22B K61B19/22F K61B19/22J4**US class:** 378/4 378/4S 600/407 600/410 600/427 606/1 606/130 606/130P 606/1P 74/490.01[Classification Explorer](#)**Cited documents:** WO9107726 A1, US7327872 BB, US6837892 BB, US6778850 BA, US6752812 BA, US6711432 BA, US6676669 BB, US6529765 BA, US6490475 BA, US6490467 BA, US6416520 BA, US6348058 BA, US6322567 BA, US6314310 BA, US6301495 BA, US6246898 BA, US6246200 BA, US6236875 BA, US6231526 BA, US6226548 BA, US6167292 A, US6096050 A, US5993463 A, US5951475 A, US5891034 A, US5824085 A, US5814038 A, US5806518 A, US5799055 A, US5791231 A, US5769092 A, US5769078 A, US5752962 A, US5695501 A, US5690106 A, US5674221 A, US5649956 A, US5546942 A, US5410638 A, US5408409 A, US5383454 A, US5300080 A,

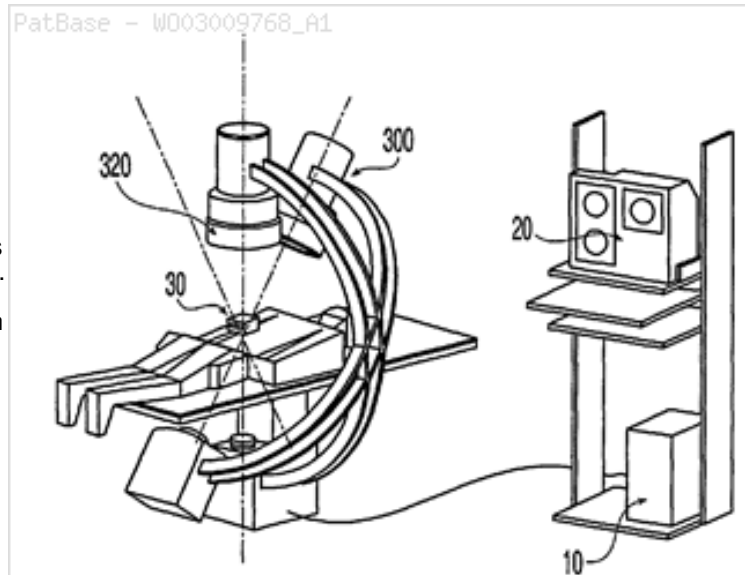
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Abstract:

Source: US2002038118A A miniature surgical robot and a method for using it are disclosed. The miniature surgical robot attaches directly with the bone of a patient. Two-dimensional X-ray images of the robot on the bone are registered with three-dimensional images of the bone. This locates the robot precisely on the bone of the patient. The robot is then directed to pre-operative determined positions based on a pre-operative plan by the surgeon. The robot then moves to the requested surgical site and aligns a sleeve through which the surgeon can insert a surgical tool.



0) US2003135216A – ANCHORING SYSTEM FOR FIXING OBJECTS TO BONES

74) Family number: 28829940 (US2003135216A)

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Title: ANCHORING SYSTEM FOR FIXING OBJECTS TO BONES

Priority: US20000206810P 20000525 US20000206811P 20000525 US20020275710 20021108
US20030296392 20030915 US20030358398 20030205 US20010264309P 20010129
US20070837937 20070813 ZA20020008530 20021022 WO2001CA00739 20010525
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: ORTHOPLEX LLC

Assignee(s):^(std): LIONEL C SEVRAIN ; NEURORTHO IMPLANTS DESIGN LLC ; SOFIA MICHEL ; SEVRAIN LIONEL ; SEVRAIN LIONEL C ; ORTHOPLEX LLC ; KREBS INT ; KREBS INTERNAT ; ORTHOPLEX LLC BOSTON

Assignee(s): NEUROTHRO IMPLANTS DESIGN LLC ; KREBS INTERNATIONAL ; SEVRAIN LIONEL CHARLES

Inventor(s):^(std): HOYACK MARK E ; KELTON GERALD P ; LIONEL C SEVRAIN ; OLSON TIMOTHY J ; SEVRAIN LIONEL C

Agent(s): A J PARK; AJ PARK; GOUDREAU GAGE DUBUC; BURNS AND LEVINSON LLP; YAN; FREDERICK C

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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International class
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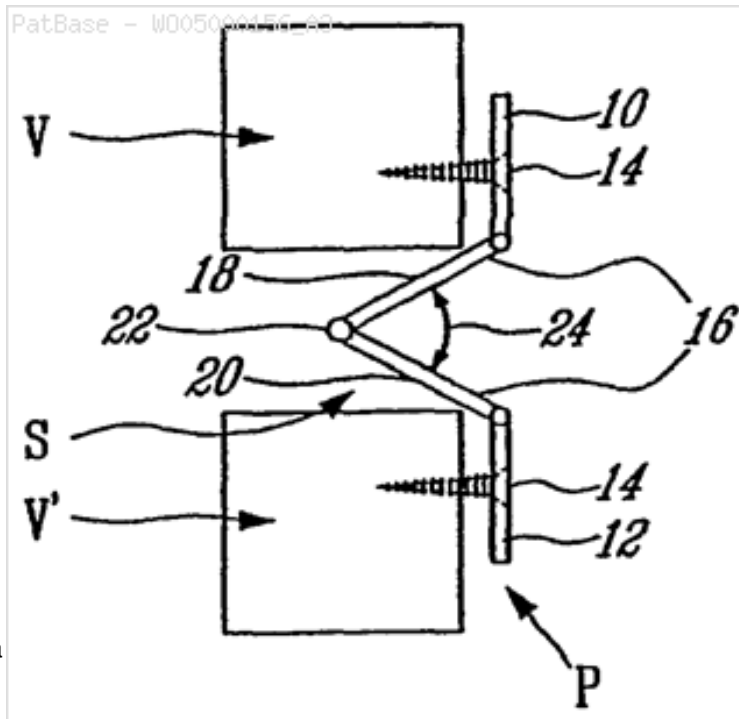
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GB2449334, GB2414674, GB2414674, FR2851158, EP2361573, EP1764051,
EP1663079, EP1478287, AU2006259513,

Abstract:

Source: US2003135216A An anchoring system (S) for mounting a support plate (P, P') for instance to a human rachis comprises first and second threaded fasteners (10, 20) each having proximal and distal ends. The proximal ends are adapted to be spaced from each other for holding the support plate (P, P') against a vertebra (V, V1, V2) of the rachis while the distal ends are embedded in the bone. The threaded fasteners (10, 20) converge from their proximal ends towards their distal ends. The first threaded fastener (10) defines at its distal end a female threaded element in the form of a threaded opening (12) extending obliquely means of the first fastener (10) and adapted to be threadably engaged by the male threaded distal end of the second fastener (20). The proximal end of the first fastener (10) is provided with indicia for indicating an orientation of its threaded opening (12) within the bone (V, V1, V2) such as to facilitate the engagement therein of the male threaded distal end of the second fastener (20). With the support plate (P, P'), the first and second fasteners (10, 20) define a triangular frame that is firmly secure to the vertebra (V, V1, V2).



75) Family number: 29471396 (US2003050704A)

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Title: PROSTHESIS

Priority: IL20000133873 20000103 IL20000133874 20000103 IL20010133873 20010101
 WO2001IL00001 20010101 WO2001IL00002 20010101

Family:	Publication number	Publication date	Application number	Application date
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	<u>AU200122170 A5</u>	20010716	AU20010022170	20010101
	<u>EP1278485 A2</u>	20030129	EP20010900007	20010101
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Probable Assignee: ORTHOSCOPE LTD**Assignee(s):^(std):** KEYNAN ORY ; ORTHOSCOPE LTD**Assignee(s):** ORY KEYNAN ; ORTHOSCOPE LTD**Inventor(s):^(std):** KEYNAN ORY ; ORTHOSCOPE LTD**Inventor(s):** ORY KEYNAN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR
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International class
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International class
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US class: 606/170 606/63 606/63S 606/8 606/80 606/80S 623/16.11 623/22.12 623/22.120P 623/22.4 623/22.400S 623/23.18 623/23.180P 623/23.24 623/23.240S 623/23.26 623/23.260S

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Forward Citations: WO15106319, WO08064346, WO06125633, WO06049797, USD581538, US9615864, US9597128, US9522009, US9517093, US9504580, US9451971, US9433450, US9427289, US9421045, US9408644, US9398928, US9393059, US9265549, US9259250, US9254195, US9254156, US9237949, US9179959, US9155574, US9144442, US9125706, US9060820, US9005254, US8974540, US8961518, US8961516, US8945233, US8939977, US8936644, US8936382, US8915966, US8911857, US8906031, US8906030, US8906022, US8870965, US8834468, US8795381, US8777947, US8771283, US8734460, US8684965, US8672982, US8672940, US8668701, US8579985, US8574233, US8512338, US8496658, US8480738, US8439917, US8430879, US8419801, US8403968, US8372074, US8366711, US8348956, US8328402, US8287541, US8287539, US8287538, US8246628, US8241287, US8211458, US8211183, US8210729, US8167881, US8162943, US8157871, US8157803, US8147492, US8128627, US8128626, US8105374, US8100982, US8100910, US8092499, US8092453, US8048134, US8034056, US8029573, US7964207, US7942875, US7922720, US7914584, US7914533, US7909825, US7879041, US7867282, US7854767, US7846162, US7811290, US7811284, US7806900, US7785325, US7753961, US7713271, US7648530, US7588577, US7559951, US7534271, US7488329, US7485119, US7481841, US7374576, US7294133, US7258692, US7247171, US7166132, US2016030191, US2015190233, US2015032168, US2014243827, US2014207138, US2014094855, US2014005730, US2012310283, US2012239037, US2012226361, US2012130502, US2012116526, US2012035734, US2011230883, US2011218626, US2011190832, US2011004319, US2010331992, US2010331842, US2010292722, US2010198352, US2010191240, US2010076503, US2009228008, US2009228007, US2009222008, US2009216335, US2009088833, US2009076619, US2009054900, US2008312749, US2008287951, US2008269776, US2008269750, US2008269748, US2008269747, US2008269746, US2008269745, US2008255560, US2008125784, US2008027451, US2007282450, US2007270855, US2007239164, US2007123995, US2007118230, US2007100438, US2007093844, US2006167560, US2006167555, US2006161262, US2006106463, US2006089642, US2006069447, US2006064164, US2006058809, US2006004459, US2005234448, US2005203508, US2005165493, US2004186579, US2004127563, US2003220646, US2003220644, US2003220641, JP4739351, JP2008540036, JP2008523906, JP2008523905, EP2419055, EP2139432, EP2139432, EP2114307, EP2002804, EP1881793, EP1344505, EP1240879, CN105213069, CN105105871, AU2006251341,

Abstract:

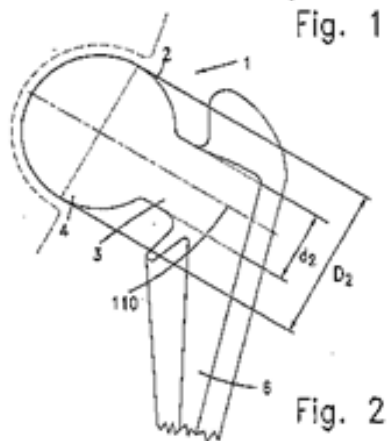
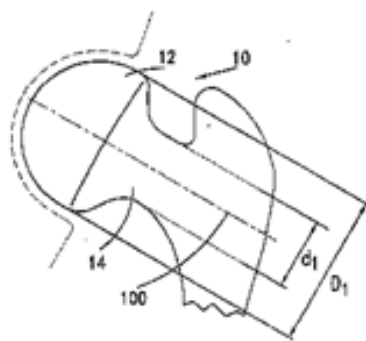
Source: US2003050704A A prosthetic device for an enarthrosis of an extremity, such as the hip joint of the shoulder joint of a human body. The prosthetic device has a ball prosthesis portion and an optional socket prosthesis portion. The ball prosthesis portion is non-inflatable, having a ball member joined to an axial end of a body member via a neck member, and is securable to the extremity. In particular, the ball prosthesis portion has a transverse profile that is adapted for enabling the same to be implanted in the enarthrosis via a suitable portal formed through the lateral cortex of the long bone of the enarthrosis.

PatBase - W00149218_A2

W00149218

PC15101A001

1/5



0) US2011166575A – SACROILIAC FUSION SYSTEM

76) Family number: 49178221 (US2011166575A)

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Title: SACROILIAC FUSION SYSTEM

Priority: EP20120722996 20120507 US20100292021P 20100104 US20120465612 20120507
 US20100938976 20101103 US20110482899P 20110505 US20120610759P 20120314
 WO2010US61807 20101222 US20130803630 20130314 US20130734743 20130104
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Family:

Publication number	Publication date	Application number	Application date
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AU2013231977 AA	20130919	AU20130231977	20130314
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EP2704647 B1	20160824	EP20120722996	20120507
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IL229125 A0	20131231	IL20120229125	20120507
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JP2014519369 T2	20140814	JP20140509508T	20120507
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US9149283 BB	20151006	US20130803630	20130314

<u>US9161763 BB</u>	20151020	US20120465612	20120507	
<u>US9345488 BB</u>	20160524	US20150728227	20150602	
<u>WO11082068 A1</u>	20110707	WO2010US61807	20101222	
<u>WO12151573 A1</u>	20121108	WO2012US36774	20120507	
<u>WO13138655 A1</u>	20130919	WO2013US31669	20130314	

Probable Assignee: ZYGA TECHNOLOGY INC

Assignee(s):^(std): ASSELL ROBERT L ; BEAUBIEN BRIAN P ; BERG THOMAS GODFREY ; ZYGA TECHNOLOGY INC ; CARR JEREMY THOMAS ; DICKHUDT EUGENE ARTHUR ; ZYGA TECH INC ; ZYGA TECHNOLOGYINC

Assignee(s): ASSELL ROBERT ; ZYGA TECHNOLOGY INC MINNETONKA ; DICKHUDT EUGENE ; ZYGA TECHNOLOGY INC700 TENTH AVENUE SOUTHMINNEAPOLISMN55415US

Inventor(s):^(std): ASSELL ROBERT ; ASSELL ROBERT L ; BEAUBIEN BRIAN ; BEAUBIEN BRIAN P ; BERG THOMAS ; BERG THOMAS GODFREY ; CARR JEREMY ; CARR JEREMY THOMAS ; DICKHUDT EUGENE ; DICKHUDT EUGENE ARTHUR

Inventor(s): DICKHUDT EUGENE ARTHUR LINO LAKES ; DICKHUDT EUGENE ARTHURUS ; CARR JEREMY THOMAS LAUDERDALE ; CARR JEREMY THOMASUS ; BERG THOMAS GODFREY CENTERVILLE ; BERG THOMAS GODFREYUS ; BEAUBIEN BRIAN P ST PAUL ; BEAUBIEN BRIAN PUS ; ASSELL ROBERT L ST PAUL ; ASSELL ROBERT LUS

Agent(s): A J PARK; AJ PARK; MACPHERSON LESLIE AND TYERMAN LLP; SPARING ROEHL HENSELER; HASLAM SIMON DAVID; LUZZATTO AND LUZZATTO; ONDA HIRONORI; ONDA MAKOTO; DICKE BILLIG AND CZAJA PLLC; MICHAEL A; MOSS AND BARNETT; BONDI MICHAEL A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A61B A61B17/14 A61B17/16 A61B17/28 A61B17/29 A61B17/32 A61B17/34 A61B17/56 A61B17/58 A61B17/70 A61B17/84 A61B19/00 A61F2/30 (Advanced/Invention); A61B17/00 A61B17/3203 A61B17/3207 A61B17/70 A61B19/00 (Advanced/Non-invention); A61B (Subclass/Invention)

CPC: A61B2017/320008 A61B17/1624 A61B17/1633 A61B2017/00464 A61B2017/00469 A61B17/1604 A61B17/1608 A61B17/1664 A61B17/32002 A61B17/3203 A61B2017/00261 A61B2017/0046 A61B2017/00867 A61B2017/32006 A61B17/1617 A61B17/320016 A61B2017/320004 A61B2017/320012 A61B2017/320028 A61B2017/320032 A61B2017/320791 A61B17/84 A61B90/03 A61B90/06 A61F2002/30995 A61B17/7055 A61B17/1671 A61B17/16 A61B2090/031 A61B2090/062 A61F2/30988

European class: A61B17/16D2B A61B17/16S2 A61B17/16S4 A61B17/32E A61B17/32E2 K61B17/00E1D K61B17/00H K61B17/00H2 K61B17/00H4 K61B17/00S12 K61B17/16C K61B17/16C2E K61B17/16D14 K61B17/16D6B K61B17/3203 K61B17/3207S2 K61B17/32A K61B17/32A4 K61B17/32E2 K61B17/32E2R K61B17/32E2S K61B17/32S K61B17/70G K61B19/30B K61B19/46D

US class: 1/1 606/170 606/279 606/300 606/79 606/79P 623/17.11

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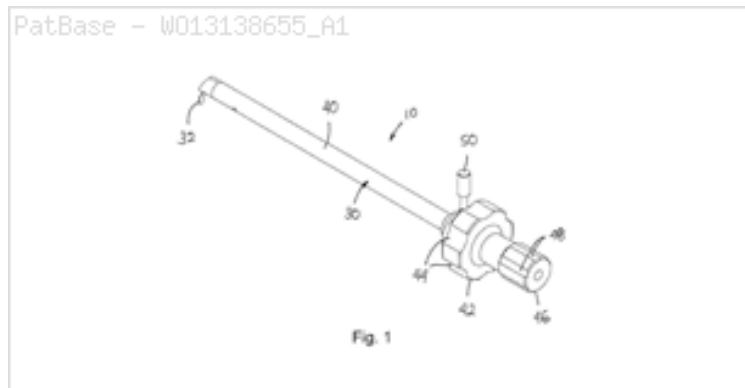
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DE202009006906 U1

Forward Citations: WO13079845, USD780315, USD777921, USD765854, USD765853, US9610083, US9572602, US9554909, US9517077, US9510872, US9492284, US9492201, US9486264, US9456855, US9452065, US9445792, US9439693, US9421109, US9421044, US9381045, US9375323, US9375243, US9351757, US9333090, US9259329, US9186155, US9161763, US9149283, US9119732, US9101371, US9044321, US9039743, US9017407, US8986348, US8979928, US8900279, US8900251, US8882818, US8808377, US8394116, US2017049488, US2016045369, US2015320451, US2015320450, US2015105828, US2014277460, US2014214011, US2013218215, US2013197590, US2013173004, US2013030456, US2010042104, FR2983057, EP2759270, EP2617372, EP2617372, DE102013100759, CN103957821, CN103892900,

Abstract:

Source: US2011166575A An undercutting system for preparing a region between ilium and sacrum for sacroiliac fusion. The undercutting system includes an insertion apparatus and a cutting assembly. The cutting assembly is operably attached to the insertion apparatus. The cutting assembly is movable with respect to the insertion apparatus between a retracted configuration and an extended configuration.



77) Family number: 28541745 (US2003097137A)

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Title: MAXILLARY DISTRACTION DEVICE

Priority: US20010988529 20011120 US20030440001 20030516 US20070876546 20071022
US20040924315 20040823 US20060859237P 20061114

Family:	Publication number	Publication date	Application number	Application date
	<u>US2003097137 AA</u>	20030522	US20010988529	20011120
	<u>US2003195521 AA</u>	20031016	US20030440001	20030516
	<u>US2005021045 AA</u>	20050127	US20040924315	20040823
	<u>US2008039861 AA</u>	20080214	US20070876546	20071022
	<u>US6589250 BB</u>	20030708	US20010988529	20011120
	<u>US7322987 BB</u>	20080129	US20030440001	20030516
	<u>US7621922 BB</u>	20091124	US20040924315	20040823
	<u>US7892241 BB</u>	20110222	US20070876546	20071022
	<u>WO06022940 A2</u>	20060302	WO2005US18057	20050523
	<u>WO06022940 A3</u>	20061207	WO2005US18057	20050523

Probable Assignee: OSTEOMED LP

Assignee(s):^(std): AHMAD SHAHER A ; MOCANU VIOREL ; OSTEOMED L P ; OSTEOMED LP ; SCHENDEL STEPHEN A ; THORNHILL LISA REGINA

Assignee(s): OSTEOMED LLC

Inventor(s):^(std): GORDON CHRISTOPHER B ; GORDON CHRISTOPHER BURNSIDE ; MOCANU VIOREL ; AHMAD SHAHER ; AHMAD SHAHER A ; SCHENDEL STEPHEN A ; THORNHILL LISA REGINA

Inventor(s): THORNHILL LISA ; GORDON CHRISTOPHER ; SCHENDEL STEPHEN

Agent(s): BAKER BOTTS LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class A61B17/56 A61B17/58 A61B17/60 A61B17/66 A61F2/36 (Advanced/Invention);
(IPC 8-9): A61B17/60 (Advanced/Non-invention);
A61B17/56 A61B17/58 A61B17/60 A61F2/36 (Core/Invention)

International class A61B17/56 A61B17/58 A61B17/66 A61F2/36
(IPC 1-7):

CPC: A61B17/663 A61B17/1637 A61B17/1673

European class: A61B17/16H A61B17/66J K61B17/16S6

US class: 433/7 606/105 606/105P 606/57 606/71

[Classification Explorer](#)

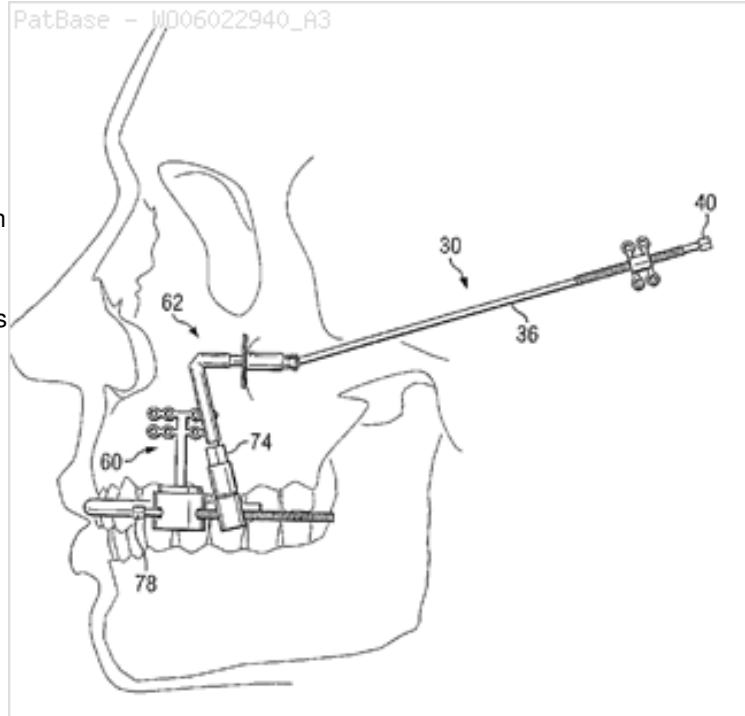
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Forward Citations: WO16120572, WO15149034, WO15061714, WO15038190, WO14165710, WO14165210, WO14144121, WO14071315, WO13188839, WO13054157, WO13026027, WO12170908, WO12170907, WO12142003, WO12099896, WO12092403, WO12068276, WO11163120, WO11017567, WO06081254, US9659152, US9649132, US9622782, US9534255,

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Abstract:

Source: US2003097137A A device for maxillary jawbone and dentition expansion and/or retraction is configured for mounting within the mouth and connects the right and left halves of the skull. The maxillary distraction device includes at least two implantable anchors configured to be implanted in the maxillary bones of the skull on opposite sides of a midline of the skull. A facebow having two posterior ends is connectable to the implantable anchors and is configured to extend from the maxillary regions entirely within the mouth across the midline of the skull. The facebow has at least one expandable section for bone lengthening. The facebow is connected to the anchors and is lengthen periodically to lengthen the maxillary bones. The facebow may provide horizontal, vertical, and transverse distraction.



78) Family number: 31992298 (US2005126563A)

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Title: SYSTEM AND METHOD FOR HYOIDPLASTY**Priority:** US20030736457 20031215 WO2004US42571 20041215**Family:**

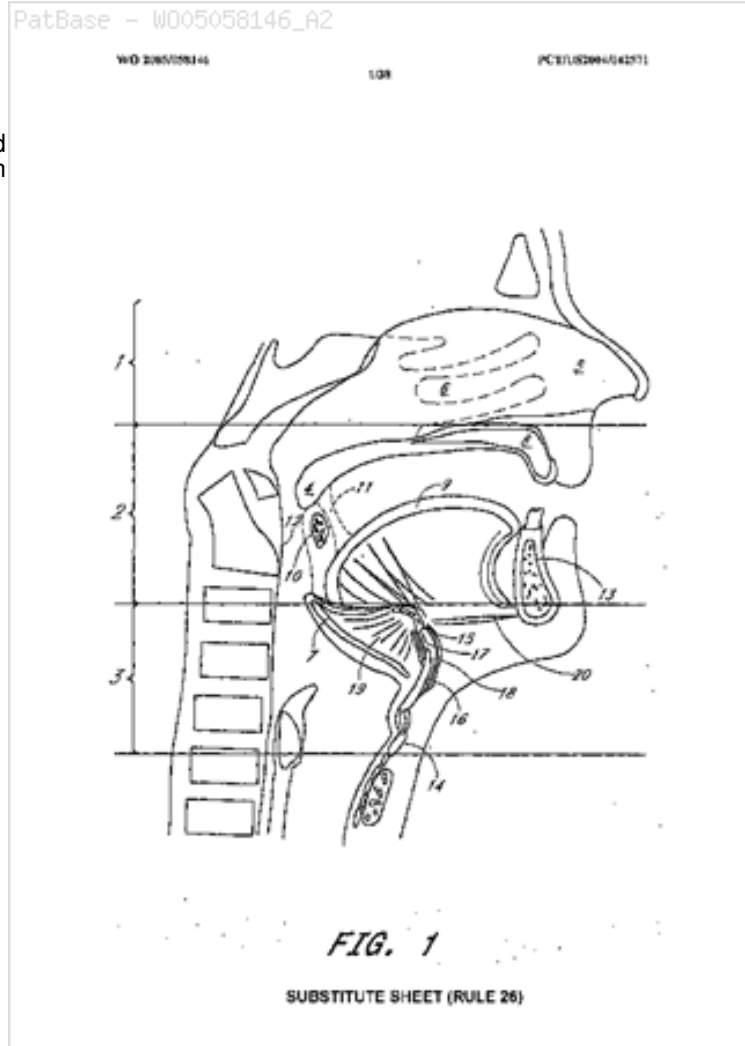
Publication number	Publication date	Application number	Application date
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EP1701670 B1	20170222	EP20040814718	20041215
US2005126563 AA	20050616	US20030736457	20031215
US8821495 BB	20140902	US20030736457	20031215
WO05058146 A2	20050630	WO2004US42571	20041215
WO05058146 A3	20050804	WO2004US42571	20041215

Probable Assignee: PHILIPS KONINKLL NV**Assignee(s):^(std):** ASPIRE MEDICAL INC ; BURG ERIK J VAN D ; DINEEN MICHAEL T ; FRAZIER ANDREW ; HIROTSUKA MARK ; ROUE CHAD C ; KESSLER ADAM ; JACKSON JASPER ; VAN DER BURG ERIK J ; PHILIPS KONINKLL NV ; KONINKL PHILIPS NV**Assignee(s):** PHILIPS ELECTRONICS KONINKLL NV**Inventor(s):^(std):** DINEEN MICHAEL T ; FRAZIER ANDREW ; HIROTSUKA MARK ; JACKSON JASPER ; KESSLER ADAM ; ROUE CHAD C ; VAN DER BURG ERIK J ; BURG ERIK J VAN D**Inventor(s):** BURG ERIK VAN D ; DINEEN MICHAEL**Agent(s):** DAMEN DANIEL MARTIJN; KNOBBE MARTENS OLSON AND BEAR LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
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[A61B17/56](#) [A61B17/84](#) [A61F5/56](#) (Advanced/Non-invention);
[A61B17/68](#) [A61B17/88](#) [A61F2/00](#) [A61F2/20](#) [A61M16/04](#) [A62B18/00](#) (Core/Invention);
[A61B17/56](#) [A61F5/56](#) (Core/Non-invention);
[A61B](#) (Subclass/Invention)**International class**
(IPC 1-7): [A61F2/20](#) [A62B18/00](#)**CPC:** [A61B17/8061](#) [A61B17/8071](#) [A61B17/808](#) [A61B17/842](#) [A61B17/8872](#) [A61B2017/564](#) [A61F2/00](#) [A61F5/56](#) [A61M16/0472](#)**European class:** [A61B17/80H](#) [A61B17/80J](#) [A61B17/88P](#) [A61F2/00](#) [A61M16/04E8](#) [K61B17/56M](#) [K61B17/80H4](#) [K61B17/84B](#) [K61F5/56](#)**US class:** [128/200.24](#) [128/200.240P](#) [606/86R](#) [623/9](#)[Classification Explorer](#)**Cited documents:** US879547 A, US7588579 BB, US7189237 BB, US682294 A, US6685742 BA, US6634362 BB, US6536439 BA, US6440145 BA, US6408851 BA, US6355036 BA, US6328753 BA, US6328745 BA, US6267589 BA, US6176479 BA, US6176479 B1, US6161541 A, US5988171 A, US5979456 A, US5693100 A, US5176618 A, US4741698 A, US4723540 A, US4666138 A, US466016 A, US4623085 A, US4445513 A, US4317451 A, US4236703 A, US4156313 A, US3944202 A, US3862631 A, US3488779 A, US298568 A, US2966907 A, US2674966 A, US2433760 A, US2297999 A, US2004102778 AA, US2004102776 AA, US2003149488 AA, US2003149445 AA, US19589 A, US1871713 A, US1569275 A, US1279537 A, US119875 A,**Forward Citations:** US9592046, US9463014, US9386981, US9265489, US9211210, US9173766, US9144511, US8834519, US8777958, US8757163, US8695607, US8517028,

US8460322, US8381735, US8371307, US8096303, US8080014, US7992567, US7975700, US7845357, US7644714, US2015073565, US2013131738, US2012290017, US2011288655, US2010294284, US2010059066, US2010059065, US2009319046, US2008078412, US2008078411, US2007295340, US2006150986, JP6081451, JP2014519885, JP2014140752, EP2561842, CN105011996, CN103501716, CN102451055,

Abstract:

Source: US2005126563A Methods and devices are disclosed for manipulating the hyoid bone, such as to treat obstructive sleep apnea. An implant is positioned adjacent a hyoid bone. The spatial orientation of the hyoid bone is manipulated, to affect the configuration of the airway. The implant restrains the hyoid bone in the manipulated configuration. The implant is positioned adjacent to pharyngeal structures to dilate the pharyngeal airway and/or to support the pharyngeal wall against collapse.



79) Family number: 17173303 (WO9516401A1)

© PatBase

Title: UNILATERAL FIXATION DEVICE
Priority: DE19930019433U 19931217 DE19945006897 19940620 WO1994EP02010 19940620
Family:

Publication number	Publication date	Application number	Application date
AT170728 E	19980915	AT19940919645T	19940620
DE59406897 D1	19981015	DE19945006897	19940620
DE9319433 U1	19940210	DE19930019433U	19931217
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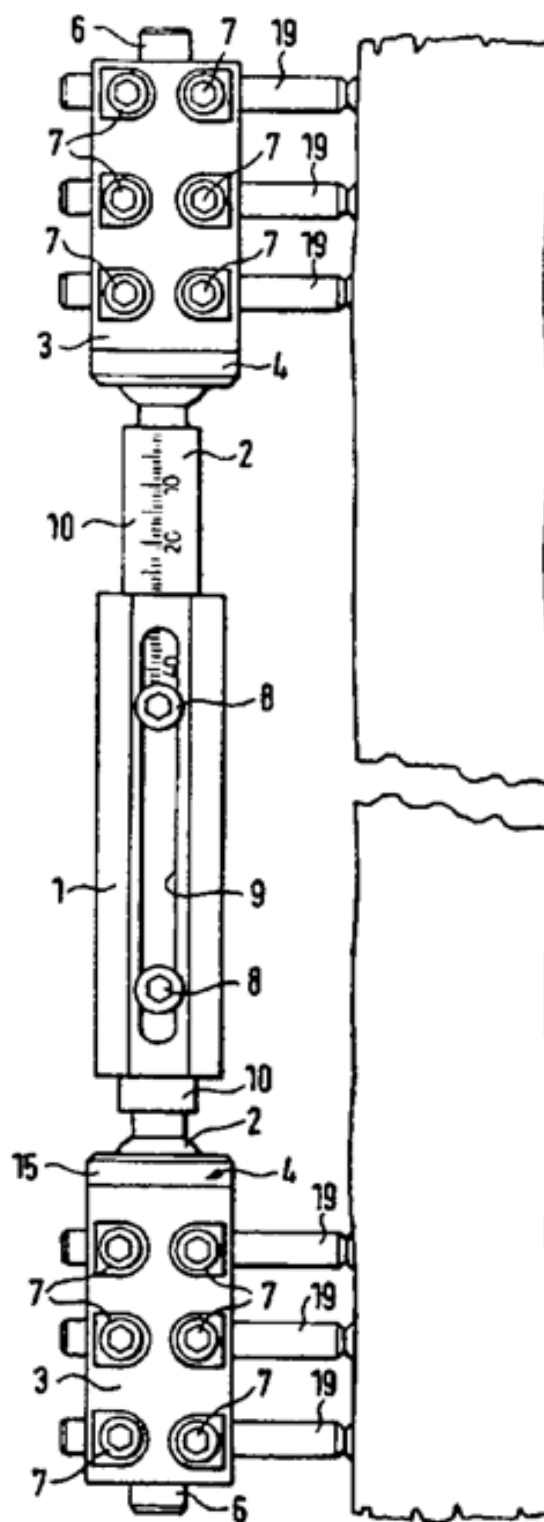
Probable Assignee: ENDOCARE AG
Assignee(s):^(std): ENDOCARE AG ; RECKERT LOTHAR
Assignee(s): RECKERT LOTHAR 29587 NATENDORF DE
Inventor(s):^(std): RECKERT LOTHAR
Inventor(s): RECKERT LOTHAR 29587 NATENDORF DE
Designated states: AT BE CH CN DE DK ES FI FR GB GR IE IT JP LI LU MC NL NO PT SE US
International class [A61B17/60 A61B17/64](#) ^(Advanced/Invention)
(IPC 8-9):
International class [A61B17/60 F16B2/00](#)
(IPC 1-7):
CPC: [A61B17/6458](#)
European class: [A61B17/64K](#)
[Classification Explorer](#)

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Forward Citations: WO9959489, WO9716128, WO9516401, WO14039205, WO12010933, WO0061020,
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 US7507240, US6500177, EP2464297, EP2464297, EP0807419, DE102010032465,
 CN104619276, CN104619276,

Abstract:

An unilateral fixation device for repositioning and stabilising broken bones from the outside has a central part of variable length whose ends are each linked to a clamping jaw (3) by a socket joint. The clamping jaws (3) have several bores (7) that extend transversely to the longitudinal axis for receiving and fixing bone nails (19). The central part consists in a first embodiment of a hollow section, in particular an elongated sleeve (1) with an axial slot (9). A bar-shaped element, in particular a rounded bar (10), is mounted in the sleeve (1) in an axially movable manner at both ends. The outwardly protruding ends of the rounded bars comprise part of the socket joint, in particular its ball-shaped head (2). In addition, the rounded bars (10) may be blocked by screws (8) that extend through the slot (9). All parts of the fixation device, in particular the socket joint, preferably consist of a high strength titanium alloy.

PatBase - W09516401_A1



Title: SURGICAL DRAPING SYSTEM

Priority:

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US20000737380 20001215	US19990362279 19990727	US20030681526 20031008
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US20030630321 20030730	US20020295127 20021115	US20030347855 20030121
US20070747304 20070511	US20020191751 20020708	US20010976396 20011011
US20010941185 20010828	US20060538099 20061003	US20020263893 20021003

Family:

Publication number	Publication date	Application number	Application date
<u>US2007102005 AA</u>	20070510	US20060538099	20061003
<u>US2007173946 AA</u>	20070726	US20070684103	20070309
<u>US2007208378 AA</u>	20070906	US20070747304	20070511
<u>US2008047567 AA</u>	20080228	US20070927736	20071030
<u>US2008147075 AA</u>	20080619	US20070928898	20071030
<u>US7128753 BA</u>	20061031	US20030630321	20030730
<u>US7208013 BA</u>	20070424	US20030347855	20030121
<u>US7828852 BB</u>	20101109	US20070684103	20070309
<u>US7837736 BB</u>	20101123	US20070928898	20071030
<u>US8739797 BB</u>	20140603	US20060538099	20061003

Probable Assignee: BONUTTI SKELETAL INNOVATIONS LLC**Assignee(s):^(std):** BONUTTI PETER M ; BRILLHART MARK V ; BONUTTI IP LLC ; MARCTEC LLC ; BONUTTI SKELETAL INNOVATIONS LLC**Assignee(s):** P TECH LLC ; ACACIA RESEARCH GROUP LLC ; ADVANCED SKELETAL INNOVATIONS LLC ; BONUTTI ; BONUTTI 2003 TRUST A**Inventor(s):^(std):** BONUTTI PETER M ; BRILLHART MARK V**Inventor(s):** BONUTTI PETER ; BRILLHART MARK**Agent(s):** PAUL D BIANCO FLEIT KAIN GIBBONS GUTMAN BONGINI AND BIANCO PL; PAUL D; FLEIT KAIN GIBBONS GUTMAN BONGINI AND BIANCO; MARTIN; FLEIT GIBBONS GUTMAN BONGINI AND BIANCO PL; MARTIN AND FERRARO LLP

International class
(IPC 8-9): A41B9/00 A41D10/00 A41D19/00 A61B17/04 A61B17/58 A61B17/68 A61B17/80 A61B17/84 A61B17/86 A61B19/00 A61B19/08 A61F13/00 A61F2/02 A61F2/30 A61F2/32 A61F2/38 A61F5/37 B29C65/60 H04N7/18 (Advanced/Invention); A61B17/00 A61B17/06 A61B19/00 A61B19/04 A61B19/10 A61F2/00 A61F2/02 A61F2/36 (Advanced/Non-invention); A61B17/04 A61B17/68 A61F2/02 A61F2/30 A61F2/32 A61F2/38 B29C65/56 (Core/Invention); A61B17/00 A61B17/06 A61F2/00 A61F2/02 A61F2/36 (Core/Non-invention)

CPC: Y10S606/908 Y10S606/91 B29C65/602 A61B17/68 A61B17/80 A61B17/866 A61B2017/0408 A61B2017/0454 A61B2017/0458 A61B2017/0464 A61B2017/0619 A61B2017/867 A61F2/30734 A61F2/367 A61F2002/30062 A61F2002/30065 A61F2002/30736 A61F2210/0004 A61F2210/0071 B29C66/8322 B29C66/721 B29C66/7212 B29C66/71 B29C66/7392 B29C66/73791 A61B34/20 A61B34/30 A61B42/00 A61B46/00 A61B90/30 A61B90/36 A61B90/361 A61B90/37 A61B90/40 A61B2034/102 A61B2034/105 A61B2046/201 A61B2046/205 A61B2046/236 A61B2090/064 A61B2090/309 A61B2090/401 A61B90/13 A61B2034/2055 A61B2090/366 A61B2090/376 A61B2017/564 A61F2/3836 A61F2002/2825 A61B17/025 A41D19/0157 A61B17/0401 A61B17/0487 A61B17/155 A61B17/158 A61B17/1604 A61B17/1666 A61B17/1668 A61B17/1675 A61B17/1703 A61B17/1717 A61B17/1721 A61B17/1746 A61B17/1764 A61B17/809 A61B2017/00004 A61B2017/00199 A61B2017/00477 A61B2017/00557 A61B2017/00734 A61B2017/0268 A61B2017/0409 A61B2017/0414 A61B2017/0496 A61B2217/005 A61B2217/007 A61F2/30721 A61F2/30724 A61F2/30767 A61F2/30771 A61F2/34 A61F2/38 A61F2/3859 A61F2/3868 A61F2/3872 A61F2/3877 A61F2/389 A61F2/4609 A61F2/461 A61F2/4684 A61F2002/2817 A61F2002/2835

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European class:

A41D19/015L A61B17/02J A61B17/04A A61B17/15K2 A61B17/15K4 A61B17/15K6
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US class:

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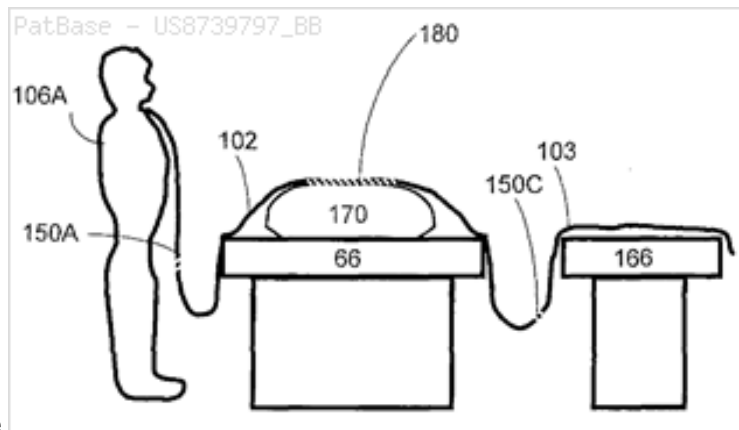
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Abstract:

Source: US2007102005A A draping system provides a continuous sterile field between a patient incision area and one or more medical practitioners. The draping system has a quick release system incorporated into the drape that enables a medical practitioner to separate from the continuous sterile field without disrupting the sterile field around the practitioner or the patient. The draping system may include an abbreviated practitioner gown, a drain and an integral patient incision area or a flap for extending the continuous sterile field around to one or more additional operating room tables. A modular drape and gown system extends the sterile field beyond the operating table allowing practitioners to couple to the extended field. A tent provides an enclosed sterile field useful in mobile or other non operating room surgical environments. Integral lighting and information displays facilitate field surgical procedures.



81) Family number: 59417014 (US2017000497A)

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Title: CRANIAL REFERENCE MOUNT

Priority: US20130910204P 20131129 US20140049866P 20140912 US20140100229 20141126
 US20140100239 20141124 US20140100215 20141126 US20140100241 20141126
 US20140940196P 20140214 US20150199095P 20150730 WO2014US67167 20141124
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Family:

Publication number	Publication date	Application number	Application date
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WO16086049 A1	20160602	WO2015US62516	20151124
WO16086054 A1	20160602	WO2015US62521	20151124

Probable Assignee: UNIV JOHNS HOPKINS

Assignee(s):^(std): DEFENSE US SEC ; UNIV JOHNS HOPKINS ; USA ; US SEC NAVY IP COUNSEL OF NAVY OFFICE OF NAVAL RES ; US NAVY ; US SEC DEFENSE ; UNITE STATES OF AMERICA REPRESENTED BY SECRETARY OF NAVY AS ; USA REPRESENTED BY SECRETARY OF DEFENSE WALTER REED NAT MILITARY MEDICAL CENTER AS

Assignee(s): USA REPRESENTED BY SECRETARY OF DEFENSE WALTER REED NATIONAL MILITARY MEDICAL CENTER AS ; JOHNS HOPKINS UNIV ; SECRETARY OF DEFENSE AS US GOV ; SECRETARY OF NAVY AS US GOV ; UNITED STATES OF AMERICA ; SECRETARY OF NAVY IP COUNSEL OF NAVY OFFICE OF NAVAL RESEARCH AS US GOV

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Agent(s): CULLEN PTY LTD; PLUMMER ANDREW J; WILSON BRYAN E; LEANING JEFFREY S; HSIEH TIMOTHY M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9):

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A61B5/103 A61C7/00 A61F2/00 A61F2/28 A61F2/30 G06F19/00 (Advanced/Invention)

CPC:

A61B17/32093 A61B90/39 A61B2017/320052 A61B2034/2068 A61B2090/395
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US class:

434/270 606/102 606/130 606/87 703/1

[Classification Explorer](#)

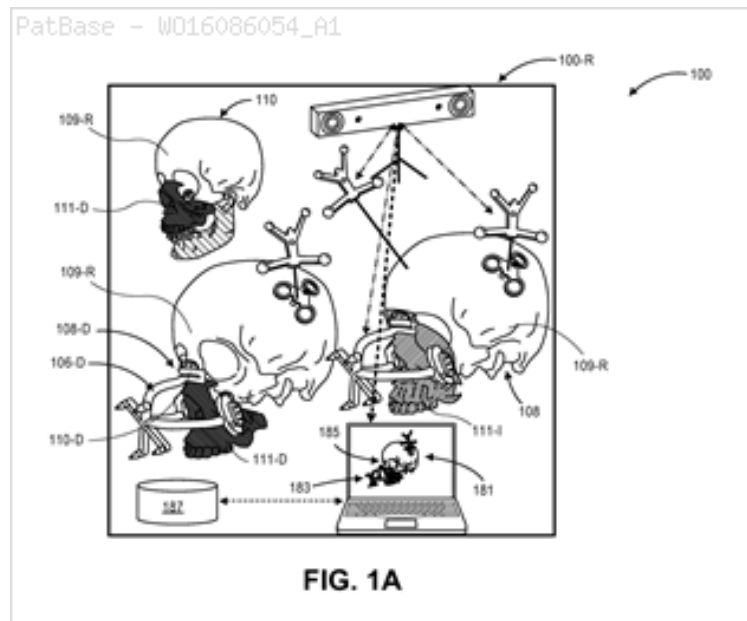
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Forward Citations: RU2607183,

Abstract:

Source: US2017000497A A surgical guide assembly includes a body having an opening formed at least partially therethrough. An arm extends from the body. A joint is positioned at least partially in the arm. The joint includes an outer ring and an inner ring. The inner ring is configured to move with respect to the outer ring such that an angle between a central longitudinal axis through the inner ring varies with respect to a central longitudinal axis through the outer ring.



82) Family number: 41632777 (US2008077136A)

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Title: ROD INSERTER AND ROD WITH REDUCED DIAMETER END

Priority: EP20070716543 20070111 EP20120153692 20070111 US20070651442 20070109
US20100705001 20100212 US20060847009P 20060925 US20140252349 20140414
WO2007US00718 20070111

Family:	Publication number	Publication date	Application number	Application date
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	<u>DE602007031937 D1</u>	20130919	DE200760031937T	20070111
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	<u>WO08039222 A1</u>	20080403	WO2007US00718	20070111

Probable Assignee: STRYKER SPINE

Assignee(s):^(std): FALLIN T WADE ; MILLARD THIERRY ; MOHR KAREN ; TRIPLETT DANIEL ; STRYKER SPINE

Assignee(s): FALLIN T ; STRYKER EUROPEAN HOLDINGS I LLC ; STRYKER EUROPEAN HOLDINGS VI LLC

Inventor(s):^(std): FALLIN T WADE ; FALLIN WADE T ; MILLARD THIERRY ; MOHR KAREN ; MOHR KAREN E ; TRIPLETT DANIEL

Inventor(s): TRIPLETT DANIEL LOGAN ; FALLIN T ; MOHR KAREN LOGAN ; FALLIN WADE T HYDE PARK ; FALLIN T WADE HYDE PARK

Agent(s): MAIWALD PATENTANWALTSGESELLSCHAFT MBH; Liebetanz Michael; LIEBETANZ MICHAEL; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP; DOHERTY MICHAEL J ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/56 A61B17/70 A61B17/86 A61B17/88 A61F5/00 (Advanced/Invention);
(IPC 8-9): A61B17/56 A61B17/68 A61B17/70 A61B17/88 A61F5/00 (Core/Invention)

CPC: A61B17/7004 A61B17/7011 A61B17/7083 A61B17/7085

European class: A61B17/70T4 K61B17/70B1C K61B17/70B1G K61B17/70T4C

US class: 606/246 606/261 606/264 606/264P 606/265 606/305 606/305S 606/61 606/86A 606/99

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Forward Citations:

WO14042374, WO14042374, WO13112689, WO12044665, WO11017712, WO11017712, WO10075400, USD703320, US9642655, US9636152, US9636151, US9629669, US9629668, US9597119, US9566165, US9566092, US9554835, US9554833, US9545270, US9532815, US9526534, US9522021, US9504496, US9498262, US9463045, US9453526, US9451993, US9445914, US9439683, US9433446, US9421038, US9402663, US9393047, US9393045, US9387018, US9333088, US9314274, US9307972, US9301853, US9295500, US9283087, US9220543, US9216039, US9211150, US9149302, US9144444, US9107761, US9060816, US9055978, US9050146, US9050139, US9011450, US9005205, US8998960, US8998959, US8998920, US8968319, US8936623, US8926672, US8926670, US8911478, US8906101, US8894657, US8870928, US8858637, US8858636, US8852239, US8845690, US8845649, US8845640, US8777954, US8685104, US8663281, US8641720, US8636655, US8603175, US8551142, US8540719, US8535320, US8523865, US8512383, US8454664, US8435269, US8425529, US8425528, US8394108, US8366714, US8357184, US8267969, US8226690, US8206395, US8202274, US8167887, US8142437, US8096996, US2016000467, US2014358181, US2014249592, US2014107706, US2013150895, US2012029580, US2012022559, US2011301612, US2011295328, US2011130793, US2010160967, US2010042149, US2009105774, KR101464618, GB2488284,

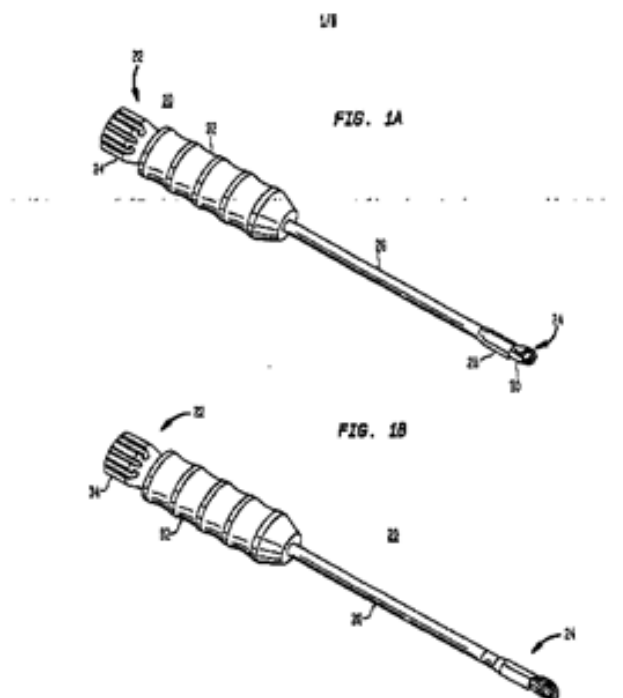
Abstract:

Source: US2008077136A An inserter tool for coupling a spinal rod with an implant includes an outer shaft having a proximal end, a distal end and an elongated opening extending between the proximal and distal ends, a handle secured to the proximal end of the outer shaft, and an inner shaft having a proximal end and a distal end, the inner shaft being telescopically received within the elongated opening of the outer shaft and being adapted to move between the proximal and distal ends of the outer shaft. The tool includes a compressible clamping tip secured to the distal end of the inner shaft, the clamping tip including a first section secured to the distal end of the inner shaft, a flexible arm that extends from the first section, and an opening disposed between the first section and the flexible arm. A knob is coupled with the proximal end of the inner shaft, the knob being rotatable in a first direction for extending the clamping tip from the distal end of the outer shaft and in a second direction for retracting the clamping tip into the distal end of the outer shaft so as to compress the flexible arm of the clamping tip toward the first section of the clamping tip.

PatBase - W008039222_A1

W008039222

PCT/US2007/006728



SUBSTITUTE SHEET (RULE 26)

0) WO9106253A1 – DEVICE FOR FIXING A BONE

83) Family number: 3540266 (WO9106253A1)

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Title: DEVICE FOR FIXING A BONE

Priority: DE19893936182 19891031 DE19904013822 19900430 DE19905005775 19901030
WO1990DE00826 19901030

Family:	Publication number	Publication date	Application number	Application date
	<u>AT105698 E</u>	19940615	AT19900915405T	19901030
	<u>DE3936182 A1</u>	19910502	DE19893936182	19891031
	<u>DE4013822 A1</u>	19911031	DE19904013822	19900430
	<u>DE59005775 D1</u>	19940623	DE19905005775	19901030
	<u>EP0500565 A1</u>	19920902	EP19900915405	19901030
	<u>EP0500565 B1</u>	19940518	EP19900915405	19901030
	<u>WO9106253 A1</u>	19910516	WO1990DE00826	19901030

Probable Assignee: FISCHER JUERGEN DR MED 4963 BIRKENAU DE

Assignee(s):^(std): FISCHER JUERGEN ; FISCHER JUERGEN DR

Assignee(s): FISCHER JUERGEN DR 69488 BIRKENAU ; FISCHER JUERGEN DR MED ; FISCHER JUERGEN DR MED 4963 BIRKENAU DE

Inventor(s):^(std): FISCHER JUERGEN ; FISCHER JUERGEN DR ; FISCHER JUERGEN DR MED

Inventor(s): FISCHER JUERGEN DR 69488 BIRKENAU

Designated states: AT BE CA CH DE DK ES FR GB GR IT LI LU NL SE US

International class
^(IPC 8-9): A61B17/60 A61B17/62 (Advanced/Invention) ;
A61B19/00 (Advanced/Non-invention) ;
A61B17/60 (Core/Invention) ;
A61B19/00 (Core/Non-invention)

International class
^(IPC 1-7): A61B17/60

CPC: A61B17/62 A61B2017/00902

European class: A61B17/62

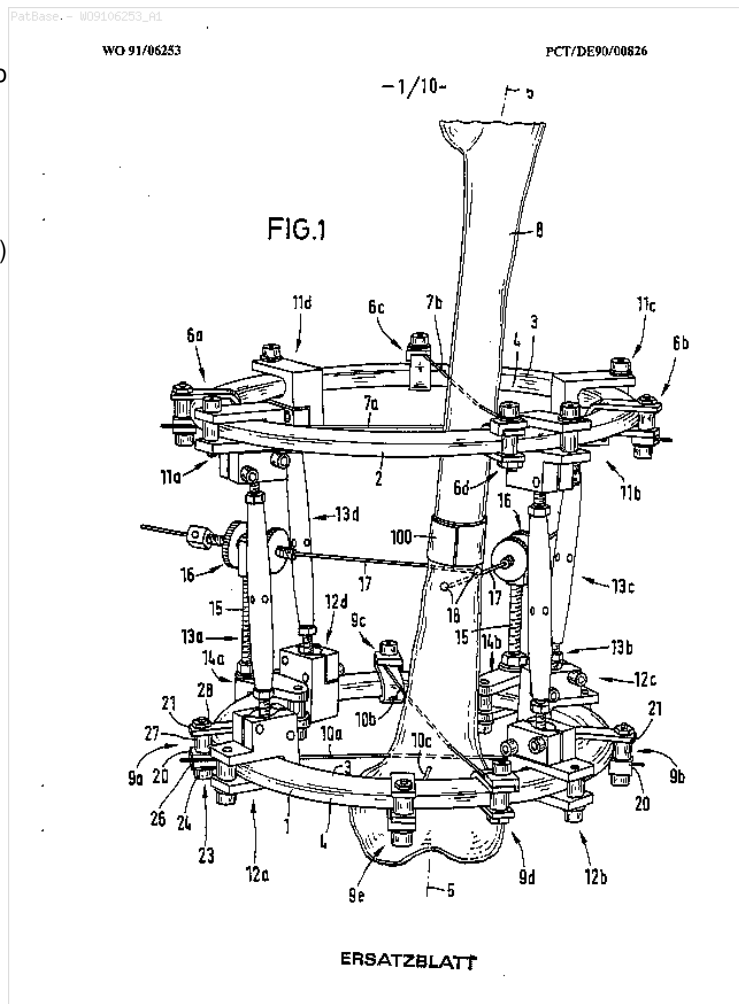
[Classification Explorer](#)

Cited documents: US2055024 A, GB2031731 A1, EP0240376 A1, EP0194187 A1, EP0190990 A1, DE8717097 U,

Forward Citations: WO16024184, WO14163591, USRE40914, US9023045, US8679117, US5971984, US5728095, US5702389, EP2446841, EP2085036, DE4428518, DE4428518, CN102551852, CN102551852, AU2011226870,

Abstract:

A device for fixing a bone (8), in particular a human leg or arm bone, comprises at least two rings (1, 2) which can be arranged at a distance apart perpendicular to the principal axis (5) of the bone and placed around the bone. Wire clamps (6, 9) distributed over the periphery of each ring hold fixation wires (7, 10) which pass through the bone in the shape of a cross. In addition, clamp elements (11, 12) clamped to the rings receive in an articulated manner the variable-length connecting elements (13) which connect the rings. Furthermore, a fixation clamp (14) clamped to at least one of the rings receives, via a fixation device (16), a guide wire (17) for the bone which is orientated perpendicular to the principal axis (5) of the bone.



84) Family number: 23289218 (US2002058948A)

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Title: Targeting system and method for distal locking of intramedullary nails
Priority: US20000239789P 20001012 US20010973696 20011011 WO2001IB02731 20011012
Family:

Publication number	Publication date	Application number	Application date
AU200216317 A5	20020422	AU20020016317	20011012
AU2002216317 AA	20020422	AU20020216317	20011012
US2002058948 AA	20020516	US20010973696	20011011
WO0230258 A2	20020418	WO2001IB02731	20011012
WO0230258 A3	20040527	WO2001IB02731	20011012

Probable Assignee: HOPITAL ORTHOPEDIQUE DE LA SUISSE ROMANDE

Assignee(s):^(std): ARLETTAZ YVAN ; UNIV LAUSANNE

Assignee(s): UNIVERSITY OF LAUSANNE ; HOPITAL ORTHOPEDIQUE DE LA SUISSE ROMANDE ; OF LAUSANNE UNIV

Inventor(s):^(std): ARLETTAZ YVAN

Inventor(s): YVAN ARLETTAZ

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class
^{(IPC 8-9):} [A61B17/17](#) (Advanced/Invention);
[A61B17/16](#) (Core/Invention)

International class
^{(IPC 1-7):} [A61B17/17](#) [A61B17/58](#)

CPC: [A61B17/1725](#)

European class: [A61B17/17J](#) [A61B17/17M](#)

US class: [606/98](#) [606/98P](#)

[Classification Explorer](#)

Cited documents: US6129729 A, US4667664 A, DE4238582 A1,

Forward Citations: USRE45571, USRE42525, US9622790, US9597128, US9532774, US9254126, US9232967, US9226782, US9192398, US9028551, US8932334, US8852244, US8845694, US8690922, US8685062, US8622897, US8602984, US8585739, US8556905, US8550995, US8517935, US8486111, US8444678, US8361151, US8262571, US8235999, US8221459, US8192437, US8038611, US8021399, US7985245, US7981031, US7959564, US7955257, US7918792, US7909843, US7824410, US7763047, US7758501, US7753939, US7695498, US7682375, US7655025, US7491168, US7455639, US7214186, US7207992, US7166073, US7008431, US6966910, US6929606, US2014243827, US2011040333, US2009043190, US2007156026, US2007083213, US2006224044, US2006004401, US2005216002, US2005203490, US2005159651, US2005159650, US2005080418, US2005004593, US2003236447, US2003191470, US2002123668, EP1491151, EP1356777,

Abstract:

Source: US2002058948A A targeting system and method is disclosed for the distal locking of intramedullary nails. The targeting system comprises a first fixation system, a second fixation system, and an aiming guide. After implantation within the intramedullary canal of a bone, the distal screw holes of an intramedullary nail are first aligned using conventional radioscopy equipment. The targeting system is then introduced between the radioscopy equipment and the patient such that the aiming guide of the targeting system is roughly aligned with the distal screw holes. The first fixation system is adapted to be fixedly coupled to an operating surface upon which an intramedullary nail fixation procedure may be performed. The second fixation system is adapted to be fixedly coupled to the handle of the implanted intramedullary nail. Rough adjustments to the first and second fixation systems enable an initial positioning of a drill with a first distal screw hole. The aiming guide, which is disposed between and fixedly coupled to the first fixation system and the second fixation system, is used to perfect alignment of the drill with the first distal screw hole. Once a precise alignment with the first distal screw hole has been realized, a mechanical adjustment to the aiming guide may allow for a rapid alignment of the drill with the second distal screw hole of the implanted intramedullary nail.

PatBase - W00230258_A2

W00230258

PCT/US00/00000

1/11

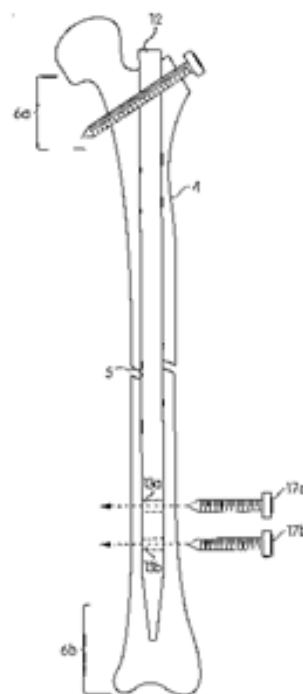


Fig. 1

SUBSTITUTE SHEET (RULE 26)

85) Family number: 32176626 (US2005182420A)

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Title: LOW PROFILE APPARATUS FOR SECURING A THERAPY DELIVERY DEVICE WITHIN A BURR HOLE

Priority: US20040544456P 20040213 US20040563787P 20040420 US20040587356P 20040713
 US20050053961 20050209 US20040602749P 20040819 US20050054073 20050209
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 WO2005US03970 20050209 WO2005US04141 20050209 US20050054583 20050209
 US20050054649 20050209 US20100899679 20101007

Family:	Publication number	Publication date	Application number	Application date
	<u>EP1720597 A2</u>	20061115	EP20050722827	20050209
	<u>EP1722848 A1</u>	20061122	EP20050713234	20050209
	<u>US2005182420 AA</u>	20050818	US20050053961	20050209
	<u>US2005182421 AA</u>	20050818	US20050054073	20050209
	<u>US2005182422 AA</u>	20050818	US20050054199	20050209
	<u>US2005182423 AA</u>	20050818	US20050054510	20050209
	<u>US2005182424 AA</u>	20050818	US20050054583	20050209
	<u>US2005182425 AA</u>	20050818	US20050054649	20050209
	<u>US2005182464 AA</u>	20050818	US20050054471	20050209
	<u>US2011034981 AA</u>	20110210	US20100899679	20101007
	<u>US7580756 BB</u>	20090825	US20050054510	20050209
	<u>US7604644 BB</u>	20091020	US20050054471	20050209
	<u>WO05079903 A2</u>	20050901	WO2005US03970	20050209
	<u>WO05079903 A3</u>	20060316	WO2005US03970	20050209
	<u>WO05079912 A1</u>	20050901	WO2005US04141	20050209

Probable Assignee: MEDTRONIC INC**Assignee(s):**^(std): MEDTRONIC INC ; OTTEN LYNN M ; SAGE SHAHN S ; SCHULTE GREGORY T ; ADAMS MATTHEW H**Inventor(s):**^(std): ADAMS MATTHEW H ; OTTEN LYNN M ; SAGE SHAHN S ; SCHULTE GREGORY T**Inventor(s):** ADAMS MATTHEW ; SCHULTE GREGORY ; SAGE SHAHN ; OTTEN LYNN**Agent(s):** MUETING RAASCH AND GEBHARDT PA; HARNESS DICKEY AND PIERCE PLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
 CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
 GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC
 MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC
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 ZA ZM ZW

International class
^{(IPC 8-9):} A61B19/00 A61M25/02 A61M5/32 A61N1/00 A61N1/04 A61N1/05 (Advanced/Invention);
A61B17/34 (Advanced/Non-invention);
A61B19/00 A61M25/02 A61M5/32 A61N1/00 A61N1/04 A61N1/05 (Core/Invention);
A61B17/34 (Core/Non-invention)

International class
^{(IPC 1-7):} A61B19/00 A61M25/02 A61N1/04 A61N1/05

CPC: A61B90/11 A61B2090/103 A61N1/0539 A61B2017/3407 A61B2017/347 A61B2017/3492**European class:** A61N1/05K1S K61B17/34D1B K61B17/34K K61B17/34R4 K61B19/20B K61B19/20H**US class:** 604/174 604/174S 604/175 606/129 606/130 606/130P 607/115 607/115P 607/116 607/116P[Classification Explorer](#)**Cited documents:** WO9955408 A1, WO9808554 A1, WO9742870 A1, WO9633766 A1, WO06062892 A2, WO05079912 A1, WO05079903 A2, WO04026161 A3, WO04026161 A2, WO03090820

A1, WO03068304 A1, WO0020048 A1, WO0013743 A1, US8116850 BB, US7896889 BB, US7867242 BB, US7660621 BB, US7658879 BB, US7497863 BB, US7479146 BB, US7329262 BB, US7285287 BB, US7235084 BB, US7204840 BB, US7175642 BB, US7094234 BA, US7004948 BA, US6817995 BA, US6706050 BA, US6682538 BB, US6676669 BB, US6623490 BA, US6609020 BB, US6554802 BA, US6537232 BA, US6529765 BA, US6482182 BA, US6356792 BA, US6324433 BA, US6321104 BA, US6210417 BA, US6206890 BA, US6195577 BA, US6179826 BA, US6134477 A, US6044304 A, US6042540 A, US6039725 A, US6030223 A, US6024729 A, US6021343 A, US6018094 A, US5954687 A, US5927277 A, US5916200 A, US5873822 A, US5871487 A, US5871445 A, US5865842 A, US5865817 A, US5843150 A, US5817116 A, US5713858 A, US5712858 A, US5662600 A, US5649936 A, US5608382 A, US5494655 A, US5494034 A, US5483961 A, US5464446 A, US5462555 A, US5394457 A, US5387220 A, US5383454 A, US5380302 A, US5291890 A, US5290266 A, US5280427 A, US5279575 A, US5279309 A, US5186174 A, US5099846 A, US5087256 A, US5080662 A, US5078142 A, US5078140 A, US5006122 A, US4998938 A, US4993425 A, US4991579 A, US4989608 A, US4986281 A, US4986280 A, US4902129 A, US4896673 A, US4824436 A, US4809694 A, US4807620 A, US4805634 A, US4805615 A, US4798208 A, US4733661 A, US4660563 A, US4638804 A, US4638798 A, US4629451 A, US4579120 A, US4572198 A, US4571750 A, US4360025 A, US4350159 A, US4328813 A, US432813 A, US4318401 A, US4312337 A, US4025964 A, US4013080 A, US3783873 A, US3760811 A, US3508552 A, US3444861 A, US3262452 A, US3017887 A, US3016899 A, US2497820 A, US2011022059 AA, US2011022058 AA, US2008058837 AA, US2008046091 AA, US2008004632 AA, US2005192594 AA, US2005188244 AA, US2005182464 AA, US2005182425 AA, US2005182424 AA, US2005182423 AA, US2005182422 AA, US2005182421 AA, US2005182420 AA, US2005154297 AA, US2005143800 AA, US2005143799 AA, US2005125007 AA, US2005065535 AA, US2005054985 AA, US2005004602 AA, US2004243146 AA, US2004173221 AA, US2004105890 AA, US2004089223 AA, US2004059260 AA, US2004034367 AA, US2004028676 AA, US2004026161 AA, US2004003156 AA, US2003199831 AA, US2003028199 AA, US2002156372 AA, US2002052610 AA, US2002022847 AA, US2002019641 AA, US2002010479 AA, US2001003156 AA, US1664210 A, US1129333 A, GB2357700 B2, GB2357700 A1, GB2355665 A1, GB2342583 B2, GB2342583 A1, GB2330080 A1, EP1048320 B1, EP1048320 A3, EP1048320 A2, EP1048318 A3, EP1048318 A2, EP1016432 B1, EP0822844 B1,

Forward Citations:

WO17064151, WO15044808, WO14089371, WO14089371, WO14089366, WO14089366, WO13086497, WO11097311, WO11097311, WO11069270, WO11008668, WO10055444, WO09055746, WO09055746, WO08119041, WO08054691, USD747804, US9643019, US9622675, US9610437, US9604055, US9604052, US9597494, US9597493, US9597032, US9592004, US9572985, US9572973, US9549708, US9545509, US9539421, US9517327, US9480845, US9474894, US9468751, US9468460, US9457180, US9445793, US9445730, US9440082, US9440064, US9427553, US9415222, US9403011, US9387320, US9375573, US9375564, US9352125, US9320900, US9308022, US9302043, US9289595, US9289143, US9265935, US9259591, US9192767, US9179850, US9167978, US9167977, US9167976, US9113801, US9072906, US9061134, US9044188, US9043000, US9042988, US9020606, US8965513, US8954165, US8938290, US8911452, US8868172, US8855775, US8849415, US8849390, US8845656, US8805539, US8788064, US8788042, US8786624, US8781597, US8774937, US8764767, US8762065, US8761902, US8738151, US8731686, US8728562, US8725243, US8676328, US8603038, US8588933, US8556860, US8543199, US8500752, US8463398, US8425534, US8417353, US8380323, US8332044, US8295934, US8262674, US8043304, US8038685, US8036736, US7988674, US7949410, US7945329, US7930035, US7887550, US7853329, US7766922, US7747325, US7604644, US7580756, US2015039063, US2014288578, US2014276418, US2014155909, US2014155859, US2014074202, US2013261720, US2013150934, US2012238992, US2012143297, US2011270187, US2011237921, US2011224764, US2011160823, US2011144655, US2011022059, US2011022058, US2011009739, US2010312193, US2010298842, US2010280585, US2010268308, US2010179563, US2010161018, US2010145357, US2010023100, US2010023020, US2009306750, US2009287287, US2009187149, US2009112327, US2009112280, US2009112279, US2009112277, US2009112273, US2009088826, US2009062682, US2009030479, US2009018609, US2008255582, US2008234598, US2008183097, US2008183096, US2008172068, US2008119900, US2008027515, US2008027347, US2007233158, US2007185502, US2007162086, US2006224191, US2005182464, US2005182424, US2005182423, US2005182422, US2005182421, US2005182420, JP2014531245, JP2011500291, FR2937556, EP2840977, EP2653188, EP2653188, EP2540248, EP2241343, EP2184083, CN103892920, CN102342851, CH702371, AU2008316640,

Abstract:

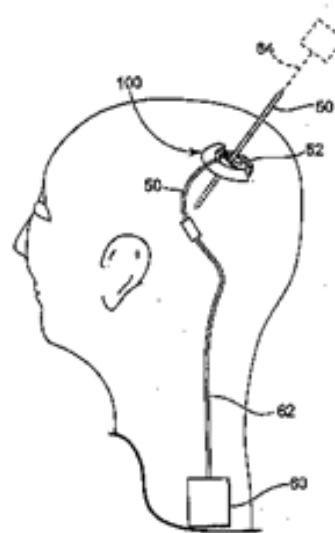
Source: US2005182420A Apparatus for securing a therapy delivery device relative to a burr hole. In one embodiment, the apparatus includes a base that is securable to bone, without the use of fasteners, either before or after insertion of the therapy delivery device into the burr hole. The base may frictionally engage the delivery device, e.g., receive it with interference, to secure the device relative to the burr hole. The base may have a relatively low profile such that a flange portion of the base extends only minimally above a cranial surface, e.g., about 4 millimeters or less.

PatBase - W005079912_A1

WO 2005/079912

1/39

PC1/US2005/04148

**Fig. 1**

86) Family number: 43542630 (US2009187194A)

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Title: ONE STEP ENTRY PEDICULAR PREPARATION DEVICE AND DISC ACCESS SYSTEM**Priority:** US20080009496 20080117 US20090321311 20090115

Family:	Publication number	Publication date	Application number	Application date
	<u>US2009187194 AA</u>	20090723	US20090321311	20090115
	<u>US2009187220 AA</u>	20090723	US20080009496	20080117
	<u>US8075579 BB</u>	20111213	US20080009496	20080117
	<u>US8236006 BB</u>	20120807	US20090321311	20090115
	<u>WO09091616 A2</u>	20090723	WO2009US00393	20090115
	<u>WO09091616 A3</u>	20091022	WO2009US00393	20090115

Probable Assignee: LIFE SPINE INC**Assignee(s):^(std):** LIFE SPINE INC ; HAMADA JAMES S**Assignee(s):** BMO HARRIS BANK NA ; MB FINANCIAL BANK NA ; SILICON VALLEY BANK ; ST CLOUD CAPITAL PARTNERS III SBIC LP**Inventor(s):^(std):** HAMADA JAMES S**Agent(s):** CURTIS L HARRINGTON; HARRINGTON AND HARRINGTON; FOLEY AND LARDNER LLP; HARRINGTON CURTIS L**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): A61B17/32 A61B17/56 A61B17/58 A61B17/70 A61B17/76 A61B17/88 (Advanced/Invention);
A61B17/32 A61B17/56 A61B17/58 A61B17/88 (Core/Invention)**CPC:** A61B17/1671 A61B17/8897 A61B17/7001 A61B17/7082 A61B17/861 A61B17/863
A61B17/8635 A61B17/864 A61B18/1477 A61B2090/3983**European class:** A61B17/16S4 A61B17/70B A61B17/70T2D A61B17/88S K61B17/86A2 K61B17/86B2
K61B17/86B4 K61B17/86D K61B19/54T**US class:** 606/104 606/104P 606/167 606/167S 606/300 606/300S 606/329 606/329S 606/86.00AP
606/86A 606/96 606/96S 606/99 606/99S[Classification Explorer](#)**Cited documents:** WO09091616 A3, WO09091616 A2, US7494489 BB, US6175758 BA, US6175758 B1, US5171279 A, US2009254131 AA, US2008086140 AA, US2007016219 AA, US2006079903 AA, US2005251139 AA,**Forward Citations:** WO13172869, WO10093658, WO10093658, USD775335, USD750249, USD745967, USD745673, USD745672, USD745671, USD738498, USD723682, USD705929, USD700322, USD696399, USD672038, USD669176, USD667542, US9642633, US9629729, US9592084, US9579925, US9551367, US9498351, US9480520, US9439782, US9433445, US9427264, US9387025, US9326800, US9289249, US9265620, US9247943, US9198678, US9186484, US9186193, US9186192, US9173694, US9131946, US9078717, US9060878, US9060877, US8998807, US8906028, US8870889, US8870882, US8808305, US8758357, US8715355, US8709088, US8685031, US8403973, US8366748, US8343201, US8292960, US8277510, US8236006, US8075579, US2015201985, US2015173798, US2014276894, US2014257402, US2014243912, US2014150896, US2013304068, US2013268010, US2012136398, US2012053639, US2011071536, US2010298892, US2010280558, US2010222827, US2008119945, EP3085311, EP2772212, CN105050518,

Abstract:

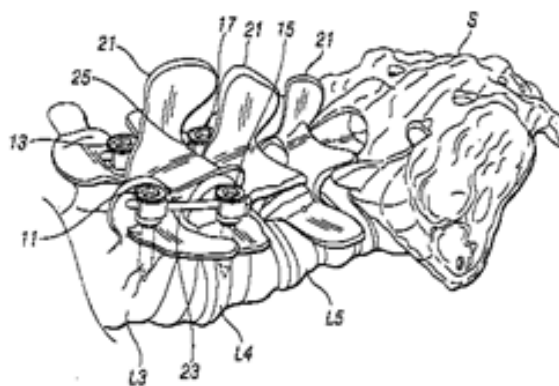
Source: US2009187194A A one step entry pedicular preparation device works well with Minimal Invasive Spine Surgery (MISS) to facilitating such approach. A related intervertebral disc access system and pedicle screw compatible with the systems is also illustrated. The systems include a manipulator having a bar handle and main body with main barrel bore a pedicle dart having a proximal tip end and a second distal open end selectably attachable to the manipulator using a variety of interconnect configurations, both of which work in conjunction with a guide pin. The pedicle darts can be made of any material, disposable or re-usable and can be utilized for a variety of purposes, including bone structure formation for faster conventional pedicle screw insertion with precision and vertebra fixation.

PatBase - W009091616_A2

WO 2009/091616

PCT/US2009/002993

1/23

**Fig. 1
(Prior Art)**

0) US2002002365A – SURGICAL INSTRUMENTATION SYSTEM

87) Family number: 31903274 (US2002002365A)

© PatBase

Title: SURGICAL INSTRUMENTATION SYSTEM

Priority: CH20000000409 20000302 US20000602341 20000624 US20010902369 20010709
 US20030391464 20030318 US20030518769P 20031110 US20030441148 20030519
 US20040006485 20041207 US20030527748P 20031209 US20030429897 20030505
 US20040595442 20041110 WO2004IB03684 20041110 US20050117740 20050429
 US20070932988 20071031 WO2004IB01712 20040519 WO2004IB01405 20040505

Family:

Publication number	Publication date	Application number	Application date
AT376393 E	20071115	AT20040733878T	20040519
CH698891 B1	20091130	CH20040002036	20041208
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CN100398070 C	20080702	CN20011008927	20010228
CN1341402 A	20020327	CN20011008927	20010228
CN1672643 A	20050928	CN200510066877	20010228
CN1784179 A	20060607	CN200480012396	20040505
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CN1791364 B	20120404	CN200480013792	20040519
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KR20060008997 A	20060127	KR20057021080	20051105
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US2004220554 AA	20041104	US20030429897	20030505
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US2005251145 AA	20051110	US20050117740	20050429
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US2008108999 AA	20080508	US20070932988	20071031
US6264647 BA	20010724	US20000602341	20000624
US6540739 BB	20030401	US20010902369	20010709
US7056317 BB	20060606	US20030391464	20030318
US7115119 BB	20061003	US20030441148	20030519
US7296804 BB	20071120	US20030429897	20030505

<u>US7326198 BB</u>	20080205	US20040006485	20041207	
<u>US7955320 BB</u>	20110607	US20040595442	20041110	
<u>US8057477 BB</u>	20111115	US20050117740	20050429	
<u>US8182486 BB</u>	20120522	US20070932988	20071031	
<u>WO04098421 A1</u>	20041118	WO2004IB01405	20040505	
<u>WO04100805 A1</u>	20041125	WO2004IB01712	20040519	
<u>WO04100805 B1</u>	20050428	WO2004IB01712	20040519	
<u>WO05044114 A1</u>	20050519	WO2004IB03684	20041110	
<u>WO05044114 B1</u>	20051027	WO2004IB03684	20041110	

Probable Assignee: GREATBATCH MEDICAL SA

Assignee(s):^(std): DESARZENS YVES ; FEHLBAUM PHILIPPE ; GREATBATCH MEDICAL S A ; GREATBATCH MEDICAL SA ; LECHOT ANDRE ; PRACEMED AG ; PRECIMED SA ; PRECIFAR SA

Assignee(s): PRECIMED S A ; PRECIFAR S A

Inventor(s):^(std): ANDRE DESARZENS YVES LECHOT ; ANDRE LECHOT ; DESARZENS YVES ; FEHLBAUM PHILIPPE ; LECHOT ANDRE ; LETSCHOT ANDRE ; PHILIPPE LECHOT ANDRE FEHLBAUM ; YVES DESARZENS

Inventor(s): PHILIPPE FEHLBAUM ; LECHOT ANDRE FEHLBAUM PHILIPPE ; DESARZENS YVES LECHOT ANDRE ; ANDRE LETSCHOT

Agent(s): MOETTELI AND ASSOCIES SARL; MOETTELI AND ASSOCIATES SARL; JOHN; MICHAEL F

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/00 A61B17/16 A61B17/32 A61B17/56 B23B31/107 (Advanced/Invention);
A61B17/00 A61B17/16 A61B17/17 A61B19/00 (Advanced/Non-Invention);
A61B17/00 A61B17/16 A61B17/56 (Core/Invention);
A61B17/00 A61B19/00 (Core/Non-Invention)

International class
(IPC 1-7): A61B17/00 A61B17/16 A61B17/56

CPC: A61B2017/00473 Y10T279/17717 Y10T279/17752 Y10T279/17803 Y10T279/32 Y10T279/3481 Y10T408/907 Y10T408/953 A61B2017/00464 A61B2090/0813 A61B17/1668 A61B17/16 A61B17/175 A61B2017/00477 A61B17/1666 A61B17/1617

European class: A61B17/16D2B A61B17/16S2C A61B17/16S2F K61B17/00H2 K61B17/00H6 K61B17/00K K61B17/16 K61B17/16D2B K61B17/17S2F K61B19/48J

US class: 279/140 279/155 279/71 279/75 279/81 408/226 408/240 606/1 606/104 606/1P 606/62 606/67 606/80 606/80P 606/81 606/99

[Classification Explorer](#)

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Forward Citations: WO16071867, WO12136972, WO11144851, WO10004267, WO09039346, WO08078170, WO07107852, WO07075152, WO07073606, WO05044114, WO05044114, WO04100805,

WO04098421, WO04093994, WO04080315, WO03094739, WO03094739, USD780548, USD736377, USD736376, USD732166, USD731649, USD685473, USD685090, US9649150, US9615942, US9597143, US9526921, US9510950, US9510945, US9510895, US9498229, US9480485, US9447803, US9439780, US9427258, US9421062, US9381058, US9375255, US9364279, US9314287, US9308009, US9301794, US9301765, US9282982, US9282978, US9247986, US9241811, US9241766, US9237916, US9198672, US9192428, US9192397, US9179984, US9173663, US9161803, US9138273, US9131970, US9101370, US9095346, US9089338, US9072523, US9050110, US9039720, US9017851, US9017849, US9011471, US9011427, US9000720, US8998939, US8992531, US8956358, US8915675, US8906109, US8876837, US8876825, US8834471, US8810974, US8740907, US8679126, US8641314, US8623025, US8600478, US8591518, US8491597, US8491586, US8485484, US8480674, US8480561, US8475460, US8439920, US8398642, US8337505, US8323284, US8313070, US8233963, US8221432, US8206394, US8197155, US8177788, US8109942, US8080015, US8075563, US8065938, US8052687, US7988692, US7963967, US7955323, US7955320, US7918856, US7909873, US7901410, US7901405, US7896881, US7862570, US7850692, US7833229, US7794467, US7764985, US7749227, US7670281, US7632276, US7628561, US7627922, US7608076, US7572259, US7547307, US7513899, US7477926, US7429264, US7326198, US7296804, US7247158, US7237556, US7229078, US7105028, US7056317, US7037310, US7008430, US6997928, US6854742, US6506000, US2015230849, US2015223796, US2014330276, US2014316417, US2014309642, US2013218161, US2013178861, US2013158655, US2012165828, US2012116396, US2012023733, US2011306980, US2011288554, US2011188922, US2011172671, US2011118743, US2011092978, US2011090673, US2011071531, US2011071530, US2011071528, US2010318192, US2010292699, US2010260537, US2010249581, US2010114117, US2010108841, US2009208281, US2009182344, US2009088757, US2009082772, US2009082771, US2009078096, US2008300600, US2008200927, US2008200926, US2008200794, US2008195101, US2008181957, US2008177265, US2008161812, US2008086141, US2008058804, US2008028547, US2007287910, US2007203477, US2007191854, US2007173847, US2007169782, US2007142840, US2007123912, US2007123891, US2007118055, US2007083208, US2007010816, US2006293679, US2006200025, US2006190011, US2006185092, US2006161051, US2006129157, US2006079864, US2006053974, US2006025774, US2005279368, US2005277971, US2005261694, US2005245808, US2005234468, US2005234466, US2005234465, US2005234332, US2005228404, US2005228390, US2005228266, US2005216020, US2005203525, US2005197569, US2005159759, US2005131395, US2005119639, US2005113846, US2005113659, US2005109855, US2005085823, US2005085822, US2005081867, US2005075632, US2005038443, US2005004600, US2004220554, US2004153063, US2004102763, US2003069591, US2002198451, US2002099380, KR101036339, JP2013126545, JP2007117720, JP2006528046, ITUD20130065, ITUD20130061, ITUD20100154, GB2408939, FR3028169, FR2960142, EP3023063, EP2604199, EP2412321, EP2387960, EP2387960, EP2354581, EP2192862, EP2192862, EP2002793, EP1905362, EP1779792, EP1624814, CN105729501, CN105107591, CN103313672, CN103054636, CN103054636, CN102088918, CN102038535, AU2012265587, AU2009269786,

Abstract:

Source: US2002002365A Instrument holder comprising a shank (1) equipped with a head (2) designed to receive an instrument and a locking component (4) pushed against the head by a spring (9) bearing on a ring (11) sliding on the shank, and having means of connection (8, 12) on the shank which is engaged by rotation of the ring, in such a way that the release of the ring allows the locking component, the spring and the ring to slide freely in order to permit cleaning of the instrument holder.



88) Family number: 40968377 (US2008312702A)

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Title: REFERENCE PIN**Priority:** CH20050000195 20050406 EP20060705429 20060405 WO2005CH00195 20050406
WO2006CH00195 20060405**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2006230883 AA</u>	20061012	AU20060230883	20060405
<u>BRPI0608955 A2</u>	20100217	BR2006PI08955	20060405
<u>CA2603930 AA</u>	20071005	CA20062603930	20060405
<u>CA2603930 C</u>	20140311	CA20062603930	20060405
<u>CN101150991 A</u>	20080326	CN200680010207	20060405
<u>CN101150991 B</u>	20100915	CN200680010207	20060405
<u>DE602006029637 D1</u>	20120719	DE200660029637T	20060405
<u>EP1865856 A2</u>	20071219	EP20060705429	20060405
<u>EP1865856 B1</u>	20120523	EP20060705429	20060405
<u>JP2008534184 T2</u>	20080828	JP20080504600T	20060405
<u>JP4977687 B2</u>	20120718	JP20080504600T	20060405
<u>KR101292915 B1</u>	20130802	KR20077023114	20060405
<u>KR20080004490 A</u>	20080109	KR20077023114	20060405
<u>NZ561949 A</u>	20090925	NZ20060561949	20060405
<u>US2008312702 AA</u>	20081218	US20060910481	20060405
<u>US8257409 BB</u>	20120904	US20060910481	20060405
<u>WO06105673 A1</u>	20061012	WO2005CH00195	20050406
<u>WO06105685 A2</u>	20061012	WO2006CH00195	20060405
<u>WO06105685 A3</u>	20070308	WO2006CH00195	20060405
<u>ZA200708131 A</u>	20081231	ZA20070008131	20060921

Probable Assignee: SYNTHES USA LLC**Assignee(s):**^(std): BUETTLER MARKUS ; SYNTHES AG ; SENN PETER ; SCHLIENGER ANDRE ;
SYNTHES GMBH ; SYNTHES HOLDING AG ; SYNTHES USA ; SYNTHES USA LLC**Assignee(s):** SYNTHES (USA) ; SYNTHES CHUR AG ; SYNTHES ; SYNTHES AG CHUR ; SYNTHES
U S A ; DEPUY SPINE LLC ; DEPUY SYNTHES PRODUCTS LLC ; HAND
INNOVATIONS LLC**Inventor(s):**^(std): BUETTLER MARKUS ; SCHLIENGER ANDRE ; SENN PETER ; PETER SENN ;
MARKUS BUETTLER ; ANDRE SCHLIENGER**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; BCF LLP; SPARING ROEHL HENSELER;
LUSUARDI WERTHER; FAY KAPLUN AND MARCIN LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV
LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL
PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US
UZ VC VN YU ZA ZM ZW**International class**
^(IPC 8-9): A61B17/04 A61B17/17 A61B17/56 A61B17/58 A61B17/72 A61B19/00 (Advanced/Invention);
A61B17/56 A61B17/58 A61B17/72 A61B19/00 (Advanced/Non-invention);
A61B17/04 A61B17/16 A61B17/56 A61B17/58 A61B17/68 A61B19/00 (Core/Invention);
A61B19/00 (Core/Non-invention);
A61B (Subclass/Invention)**International class**
^(IPC 1-7): A61B17/17**CPC:** A61B2090/3925 A61B2090/397 A61B2090/3983 A61B17/1725 A61B17/1703
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European class: A61B17/17B A61B17/17M A61B17/17R A61B17/60 K61B17/17B K61B17/72 K61B19/54F K61B19/54R K61B19/54T

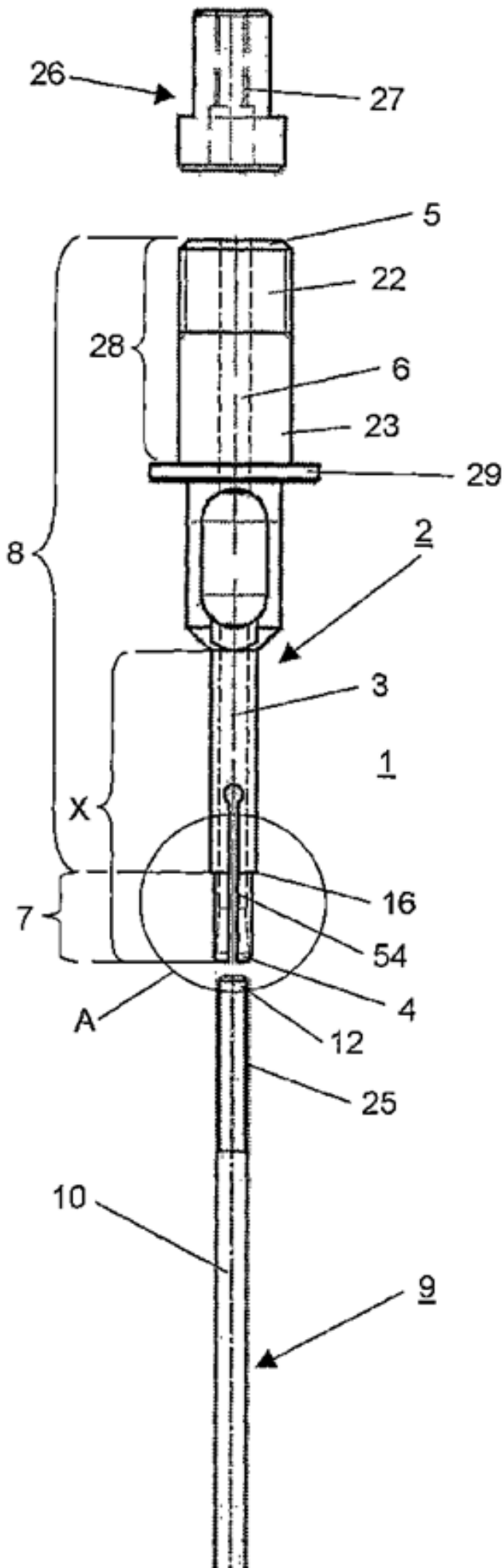
US class: 606/326 606/326S 606/329 606/329P 606/96

Classification Explorer

Cited documents: WO0219931 A1, WO0156487 A1, US7942875 BB, US7887545 BB, US7588577 BB, US7549994 BB, US6656189 BA, US6379364 BA, US6039742 A, US5766179 A, US5665086 A, US5478343 A, US5474561 A, US5411503 A, US5234434 A, US4621628 A, US4541424 A, US2044257 A, US2004260290 AA, US2003018335 AA, JP2004507332 T2, JP2000513603 T2, DE4238582 A1, DE19802751 A1,

Forward Citations: WO16083355, US9597129, US9517092, US9474557, US9155582, US8668695, US2014107708, DE102011001212, CN104997557, CN103705295,

Source: US2008312702A Described is a reference pin for use during a bone fracture treatment. The pin may include a longitudinal shaft and a spreading member. The longitudinal shaft with a longitudinal axis, a front end, a rear end and a through hole penetrating the shaft from the front end to the rear end. The shaft includes a rear portion adjoining the rear end and an expandable front portion adjoining the front end. The expandable front portion is insertable in a distal locking hole of an intramedullary nail and reversibly expandable transversely to the longitudinal axis. The spreading member is moveably located in the through hole and apt for reversibly expanding the expandable front end portion. The expandable front portion is reversibly expandable within a range between 0.3 mm and 0.5 mm.



Title: SURGICAL ROBOT PLATFORM

Priority: US20060774586P 20060216 US20060775816P 20060216 US20120542560 20120705
 US20070845557 20070827 US20070838027 20070813 US20070676023 20070216
 US20130924505 20130621 US20120662702P 20120621 US20130800527P 20130315
 US20130062707 20131024 US20140476101 20140903 US20140475998 20140903
 US20150602723 20150122 US20150729096 20150603 WO2013US47194 20130621
 US20160095883 20160411 US20160135658 20160422 WO2014US62083 20141024
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 US20160267950 20160916 US20160289537 20161010 US20160343255 20161104
 US20160371304 20161207 US20160347841 20161110

Family:

Publication number	Publication date	Application number	Application date
EP2863827 A1	20150429	EP20130807863	20130621
EP2863827 A4	20160420	EP20130807863	20130621
EP3060138 A1	20160831	EP20140856284	20141024
EP3060138 A4	20160921	EP20140856284	20141024
JP2015528713 T2	20151001	JP20150518631T	20130621
JP2016539681 T2	20161222	JP20160526094T	20141024
US2013345718 AA	20131226	US20130924505	20130621
US2014275955 AA	20140918	US20130062707	20131024
US2014378999 AA	20141225	US20140476101	20140903
US2015032164 AA	20150129	US20140475998	20140903
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Probable Assignee: GLOBUS MEDICAL INC**Assignee(s):^(std):** EXCELSIUS SURGICAL L L C ; GLOBUS MEDICAL INC**Assignee(s):** EXCELSIUS SURGICAL LLC

Inventor(s):^(std): BARTELME MICHAEL ; CHENG YUAN ; CICCHINI STEPHEN ; CLEARY DAVID ;
 CRAWFORD NEIL ; CRAWFORD NEIL R ; FORSYTH JEFFREY ; FOSTER MITCHELL ;
 FOSTER MITCHELL A ; JOHNSON NOBERT ; JOHNSON NORBERT ; KRULL
 ALEXANDER ; LEBOEUF II ROBERT J ; LEBOEUF ROBERT ; MAJOR CHRIS ;
 MOKHTAR JAWAD ; MOULTON TIMOTHY ; OLENIO ZACHARY ; THEODORE
 NICHOLAS ; THEODORE NICHOLAS A ; WEBER WES ; YAU JAMES ; ZHANG KEVIN

Agent(s): MORABITO SARA; HARAKENZO WORLD PATENT AND TRADEMARK; FELLOWS
 GERALD L; CASTELLANO KRISTINA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
 CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE

GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ
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International class
(IPC 8-9):

A61B17/00 A61B17/02 A61B17/16 A61B17/17 A61B17/34 A61B17/70 A61B19/00
A61B34/00 A61B34/20 A61B34/30 A61B5/00 A61B5/055 A61B5/06 A61B6/00 A61B6/03
A61B90/00 A61B90/90 A61B90/98 B25J13/06 B25J3/00 B25J9/02 G01S5/16
G06T7/00 (Advanced/Invention);
A61B34/10 A61B34/32 (Advanced/Non-invention)

CPC:

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A61B2090/3966 A61B2090/3975

US class:

382/131 600/409 600/424 600/473 606/130 606/279 700/259

[Classification Explorer](#)

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EP0744633 A2,

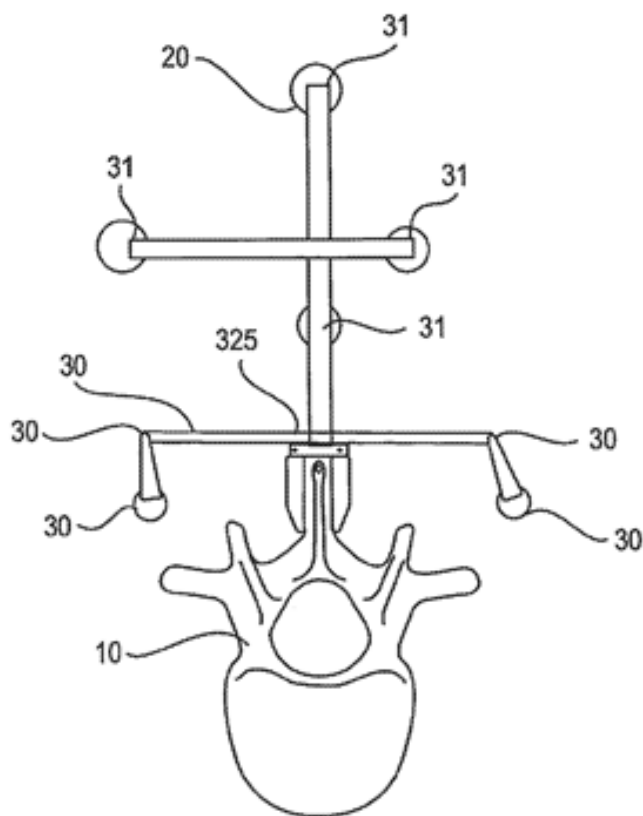
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WO16141378, WO16123697, WO16087539, WO15193479, WO15184146, US9630318,
US9622831, US9604359, US9597797, US9585700, US9585596, US9579789,
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US2015157197, US2015134145, US2015127154, US2015047125, US2015018670,
US2014229007, US2014200621, US2014039681, US2013345718, US2013310824,
US2013072982,

Abstract:

Source: US2013345718A A medical robot system, including a robot coupled to an effectuator element with the robot configured for controlled movement and positioning. The system may include a transmitter configured to emit one or more signals, and the transmitter is coupled to an instrument coupled to the effectuator element. The system may further include a motor assembly coupled to the robot and a plurality of receivers configured to receive the one or more signals emitted by the transmitter. A control unit is coupled to the motor assembly and the plurality of receivers, and the control unit is configured to supply one or more instruction signals to the motor assembly. The instruction signals can be configured to cause the motor assembly to selectively move the effectuator element and is further configured to (i) calculate a position of the at least one transmitter by analysis of the signals received by the plurality of receivers; (ii) display the position of the at least one transmitter with respect to the body of the patient; and (iii) selectively control actuation of the motor assembly in response to the signals received by the plurality of receivers.

PatBase - W016118744_A1

**FIG. 8A**

Title: BONE FIXATION ASSEMBLY AND RELATED METHOD**Priority:** US20050032867 20050111

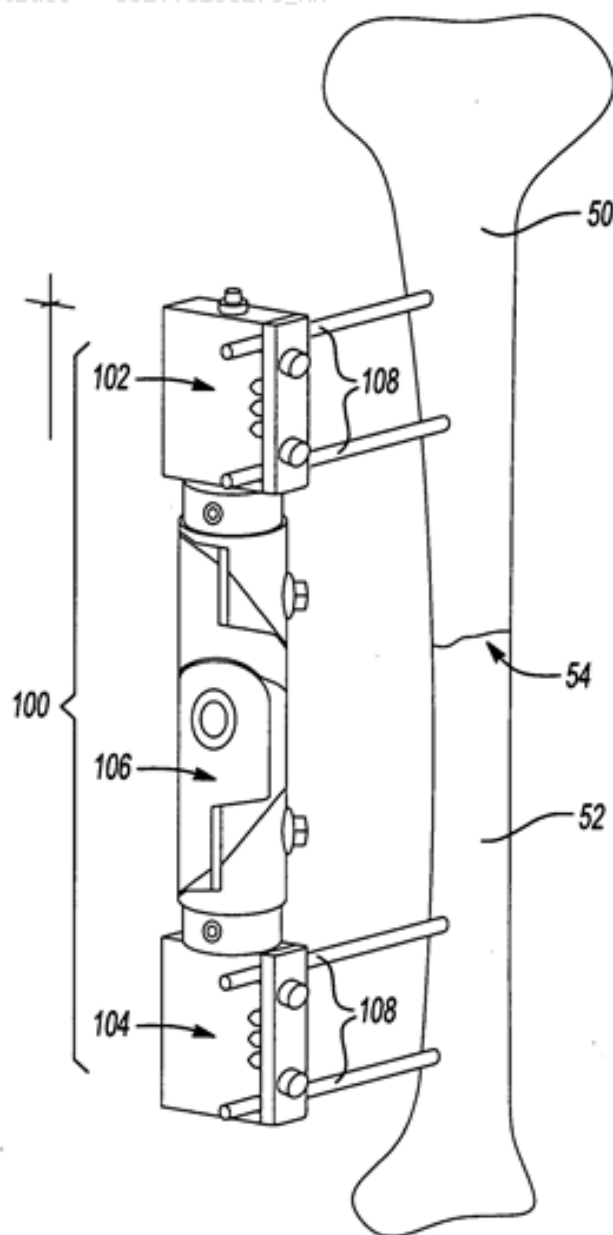
Family:	Publication number	Publication date	Application number	Application date
	<u>US2006155276 AA</u>	20060713	US20050032867	20050111

Probable Assignee: EBI LLC**Assignee(s):^(std):** BAILEY KIRK J ; WALULIK STEPHEN B ; ELGHAZALY TIM ; LEUNG TAKKWONG R**Assignee(s):** EBI LP ; LVB ACQUISITION INC ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURE ; BANK OF AMERICA NA ADMINISTRATIVE AGENT FOR SECURED PARTIES AS ; BIOMET INC ; EBI LLC**Inventor(s):^(std):** BAILEY KIRK J ; ELGHAZALY TIM ; LEUNG TAKKWONG R ; WALULIK STEPHEN B**Inventor(s):** BAILEY KIRK ; WALULIK STEPHEN ; LEUNG TAKKWONG**Agent(s):** HARNESS DICKEY AND PIERCE PLC**International class** A61B17/60 (Advanced/Invention);
(IPC 8-9). A61B17/60 (Core/Invention)**CPC:** A61B17/6416 A61B17/6441 A61B17/645**European class:** A61B17/64C A61B17/64G A61B17/64H**US class:** 606/59[Classification Explorer](#)**Cited documents:** USRE34985 E, US6746448 BB, US6678562 BA, US6652523 BA, US6623483 BA, US6530925 BB, US6508424 BA, US6461358 BA, US6423061 BA, US6340361 BA, US6245071 BA, US6171308 BA, US5931837 A, US5897555 A, US5393161 A, US5391167 A, US5376072 A, US5364037 A, US5209750 A, US5148995 A, US5129148 A, US4920959 A, US4714076 A, US4620533 A, US2004138659 AA, US2004133200 AA, US2003225407 AA, US2003216734 AA, US2003181911 AA, US2002151892 AA,**Forward Citations:** USD720853, USD704840, USD683461, USD682426, USD663030, USD633206, USD632791, US9549762, US9532805, US9402651, US9351763, US9308037, US9301782, US9259242, US9220533, US9101398, US9050135, US8945129, US8945128, US8906020, US8858555, US8840611, US8834467, US8827998, US8808289, US8721641, US8685023, US8562606, US8172840, US2013158551, US2012209266, US2012143191, US2012093575, US2012089142, US2011066151, US2009125068, CN102440824, CN102440824, AU2011226864,

Abstract:

Source: US2006155276A A fixation assembly for securing a first bone portion in fixed relationship relative to a second bone portion. The fixation assembly includes a plurality of modular components articulatably coupled therebetween, at least one fastener interconnecting two of the plurality of components, and a clamp connector adapted for selective unilateral or multilateral bone fixation. The entire fixation assembly or portions thereof can be selectively radiolucent.

PatBase - US2006155276_AA



Priority: DE19860009102U 19860404**Family:**

Publication number	Publication date	Application number	Application date
<u>DE8609102 U1</u>	19870402	DE19860009102U	19860404

Probable Assignee: WITZEL ULRICH DR ING 5600 WUPPERTAL DE**Assignee(s):** WITZEL ULRICH DR ING 5600 WUPPERTAL DE

International class (IPC 8-9): A61B17/60 (Advanced/Invention);
A61B17/17 A61B17/86 (Advanced/Non-invention);
A61B17/60 (Core/Invention);
A61B17/16 A61B17/68 (Core/Non-invention)

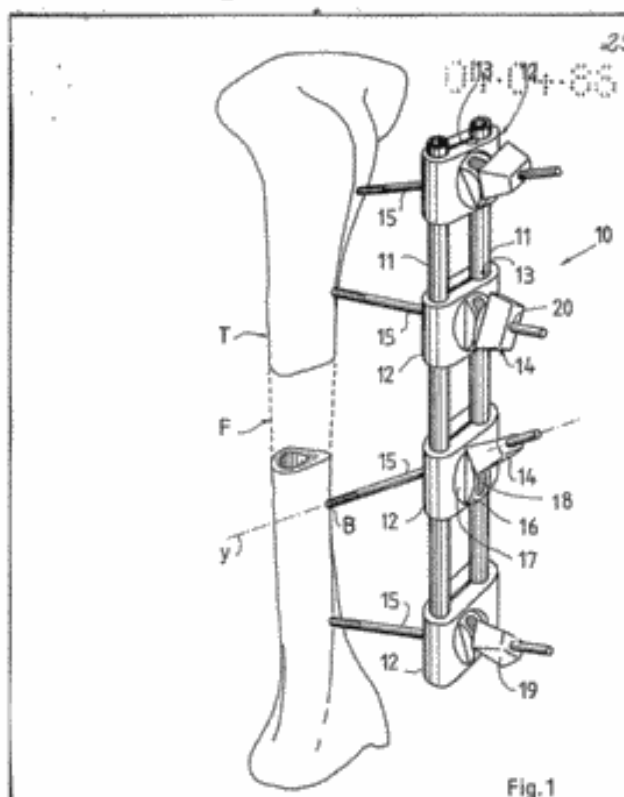
International class (IPC 1-7): A61B17/60

CPC: A61B17/60 A61B17/171 A61B17/8695**European class:** A61B17/60 K61B17/17E K61B17/86W[Classification Explorer](#)**Forward Citations:** WO9400066, WO07056709, WO0236026, US6626906, US5501684, AU2002213261,**Abstract:**

Source: DE8609102U1 (Claim 1) Bezeichnung der Erfindung: Fixateur externe zur Osteosynthese Ansprueche 1. Fixateur externe zur Osteosynthese, mit mindestens einem Uberbrueckungsbauteil, an welchem mittels Klemmbacken- flaechen mehrere Halterungen orientier- und schraubverklemmbar sind, welche wiederum zylindrische Halteoeffnungen aufweisen, die mittels Betaetigungsschrauben zustellbar sind und hierbei als Klemmaufnahmen fuer je einen Knochennagel bzw.

Machine translation: (Claim 1) Title of the invention: external fixator for osteosynthesis claims 1 External fixator for osteosynthesis, with at least one Uberbrueckungsbauteil, which means at a plurality of holders jaw surfaces are orientable and schraubverklemmbar, which have in turn, cylindrical Halteoeffnungen that are undeliverable and Betaetigungsschrauben using this as a clamp recordings for each nail or a bone

PatBase - DE8609102_U1



8609102

92) Family number: 30751602 (US2004152970A)

© PatBase

Title: SIX DEGREE OF FREEDOM ALIGNMENT DISPLAY FOR MEDICAL PROCEDURES

Priority: EP20040001428 20040123 EP20070111192 20040123 EP20070111195 20040123
 US20040794716 20040305 US20030423515 20030425 US20030354562 20030130
 US20090473557 20090528

Family:	Publication number	Publication date	Application number	Application date	
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	<u>AT499051 E</u>	20110315	AT20040111190T	20040123	
	<u>AT515235 E</u>	20110715	AT20040111192T	20040123	
	<u>AT520367 E</u>	20110915	AT20040111195T	20040123	
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	<u>DE602004007307 T2</u>	20071122	DE200460007307T	20040123	
	<u>DE602004031565 D1</u>	20110407	DE200460031565T	20040123	
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	<u>EP1836978 B1</u>	20110706	EP20070111192	20040123	
	<u>EP1844719 A2</u>	20071017	EP20070111190	20040123	
	<u>EP1844719 A3</u>	20071024	EP20070111190	20040123	
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Probable Assignee: MEDTRONIC NAVIGATION INC

Assignee(s):^(std): SURGICAL NAVIGATION TECH ; MEDTRONIC NAVIGATION INC

Assignee(s): MIRE DAVID A ; SURGICAL NAVIGATION TECHNOLOGIES INC ; TRIEU HAI H ; RUTZ GREG ; SURGICAL NAVIGATION TECHNOLOGIES INC LOUISVILLE ; DUGGER JANICE ; HUNTER MARK ; HUNTER MARK W ; LYON TORSTEN

Inventor(s):^(std): DUGGER JANICE ; HUNTER MARK ; HUNTER MARK W ; LYON TORSTEN ; MIRE DAVID A ; RUTZ GREG ; TRIEU HAI H

Inventor(s): RUTZ GREG BOULDER ; LYON TORSTEN GOLDEN ; HUNTER MARK W BROOMFIELD

Agent(s): OFFICE FREYLINGER SA; EDLUND FABIAN; HARNESS DICKEY AND PIERCE PLC; HARNESS DICKEY

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

International class
(IPC 8-9): A61B17/02 A61B17/15 A61B17/17 A61B19/00 A61B5/05 A61F2/32 A61F2/44 A61F2/46 G06F19/00 G06T15/00 (Advanced/Invention); A61B17/00 A61B17/17 A61F2/00 A61F2/02 A61F2/30 A61F2/32 A61F2/34 A61F2/36 A61F2/44 A61F2/48 (Advanced/Non-invention); A61B17/02 A61B17/14 A61B17/16 A61B19/00 A61B5/05 A61F2/32 A61F2/44 A61F2/46 G06F19/00 G06T15/00 (Core/Invention); A61B17/00 A61F2/00 A61F2/02 A61F2/30 A61F2/32 A61F2/36 A61F2/48 (Core/Non-invention)

International class
(IPC 1-7): A61B17/17 A61B19/00 A61B5/00 A61B5/05 A61F2/32 A61F2/44 A61F2/46 G06F19/00

CPC: A61B34/10 G06F19/3437 G06F19/325 A61F2/4657 A61B17/00234 A61B17/025 A61B17/15 A61B17/1703 A61B17/175 A61B17/1757 A61B34/20 A61B34/25 A61B34/30 A61B90/10 A61B2017/00199 A61B2017/0256 A61B2034/102 A61B2034/105 A61B2034/107 A61B2034/108 A61B2034/2051 A61B2034/2072 A61B2034/252 A61B2034/254 A61B2034/256 A61B2090/363 A61B2090/365 A61B2090/374 A61B2090/376 A61B2090/3983 A61F2/32 A61F2/34 A61F2/36 A61F2/441 A61F2/4425 A61F2/4607 A61F2/4609 A61F2002/30471 A61F2002/30476 A61F2002/305 A61F2002/30517 A61F2002/30538 A61F2002/30548 A61F2002/30565 A61F2002/30578 A61F2002/30579 A61F2002/30586 A61F2002/30624 A61F2002/30649 A61F2002/30668 A61F2002/3067 A61F2002/30677 A61F2002/3069 A61F2002/449 A61F2002/4632 A61F2002/4635 A61F2002/4666 A61F2002/4668 A61F2002/467 A61F2002/4681 A61F2002/48 A61F2220/0025 A61F2220/0091 A61F2250/0001 A61F2250/0002 A61F2250/0006 A61F2250/0013

European class: A61B17/02J A61B17/15 A61B17/17B A61B17/17S2F A61B17/17S4 A61B19/20 A61B19/52H12 A61F2/44D2 A61F2/46M G06F19/34H K61B19/50 K61B19/50B2 K61B19/50B4 K61B19/50D K61B19/52H12B4 K61B19/52H12F K61B19/52L2 K61B19/56 K61B19/56B K61B19/56D K61B19/56F K61F2/00T15 K61F2/00T33D K61F2/00T33S K61F2/00T33Z K61F2/02G1 S06F19/32E1

US class: 128/899 128/899S 128/92 128/920 128/920S 345/418 600/407 600/407P 600/411 600/424 600/424P 600/424S

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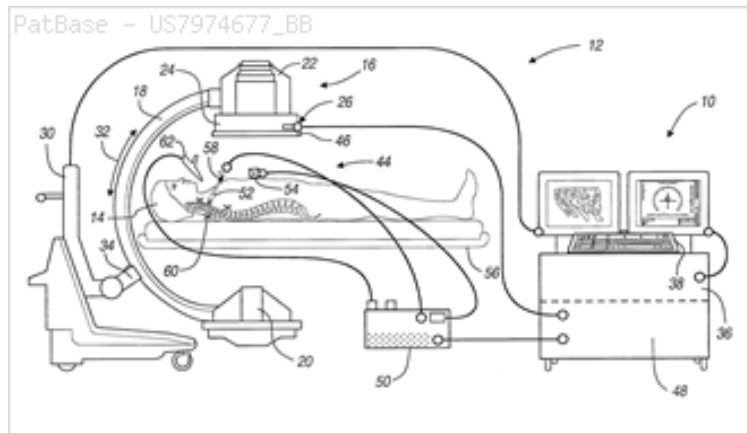
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Abstract:

Source: US2004152970A A display and navigation system for use in guiding a medical device to a target in a patient includes a tracking sensor, a tracking device and display. The tracking sensor is associated with the medical device and is used to track the medical device. The tracking device tracks the medical device with the tracking sensor. The display includes indicia illustrating at least five degree of freedom information and indicia of the medical device in relation to the five degree of freedom information.



93) Family number: 33049623 (US2006149278A)

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Title: DEVICES AND METHODS FOR INTER-VERTEBRAL ORTHOPEDIC DEVICE PLACEMENT

Priority: EP20050825694 20051123 US20040631213P 20041124 US20050286152 20051123
US20050713235P 20050831 US20060544452 20061006 US20050724632P 20051007
WO2005US42757 20051123 US20120466000 20120507 US20150643974 20150310

Family:	Publication number	Publication date	Application number	Application date
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	<u>DE602005030074 D1</u>	20111110	DE200560030074T	20051123
	<u>EP1814474 A2</u>	20070808	EP20050825694	20051123
	<u>EP1814474 A4</u>	20081210	EP20050825694	20051123
	<u>EP1814474 B1</u>	20110914	EP20050825694	20051123
	<u>US2006149278 AA</u>	20060706	US20050286152	20051123
	<u>US2007093828 AA</u>	20070426	US20060544452	20061006
	<u>US2012221063 AA</u>	20120830	US20120466000	20120507
	<u>US2015245923 AA</u>	20150903	US20150643974	20150310
	<u>US8172855 BB</u>	20120508	US20050286152	20051123
	<u>US8870920 BB</u>	20141028	US20060544452	20061006
	<u>US8974461 BB</u>	20150310	US20120466000	20120507
	<u>WO06058221 A2</u>	20060601	WO2005US42757	20051123
	<u>WO06058221 A3</u>	20060921	WO2005US42757	20051123
	<u>WO07044705 A2</u>	20070419	WO2006US39491	20061006
	<u>WO07044705 A3</u>	20090430	WO2006US39491	20061006

Probable Assignee: ABDOU SAMY

Assignee(s):^(std): ABDOU M S ; ABDOU M SAMY ; ABDOU SAMY ; ABDOU SAMY M ; ABDOU AMY M

Assignee(s): ABDOU M ; ABDOU SAMY SAN DIEGO

Inventor(s):^(std): ABDOU M S ; ABDOU M SAMY ; ABDOU SAMY ; ABDOU SAMY M ; ABDOU AMY M

Inventor(s): ABDOU M ; ABDOU SAMY SAN DIEGO

Agent(s): 2K PATENTANWAELE BLASBERG KEWITZ AND REICHEL PARTNERSCHAFT MBB;
LLOYD PATRICK ALEXANDER DESMOND; FISH AND RICHARDSON PC; GAZDZINSKI
AND ASSOCIATES PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
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LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM
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TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/58 A61B17/60 A61B17/70 A61B17/88 A61F2/30 A61F2/44
A61F2/46 (Advanced/Invention);
A61B17/02 A61B17/34 A61B17/90 A61B19/00 A61F2/46 (Advanced/Non-invention);
A61B17/58 A61B17/70 A61F2/30 A61F2/46 (Core/Invention)

CPC: A61B17/025 A61B17/3468 A61B2017/90 A61F2/4611 A61B17/7062 A61B17/7065
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European class: A61B17/02J A61B17/70P4 A61B17/70T2B A61F2/46B7 K61B17/02J2 K61B17/34J
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K61F2/46M1 K61F2/46M2 K61F2/46M4

US class: 606/248 606/249 606/61 606/86.00A 606/86.00AP 606/86A 606/90 606/90P 606/99
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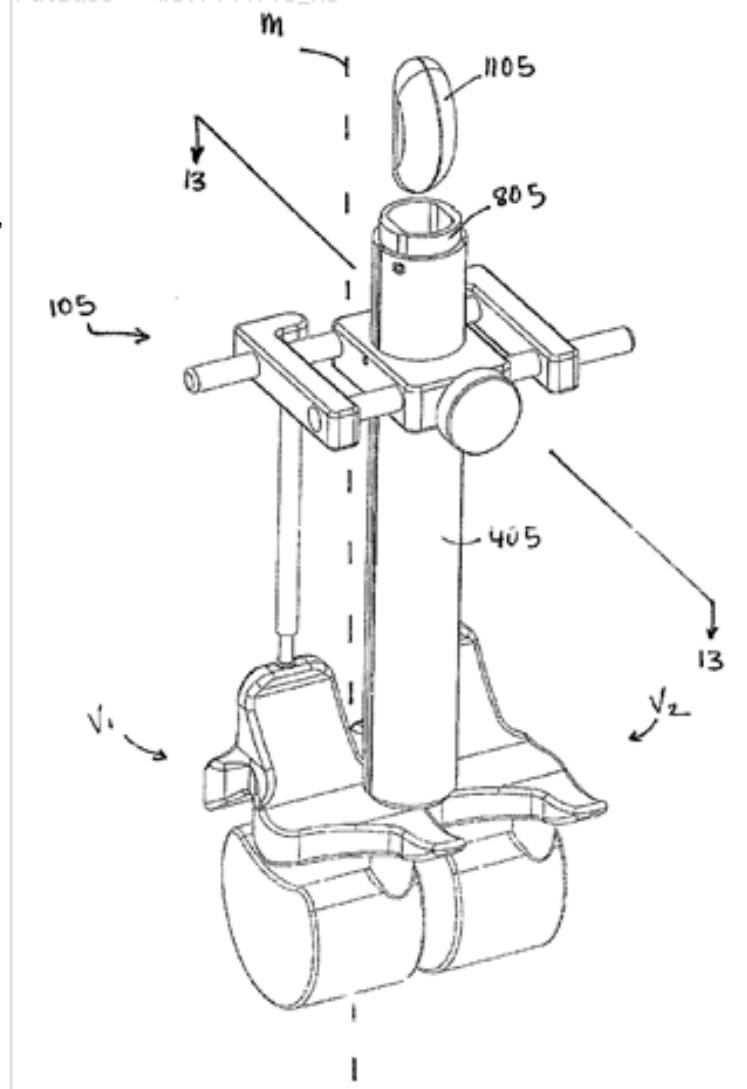
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Abstract:

Source: US2006149278A The disclosure relates to devices and methods for implantation of an orthopedic device between skeletal segments using limited surgical dissection. The implanted devices are used to adjust and maintain the spatial relationship(s) of adjacent bones. Depending on the implant design, the motion between the skeletal segments may be increased, limited, modified, or completely immobilized.

PatBase - W007044705_A3



0) WO04026156A1 – STABLE DYNAMIC AXIAL FIXATOR–II (HOLYFIX) FIXAT...

94) Family number: 30492668 (WO04026156A1)

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Title: STABLE DYNAMIC AXIAL FIXATOR–II (HOLYFIX)
Priority: TR20020002203 20020918 TR20030001347 20030819 WO2003TR00075 20030915
Family:

Publication number	Publication date	Application number	Application date
AU2003265217 AA	20040408	AU20030265217	20030915
TR200202203 A2	20040421	TR20020002203	20020918
TR200301347 A2	20050321	TR20030001347	20030819
WO04026156 A1	20040401	WO2003TR00075	20030915

Probable Assignee: KUTLU HACI

Assignee(s):^(std): KUTLU HACI

Assignee(s): HACI KUTLU

Inventor(s):^(std): KUTLU HACI

Inventor(s): HACI KUTLU

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
^(IPC 8–9): [A61B17/64 A61B17/66 A61F5/00](#) (Advanced/Invention);
[A61B17/60 A61F5/00](#) (Core/Invention);
[A61F](#) (Subclass/Invention)

International class
^(IPC 1–7): [A61B17/64 A61F A61F5/00](#)

CPC: [A61B17/6458 A61B17/6491 A61B17/66](#)

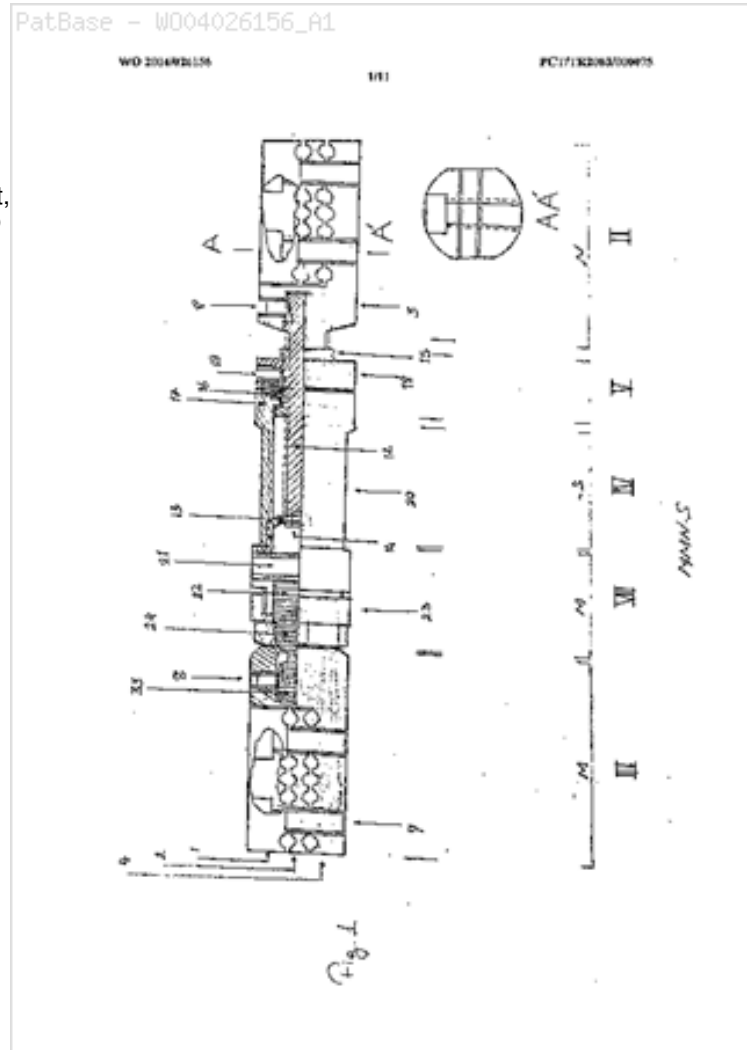
European class: [A61B17/64K A61B17/66 K61B17/64P](#)

[Classification Explorer](#)

Cited documents: WO9925265 A1, WO9402078 A1, WO0128441 A1, US6428540 BA, US5026372 A, US4488542 A, US4312336 A, TR199701377, FR2557933 A1, EP1021992 A2, EP0628289 A1, DE4139700 A1,

Abstract:

Holyfix is a highly modular system. By combination of the parts different types of monoaxial, hybrid, circular, bar and combinations of these types of fixator can be constructed specifically according to the pathology with different functions. The system is composed of a distraction-compression unit, body connectors and angled connector, clamp types that can be selected as required, a modular different types of cancelable ball-socket type and conic type of joint, holybar, ring and clips (holyring) system for ring fixation, pins with roughened surfaces (holypin) for soft tissue integration to prevent infection, and guide system (holyguid) for x-ray free pin insertion.



95) Family number: 33060080 (US2008188707A)

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Title: IMPLANTABLE ACTUATOR FOR HEARING AID APPLICATIONS

Priority: EP20050810605 20051130 US20040631508P 20041130 US20040631512P 20041130
 US20050719975 20051130 US20050719689 20051130 WO2005AU01800 20051130
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 WO2005AU01801 20051130

Family:

Publication number	Publication date	Application number	Application date
<u>AU2005312331 AA</u>	20060608	AU20050312331	20051130
<u>AU2005312331 BB</u>	20100422	AU20050312331	20051130
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<u>EP1819303 A1</u>	20070822	EP20050810605	20051130
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<u>WO06058368 A1</u>	20060608	WO2005AU01801	20051130

Probable Assignee: ADVANCED BIONICS AG

Assignee(s):^(std): ADVANCED BIONICS AG ; BERNARD HANS ; BERNHARD HANS ; CAUWELS KAREN ; COCHLEAR ACOUSTICS LTD ; HALLER MARKUS ; VISINO PATRICK ; FONTANNAZ JOEL ; PECLAT CHRISTIAN ; KLOECK BEN ; HUYBRECHTS KAREL ; STIEGER CHRISTOF ; HAUSLER RUDOLPH ; KAISER THOMAS ; COCHLEAR LTD ; VISINO PATRIZIO

Assignee(s): PHONAK AG ; HAEUSLER RUDOLPH

Inventor(s):^(std): BERNARD HANS ; BERNHARD HANS ; CAUWELS KAREN ; FONTANNAZ JOEL ; HAEUSLER RUDOLPH ; HALLER MARKUS ; HAUSLER RUDOLPH ; HUYBRECHTS KAREL ; KAISER THOMAS ; KLOECK BEN ; PECLAT CHRISTIAN ; STIEGER CHRISTOF ; VISINO PATRICK ; VISINO PATRIZIO

Inventor(s): THOMAS KAISER ; BEN KLOECK ; RUDOLPH HAUSLER ; MARKUS HALLER ; KAREL HUYBRECHTS ; KAREN CAUWELS ; JOEL FONTANNAZ ; HANS BERNHARD ; CHRISTIAN PECLAT ; CHRISTOF STIEGER

Agent(s): MADDERNS PATENT AND TRADE MARK ATTORNEYS; SMART AND BIGGAR; OSLER HOSKIN AND HARCOURT LLP; SCHWAN SCHORER U PARTNER
 PATENTANWAELTE MBB; SCHWAN SCHWAN SCHORER; CONNOLLY BOVE LODGE AND HUTZ LLP; ROBERTS MLOTKOWSKI SAFRAN AND COLE PC; DAVID S; LOWE HAUPTMAN AND HAM

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class A61B17/00 A61B17/56 A61F11/00 A61F2/18 H04R25/00 (Advanced/Invention);
 (IPC 8-9): A61B17/00 A61B17/56 A61F11/00 A61F2/18 H04R25/00 (Core/Invention)

CPC: A61F2/00 A61B17/80 A61B17/8061 H04R2225/67 Y10S411/948 H04R2225/41
H04R2225/61 A61F2/18 H04R25/608 A61F2002/183 H04R25/606

European class: A61F2/00 H04R25/60D1 K61B17/80 K61B17/80H K61F2/18E T04R225/41 T04R225/61
T04R225/67

US class: 381/322 381/324 381/326 381/326S 411/133 411/140 411/321 411/948 600/25 600/25P
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623/10

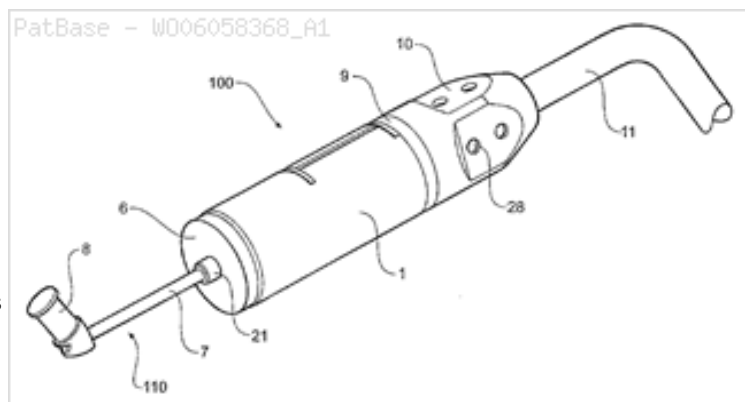
[Classification Explorer](#)

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Forward Citations: WO16063133, WO13023693, WO13017173, WO13017172, WO12163388, WO12159654, WO12076060, WO12076060, WO12045852, WO12045852, WO11005479, WO11005479, WO10116005, WO10102342, WO09155650, WO09124038, WO09121096, WO09121095, US9635573, US9622041, US9544700, US9537586, US9533143, US9516433, US9421387, US9420473, US9277335, US9253673, US9253648, US9191848, US9185591, US9131323, US9119010, US9094975, US9094974, US9055379, US9008587, US8986187, US8845705, US8787609, US8715154, US8715153, US8560079, US8483418, US8435291, US8401214, US8105229, US2015245906, US2015201286, US2014275735, US2013225912, US2012108887, US2011243358, US2011059331, US2011046731, US2011029031, US2009306458, US2009292337, EP2265318, EP2265318, CN103404174, CN102598715,

Abstract:

Source: US2008188707A An electromechanical actuator (100) suitable, for example, in hearing aid applications is disclosed. Certain embodiments of the actuator comprise a hermetic titanium housing (1), a mechanical output structure (110) emulating the long process of incus (8), and means for efficiently generating movement in the audible frequency range. The electromechanical actuator (100) may be configured to be coupled to the inner ear fluids via a conventional stapes prosthesis. The implantable actuator (100), which may be considered to be operably equivalent to a loudspeaker of a conventional hearing aid, may bypass the outer and the middle ear in order to directly drive the inner ear fluids. As such, embodiments of the electromechanical actuator of the present invention may be used to remedy any source of conductive hearing loss. Additionally, certain embodiments of the electromechanical actuator may be configured to provide sufficiently high output levels to treat severe sensorineural hearing loss while being sufficiently small to completely fit into a human mastoid.



96) Family number: 1523633 (US4009712A)

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Title: Fluted hip nail implant system for orthopaedic surgery

Priority: CA19750238531 19751029 CA19790319130 19790104 US19750602725 19750807

Family:

Publication number	Publication date	Application number	Application date
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NL7513097 A	19770209	NL19750013097	19751107
SE7512409 A	19770208	SE19750012409D	19751105
US4009712 A	19770301	US19750602725	19750807

Probable Assignee: BIOMET INC AN INDIANA CORP

Assignee(s):^(std): MINNESOTA MINING AND MFG ; SAMPSON CORP

Assignee(s): SANPUSON CORP ZA ; SAMPSON TE PITTSBURGH PENNSYLVANIE VER ST V AM CORP ; MINNESOTA MINING AND MFG CO ; MINNESOTA MINING MFG ; BIOMET INC ; BIOMET INC AN INDIANA CORP ; BURSTEIN ALBERT H ; HEIPLE KINGSBURY G ; KIRSCHNER MEDICAL CORP ; MARYLAND NATIONAL BANK

Inventor(s):^(std): ARUBAATO EICHI BAASUTAIN ; BURSTEIN A H ; BURSTEIN ALBERT H ; HEIPLE K G ; HEIPLE KINGSBURY G ; KINGUZUBARII JII HAIPURU

Inventor(s): A H BURSTEIN ; ALBERT H BURSTEIN ; K G HEIPLE ; KINGSBURY G HEIPLE ; G HEIPLE KINGSBURY ; H BURSTEIN ALBERT

International class
(IPC 8-9): [A61B17/16](#) [A61B17/58](#) [A61B17/74](#) [A61B17/88](#) (Advanced/Invention) ;
[A61B17/16](#) [A61B17/58](#) [A61B17/68](#) [A61B17/88](#) (Core/Invention)

International class
(IPC 1-7): [A61B17/16](#) [A61B17/18](#) [A61F1/00](#) [A61F1/24](#) [A61F5/01](#) [A61F5/04](#)

CPC: [A61B17/282](#) [A61B17/746](#) [A61B17/808](#) [A61B17/8866](#) [A61B17/92](#)

European class: [A61B17/74D4](#) [A61B17/80J](#) [A61B17/92](#) [K61B17/28D4](#) [K61B17/88H](#)

US class: [128/92BA](#) [606/67](#)

[Classification Explorer](#)

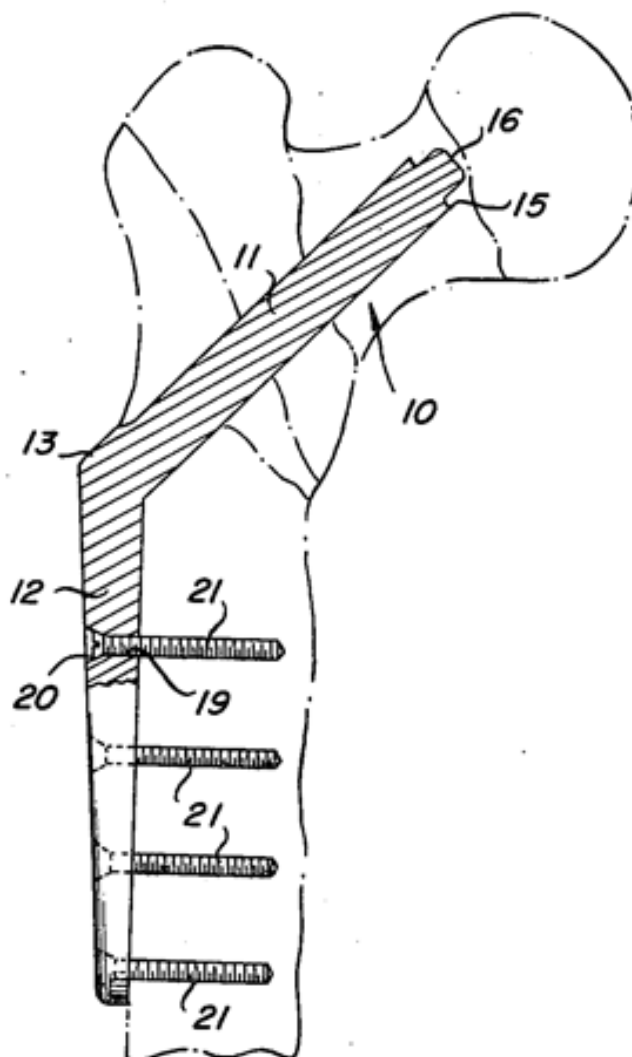
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Forward Citations: WO16033426, WO12095318, WO11075757, WO10068737, US9597188, US9504578, US9463091, US9381097, US9333095, US9308034, US9119601, US9101495, US9095452, US9078765, US9078676, US9044337, US9039774, US8998919, US8979932, US8974532, US8858635, US8771284, US8753397, US8685036, US8518050, US8465546, US8419799, US8409288, US8343219, US8267999, US8257439, US8197484, US8192449, US7951176, US7229445, US6447546, US6409730, US6033407, US5868784, US5849004, US5785712, US5725596, US5624443, US5484439, US5041114, US4723540, US4475544, US4457306, US4381770, US4172452, US2013079789, US2010152789, US2009307887, US2009204219, US2009132054, US2008275447, US2008200984, US2008091212, US2007270951, US2007123916, US2006004361, US2005010226, JP62255698, JP60182069, JP2012511409, JP1216198, FR2646768, EP1985249, EP1779798, EP1779798, DE102012108709,

Abstract:

Source: US4009712A A fluted hip nail implant system for orthopaedic surgery for use in repair of fractures of the hip or for stabilization of surgically created fractures in the reconstruction of congenital deformities of the hip. A single piece fluted hip nail with depending bone plate having a specially designed junction between the nail portion and the bone plate adapted to receive instrumentation for use in insertion and removal of the implant. The hip nail portion is formed with flutes terminating in sharp tips for cutting into the bone and providing torsional rigidity. A bone clamp tool having a ball member adapted to be received in a recess on the bone plate assists in clamping the bone plate to a femur to permit application of surgical screws.

PatBase - US4009712_A



97) Family number: 32870562 (US2006089654A)

© PatBase

Title: INTERSPINOUS DISTRACTION DEVICES AND ASSOCIATED METHODS OF INSERTION

Priority: EP20070854667 20071115 EP20130180855 20071115 US20040621712P 20041025
 US20050293438 20051202 US20050257647 20051025 US20040633112P 20041203
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 US20080020282 20080125 US20070884581P 20070111 US20090165354P 20090331
 US20100751856 20100331 US20050678360P 20050506 US20090538710 20090810
 US20090232680P 20090810 US20100854125 20100810 US20070126273P 20070417
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Family:

Publication number	Publication date	Application number	Application date
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<u>AU2008319176 AA</u>	20090507	AU20080319176	20080717
<u>AU2008319176 AB</u>	20100701	AU20080319176	20080717
<u>AU2010232667 AA</u>	20101007	AU20100232667	20100331
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<u>CA2675182 AA</u>	20090710	CA20072675182	20071115
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<u>CN101677828 A</u>	20100324	CN200780052120	20071115
<u>CN101677828 B</u>	20130501	CN200780052120	20071115
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<u>EP1807012 B1</u>	20160706	EP20050820768	20051025
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<u>EP2214597 A4</u>	20120411	EP20080845923	20080717
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<u>EP2413825 A4</u>	20131211	EP20100759359	20100331

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<u>JP2010515528 T2</u>	20100513	JP20090545544T	20071115
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<u>MX2012001849 A1</u>	20120508	MX20120001849	20100810
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<u>WO11019758 A3</u>	20110616	WO2010US45081	20100810

Probable Assignee: LANX INC

Assignee(s):^(std): LINS ROBERT E ; LINS LOREN E ; SIMOVITCH HARVEY ; LANX LLC ; THRAMANN JEFF ; LANX INC ; LINS ROBERT ; TABER JUSTIN ; BINDER LAWRENCE ; FULTON MICHAEL ; LAMBORNE ANDREW ; LAMBOURNE ANDREW ; ZIEMEK TERRY ; THRAMANN JEFFERY ; THRAMANN JEFFREY ; MADDUX JOSEPH

Assignee(s): LANX INC BROOMFIELD ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; ZIMMER BIOMET SPINE INC ; LANX ; LANX MEDICAL INC

Inventor(s):(std): ANDREW LABORNE ; ANDREW LAMBORNE ; BINDER LAWRENCE ; FULTON MICHAEL ; JEFF THRAMANN ; JEFFERY THRAMANN ; LAMBORNE ANDREW ; LINS LOREN E ; LINS ROBERT ; LINS ROBERT E ; MADDUX JOE ; MADDUX JOSEPH ; MICHAEL FULTON ; ROBERT LINS ; SIMOVITCH HARVEY ; TABER JUSTIN ; TERRY ZIEMEK ; THRAMANN JEFFERY ; THRAMANN JEFFREY J ; ZIEMEK TERRY ; THRAMANN JEFFREY ; LAMBOURNE ANDREW ; JOSEPH MADDUX ; ANDREW LAMBOURNE ; THRAMANN JEFF ; JUSTIN TABER ; JEFFREY THRAMANN ; LAWRENCE BINDER

Inventor(s): LINS LOREN ; THRAMANN JEFFREY LONGMONT ; LAMBORNE ANDREW FULTON MICHAEL THRAMANN JEFFREY ; LAMBORNE ANDREW GOLDEN ; FULTON MICHAEL WESTLAKE

Agent(s): GRIFFITH HACK; CREATE IP; CREATEIP; MBM INTELLECTUAL PROPERTY LAW LLP; PORZIO RIOS; CARLOS R OLARTE GARCIA; KRANSELL AND WENNBORG KB; FRITZON ROLF; ROMEDAHN BENGT; DOUGHERTY CLEMENTS; HOLLAND AND HART LLP LANX INC INTELLECTUAL PROPERTY DEPARTMENT; HOLLAND AND HART LLP; HARNESS DICKEY; SCHWEGMAN LUNDBERG AND WOESSNER PA; KINNEAR BRIAN ET AL; KINNEAR BRIAN; OSTERLOTH GREGORY W; KINNEAR BRIAN P ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/02 A61B17/56 A61B17/58 A61B17/68 A61B17/70 A61B17/82 A61B17/88 A61F2/44 A61F2/46 A61L27/00 (Advanced/Invention);
A61B17/00 A61B17/82 A61B17/84 (Advanced/Non-invention);
A61B17/56 A61B17/58 A61B17/70 A61F2/44 A61F2/46 (Core/Invention)

International class
(IPC 1-7): A61F2/44

CPC: A61B2017/0256 A61B17/7065 A61B17/7053 A61B2017/00477 A61B17/7061 A61B17/82 A61B17/7067 A61B17/7062 A61B17/7071 A61B17/7064 A61B17/7076 A61B17/7068 A61B17/842

European class: A61B17/70E A61B17/70P A61B17/70P4 A61B17/70P8 K61B17/00K K61B17/02J2 K61B17/82 K61B17/84B

US class: 1/1 606/246 606/246P 606/248 606/248S 606/249 606/249P 606/279 606/279S 606/74 606/74S 606/86.00AS 606/86A 606/90 606/90P 623/17.11 623/17.110S 623/17.16 623/17.160S

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Title: EXTERNAL FIXATOR**Priority:** DE19924231433 19920919 DE19924231443 19920919 CA19932106333 19930916

Family:	Publication number	Publication date	Application number	Application date
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	<u>CA2106333 C</u>	19990824	CA19932106333	19930916

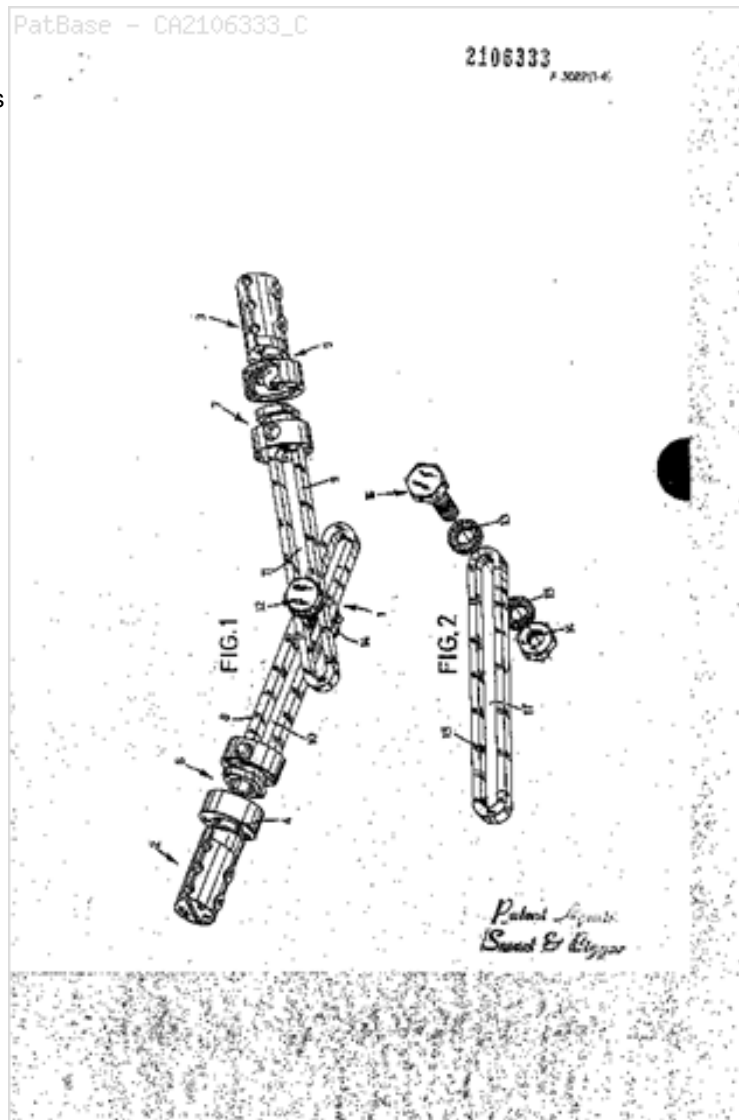
Probable Assignee: PENNIG DIETMAR**Assignee(s):^(std):** PENNIG DIETMAR**Inventor(s):^(std):** PENNIG DIETMAR

International class A61B17/60 (Advanced/Invention);
 (IPC 8-9): A61B17/60 (Core/Invention)

International class A61B17/60
 (IPC 1-7):

[Classification Explorer](#)**Abstract:**

Source: CA2106333A The invention refers to an osteosynthesis aid which is used, in particular, for the fixation of a pelvis and differs from the prior art in that the central body is formed of at least two arm or link members, each of which has an elongate slot through which a lock bolt is passed to provide a releasably clamped joint and each of which also has releasably secured ball-joint connection to an end-connecting clamp for bone-pin or bone-screw anchorage to an afflicted bone.



99) Family number: 43345797 (US2010298834A)

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Title: DEVICE AND APPARATUS FOR PERFORMING AN ENDOPROSTHESIS IMPLANTATION

Priority: DE200710057008 20071127 DE200710062640 20071222 DE200810031957 20080707 DE200810053566 20081028 WO2008DE001965 20081126

Family:	Publication number	Publication date	Application number	Application date
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Probable Assignee: HILDEBRANDT BERNHARD**Assignee(s):**^(std) HILDEBRANDT BERNHARD ; HILDEBRANDT BERNHARDT**Inventor(s):**^(std) HILDEBRANDT BERNHARD ; HILDEBRANDT BERNHARDT**Agent(s):** REINHARDT HARRY; CANTOR COLBURN LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A61B17/02](#) [A61B17/16](#) [A61B17/17](#) [A61B17/88](#) [A61B17/90](#) [A61B19/00](#) [A61F2/32](#) [A61F2/34](#) [A61F2/36](#) [A61F2/40](#) [A61F2/46](#) [A61G13/00](#) ^(Advanced/Invention);
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CPC: [A61F2/34](#) [A61B17/025](#) [A61B17/1624](#) [A61B17/1666](#) [A61B17/1668](#) [A61B17/1684](#) [A61B17/1703](#) [A61B17/1721](#) [A61B17/1746](#) [A61B17/175](#) [A61B17/1742](#) [A61B17/1746](#) [A61B17/86](#) [A61B2017/0275](#) [A61B2017/1602](#) [A61F2/3094](#) [A61F2/3601](#) [A61F2/3603](#) [A61F2/40](#) [A61F2/4003](#) [A61F2/4607](#) [A61F2/4609](#) [A61F2/4612](#) [A61F2/4657](#) [A61F2002/30507](#) [A61F2002/30563](#) [A61F2002/30579](#) [A61F2002/30878](#) [A61F2002/347](#) [A61F2002/3491](#) [A61F2002/3496](#) [A61F2002/4085](#) [A61F2002/4619](#) [A61F2002/4629](#) [A61F2002/4635](#) [A61F2002/4658](#) [A61F2220/0025](#) [A61G13/00](#) [A61G13/101](#) [A61G13/12](#) [A61G13/1245](#) [A61G13/1255](#) [A61G13/1295](#) [A61F2002/4687](#) [A61F2002/4627](#) [A61F2002/4628](#) [A61G13/0072](#) [A61G13/0081](#) [A61B17/1778](#)

European class: [A61B17/02J](#) [A61B17/16D6B](#) [A61B17/16S14](#) [A61B17/16S2C](#) [A61B17/16S2F](#) [A61B17/17B](#) [A61B17/17K](#) [A61B17/17S2C](#) [A61B17/17S2F](#) [A61F2/34](#) [A61F2/36A](#) [A61F2/36A1](#) [A61F2/40](#) [A61F2/40A](#) [A61F2/46B4](#) [A61F2/46B5](#) [A61F2/46B8](#) [A61F2/46M](#) [A61G13/00](#) [A61G13/10A](#) [A61G13/12](#) [K61B17/02J6](#) [K61B17/16A](#) [K61B17/74D](#) [K61B17/74D4](#) [K61B17/86](#) [K61F2/30A3T33V](#) [K61F2/30A3W16](#) [K61F2/30A3W8](#) [K61F2/30L2S](#) [K61F2/30M](#) [K61F2/34S](#) [K61F2/34W20P](#) [K61F2/34Y](#) [K61F2/40G2](#) [K61F2/46B22](#) [K61F2/46B44](#) [K61F2/46E](#) [K61F2/46M1](#) [K61F220/00T](#) [K61G13/00E4](#) [K61G13/00E5](#) [K61G13/12A7](#) [K61G13/12A9](#) [K61G13/12C3](#)

US class: [606/102](#) [606/102S](#) [606/80](#) [606/80P](#) [606/86.00RS](#) [606/86R](#) [606/96](#) [606/96S](#) [606/99](#) [606/99S](#)

[Classification Explorer](#)

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Forward Citations: WO16007226, WO11005198, WO11005192, US9629724, US9622870, US9561109, US9532880, US9402727, US9398928, US9351900, US9078673, US9066805,

US9039780, US8945229, US8672862, US2015327873, US2014350689, US2013261750, US2013197523, US2012029581, JP2012532663, FR3013211, EP2879610, EP2877126, EP2688527, EP2688527, DE102011101054, DE102011100073, DE102011018365, DE102009034746, CN104758046, CN104758044, CN103263289, CN103263289, CN102319131, CN102319131, AU2010269157,

Abstract:

Source: US2010298834A Through the devices and apparatuses that are provided for performance of an implantation of endoprostheses, the previously unavoidable soft tissue damage and bone loss are largely reduced by carrying out the implantation via a narrow joint gap and a hole through the bone and through the rotational center point of the joint head. A fixation device and an extension arm of an extension device guarantee a bore true to angle, the system bore, through the proximal femur and femur head or humerus and humerus head. These must be extended with an extension device only by 2.0 to 2.7 cm in the bent position from the joint socket and are pivoted into the extension position. A narrow soft tissue access is therefore sufficient in order to introduce milling cutters and prostheses into the joint by means of a gripping tool. Through the system bore the drive shafts of the milling cutters as well as the press-in rods of the socket shell and the head prosthesis are guided true to angle and the latter pressed in by the press-in method and fixed by a fixation rod and counter plate. The devices are suitable for endoprosthesis implantations of the shoulder and hip.

PatBase - W009068011_A9

PATENT COOPERATION TREATY		
PCT		
DECLARATION OF NON-DETACHMENT OF INTERNATIONAL SEARCH REPORT (PCT Article 17(2)(b), Rules 13ter-15j and 50 and 59)		
Applicant's or agent's file reference	IMPORTANT DECLARATION	Date of mailing (day/month/year)
International application No. PCT/DE2008/001845	International filing date (day/month/year) 24/11/2008	Effective Priority Date (day/month/year) 27/11/2007
International Patent Classification (IPC) or both national classification and IPC: A61F2/34, A61F2/36, A61F2/40, A61F2/44, A61F2/50, A61F2/54, A61F2/58, ...		
Applicant: HILTI KEMPNER, Bielefeld		
This International Searching Authority hereby declares, according to Article 17(2)(b), that no international search report will be established on the international application for the reasons indicated below: 1. ☐ The subject matter of the international application relates to: a. ☐ selected to describe b. ☐ mathematical discovery c. ☐ plant varieties d. ☐ animal varieties e. ☐ essentially biological processes for the production of plants and animals, other than microbiological processes and the products of such processes f. ☐ schemes, rules or methods of doing business g. ☐ schemes, rules or methods of performing purely mental work h. ☐ schemes, rules or methods of playing games i. ☐ methods for treatment of the human body by surgery or therapy j. ☐ methods for treatment of the animal body by surgery or therapy k. ☐ diagnostic methods practised on the human or animal body l. ☐ new presentations of information m. ☐ computer programs for which this International Searching Authority is not equipped to search prior art 2. ☒ The failure of the following parts of the international application to comply with prescribed requirements prevents a meaningful search from being carried out: ☐ the description ☒ the claims ☐ the drawings 3. ☐ A meaningful search could not be carried out without the response listing, the applicant did not, within the prescribed time limit, furnish a response listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and each listing was not available to the International Searching Authority in a form and manner acceptable to it. ☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and each listing was not available to the International Searching Authority in a form and manner acceptable to it. ☐ pay the required late fee (article 17j of the PCT Rules) or (D). 4. ☐ A meaningful search could not be carried out without the claims related to the response listing. The applicant did not, within the prescribed time limit, furnish such claims in a form complying with the technical requirements provided for in Annex C of the Administrative Instructions, and each claim was not available to the International Searching Authority in a form and manner acceptable to it. 5. (Further comments) Additional IPC: A61B1/70 A61B1/70		
Name and mailing address of the ISA/		Authorized officer
Residence No.		Telephone No.

Form PCT/ISA/205 (April 2005)

100) Family number: 28064294 (US2003030397A)

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Title: Natural robot control

Priority: US20000234191P 20000920 US20010960293 20010920 US20010960294 20010920
US20020202414 20020722 US20010960293 20010920

Family:	Publication number	Publication date	Application number	Application date
	<u>US2003030397 AA</u>	20030213	US20010960294	20010920
	<u>US2003120183 AA</u>	20030626	US20020202414	20020722
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	<u>US6805677 BB</u>	20041019	US20010960293	20010920
	<u>US7918808 BB</u>	20110405	US20020202414	20020722

Probable Assignee: SIMMONS JOHN CASTLE

Assignee(s):^(std): SIMMONS JOHN C ; SIMMONS JOHN CASTLE

Inventor(s):^(std): SIMMONS JOHN C ; SIMMONS JOHN CASTLE

International class
(IPC 8-9): A61B5/103 A61B5/117 A61F4/00 B25J9/00 B25J9/16 G06F3/00 G06F3/01
G09B21/00 (Advanced/Invention);
A61F4/00 B25J9/00 B25J9/16 G06F3/00 G06F3/01 (Core/Invention)

International class
(IPC 1-7): A61B5/00 A61B5/103 A61N1/18 B25J9/18 G05B19/00 G05B19/19

CPC: A61F4/00 B25J9/0006 B25J9/1689 G05B2219/40136 G05B2219/40144 G06F3/011

European class: A61F4/00 B25J9/00E B25J9/16T4 G06F3/00B8 G06F3/01B S05B219/40136
S05B219/40144

US class: 318/568.11 318/568.110P 318/568.12 318/568.17 340/825.19 345/156 600/590 600/595
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[Classification Explorer](#)

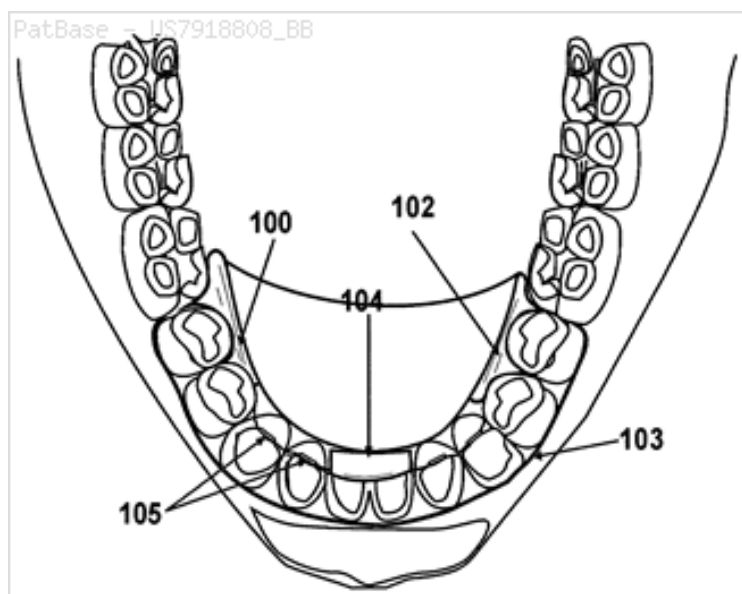
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Abstract:

Source: US2003030397A An apparatus and process for controlling a remote robot responsive to the integrated sensory perceptions, natural body movements, inertia and gravitation of an operator/user who is himself responding to a three dimensional virtual world of visual and sensory conditions responsive to the environment at the remote site where the robot is operating. The user requires no training, special commands or devices to direct the robot because the user has the perception of actually being at the remote location, handling remote objects he sees and feels in his hands, walking, climbing, viewing and feeling the remote world.



Title: SPINAL FIXATION SYSTEM**Priority:** GB19910010778 19910518 WO1992GB00898 19920518

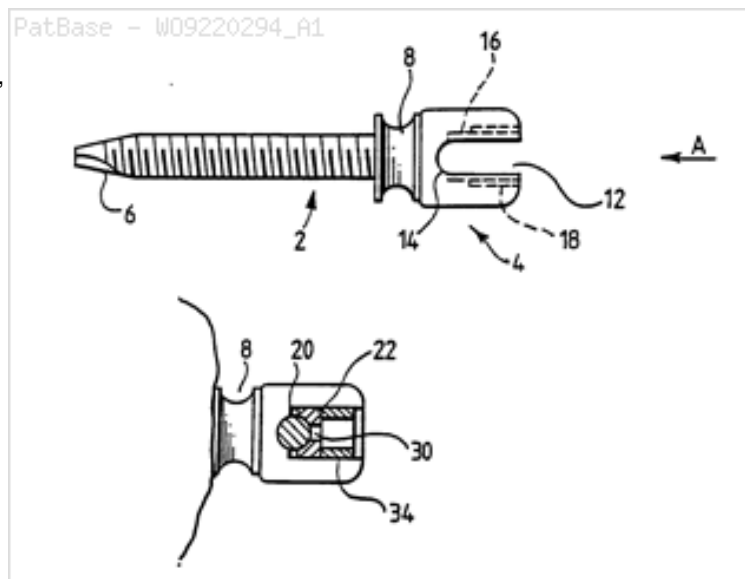
Family:	Publication number	Publication date	Application number	Application date
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	<u>DE69222772 D1</u>	19971120	DE19926022772	19920518
	<u>DE69222772 T2</u>	19980514	DE19926022772T	19920518
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	<u>WO9220294 A1</u>	19921126	WO1992GB00898	19920518

Probable Assignee: EISENSTEIN STEPHEN MICHAEL FEL**Assignee(s):**^(std): MIDDLETON JEFFREY K ; MIDDLETON JEFFREY KEITH ; EISENSTEIN STEPHEN M F ; EISENSTEIN STEPHEN MICHAEL FEL**Assignee(s):** EISENSTEIN STEPHEN MICHAEL FELS ; EISENSTEIN STEPHEN MICHAEL FELS OSWERTRY SHROPSHIRE ; JEFFREY KEITH MIDDLETON ; STEPHEN MICHAEL FELS EISENSTEIN ; MIDDLETON JEFFREY KEITH WIGAN LANCASHIRE GB ; EISENSTEIN STEPHEN MICHAEL FELS OSWERTRY SHROPSHIRE GB**Inventor(s):**^(std): MIDDLETON JEFFREY KEITH**Inventor(s):** MIDDLETON JEFFREY KEITH NR WIGAN LANCASHIRE ; MIDDLETON JEFFREY KEITH NR WIGAN LANCASHIRE WN6 8H ; MIDDLETON JEFFREY KEITH NR WIGAN LANCASHIRE WN6 8HS GB ; JEFFREY KEITH MIDDLETON**Designated states:** AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IT JP KP KR LK LU MC MG ML MN MR MW NL NO PL RO RU SD SE SN TD TG US**International class**
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A61B17/70 A61B17/88 (Core/Invention)**International class**
^{(IPC 1-7):} A61B17/16 A61B17/56 A61B17/60**CPC:** A61B2090/3916 A61B17/7032 A61B17/7076 A61B17/7082 A61B17/7083 A61B17/7091 A61B17/7092**European class:** A61B17/70B2 A61B17/70T10 A61B17/70T2 A61B17/70T21 A61B17/70T2D A61B17/70T4 K61B19/54B6**US class:** 606/102 606/105 606/61 606/73 606/86A 606/914[Classification Explorer](#)**Cited documents:** WO9414384 A2, US5353667 A, US5242448 A, US5176680 A, US5152790 A, US5059194 A, US4955885 A, US4945914 A, US4763644 A, US3286749 A, US2002021 A, EP0528706 A1, EP0443892 A1, EP0441729 A1, EP0151892 A1, DE3505567 A1,**Forward Citations:** WO9952446, WO9952446, WO07073537, WO06101898, WO05079428, WO05079428, WO05009485, WO05009485, WO0143620, WO0143620, USRE46410, USRE45639, USRE45571, USRE44835, USRE44813, USRE44296, USRE43526, USRE43317, USRE42525, US9655741, US9636152, US9636098, US9622790, US9585763, US9554917, US9532774, US9526624, US9522069, US9439775, US9439774, US9439699, US9408637, US9402745, US9387086, US9358045, US9351846, US9277940, US9254139, US9254126, US9232967, US9226782, US9220603, US9173649, US9107762, US9095450, US9084682, US9034038, US9028551, US9011544, US9011501, US8998990, US8974533, US8974531, US8974530,

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Abstract:

Source: US5899901A This invention relates to apparatus for use in surgery. More specifically, it relates to a spinal fixation device which is adapted to engage a spinal body (e.g. vertebra, or sacrum) and to grip an elongate part, which may be a rod, bar, wire or the like. for convenience. Two or more such devices may engage respective vertebrae and grip a common rod, which may act to improve a spinal defect, such as ankylosing spondylitis, lumbar scoliosis or spondylolisthesis. The invention also relates to surgical instrumentation for use with such a spinal fixation device.



102) Family number: 55308161 (US2013325075A)

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Title: POLYAXIAL BONE SCREW ASSEMBLY

Priority: US20030464633 20030618 US20030651003 20030828 US20100800314 20100512
 US20080009130 20080116 US20040818554 20040405 US20090178840P 20090515
 US20130815750 20130315 US20130815760 20130315

Family:	Publication number	Publication date	Application number	Application date
	<u>US2013325075 AA</u>	20131205	US20130815750	20130315
	<u>US8926670 BB</u>	20150106	US20130815750	20130315

Probable Assignee: JACKSON ROGER P**Assignee(s):^(std):** JACKSON ROGER P**Inventor(s):^(std):** JACKSON ROGER P**Agent(s):** JOHN C**International class** A61B17/70 (Advanced/Invention)
(IPC 8-9):**CPC:** A61B17/7032 A61B17/7037 A61B17/704 A61B17/708**US class:** 606/264 606/308[Classification Explorer](#)

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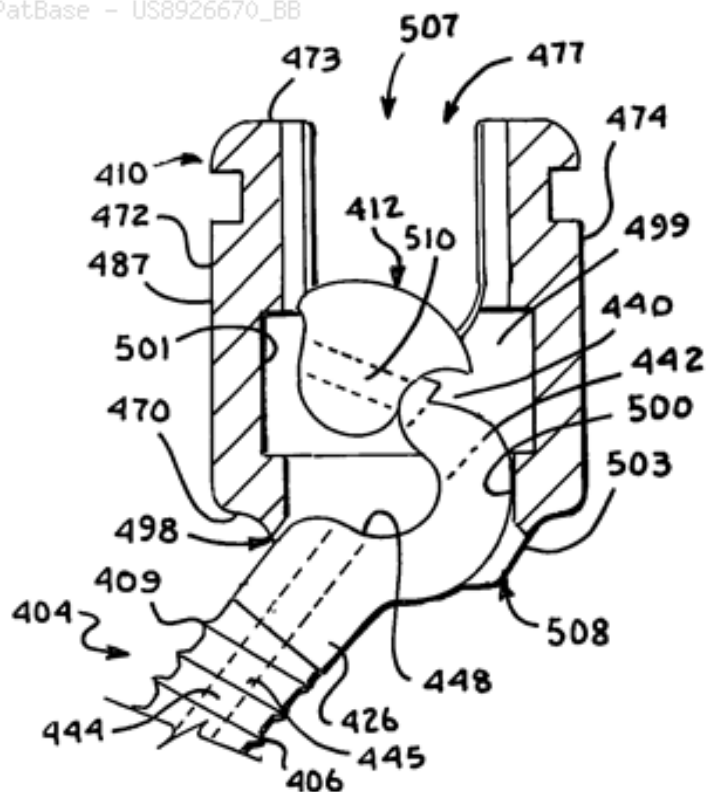
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Forward Citations: WO15095353, US9532810, US9289244, US9277938, US2015272627, US2014214084,
 US2014142640, US2013096621,

Abstract:

Source: US2013325075A A polyaxial bone screw assembly includes a shank body having an upper head portion with a mating segment and a first partial spherical surface, a retainer structure being mateable with the mating segment of the upper head portion, the retainer structure having a second partial spherical surface such that when mated, the first and second partial spherical surfaces form a spherical ball member, a receiver defining an open channel and having a base with a seating surface partially defining a cavity with a shaped wall, the open channel communicating with the cavity, the cavity communicating with an exterior of the base through an opening sized and shaped to receive the shank upper head portion therethrough, and a bushing sized and shaped to fit within open channel and cavity and lock in recesses on interior of receiver.

PatBase - US8926670_BB



0) US2006289414A – SINGLE RETAINER MOUNTED RISER

103) Family number: 34029835 (US2006289414A)

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Title: SINGLE RETAINER MOUNTED RISER

Priority: CA20062550587 20060616 EP20060253236 20060622 US20070768482 20070626
US20050693521P 20050623 US20050714483P 20050906 US20060451522 20060612
US20100819435 20100621 US20110286277 20111101

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2550587 AA</u>	20061223	CA20062550587	20060616
	<u>CA2550587 C</u>	20091215	CA20062550587	20060616
	<u>DE602006037473 D1</u>	20130919	DE200660037473T	20060622
	<u>EP1736274 A2</u>	20061227	EP20060253236	20060622
	<u>EP1736274 A3</u>	20110706	EP20060253236	20060622
	<u>EP1736274 B1</u>	20130724	EP20060253236	20060622
	<u>EP2679836 A1</u>	20140101	EP20130174977	20060622
	<u>ES2429092 T3</u>	20131113	ES20060253236T	20060622
	<u>JP2007000935 A2</u>	20070111	JP20060174330	20060623
	<u>MXPA06007333 A1</u>	20070110	MX2006PA07333	20060623
	<u>US2006289414 AA</u>	20061228	US20060451522	20060612
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	<u>US2010329820 AA</u>	20101230	US20100819435	20100621
	<u>US2012066885 AA</u>	20120322	US20110286277	20111101
	<u>US7271367 BB</u>	20070918	US20060451522	20060612
	<u>US7784665 BB</u>	20100831	US20070768482	20070626
	<u>US8070040 BB</u>	20111206	US20100819435	20100621
	<u>US8261960 BB</u>	20120911	US20110286277	20111101

Probable Assignee: COMAU LLC

Assignee(s):^(std): COMAU INC ; PROGRESSIVE TOOL AND IND CO ; DUGAS MICHAEL R ; KILIBARDA VELIBOR ; NIKESCH HANS ; MAYBEE WILLIAM T

Assignee(s): PROGRESSIVE TOOL AND IND ; PROGRESSIVE TOOL AND INDUSTRIES COMPANY ; PROGRESSIVE TOOL AND INDUSTRIES CO ; MAYBEE WILLIAM J ; COMAU LLC ; COMAU LLC NDGEDS STAATES DELAWARE SOUTHFIELD ; COMAU PICO INC

Inventor(s):^(std): DUGAS MICHAEL R ; KILIBARDA VELIBOR ; MAYBEE WILLIAM J ; MAYBEE WILLIAM T ; NIKESCH HANS

Inventor(s): NIKESCH HANS NEW BALTIMORE ; VELIBOR KILIBARDA ; WILLIAM J MAYBEE ; DUGAS MICHAEL ; MICHAEL R DUGAS ; MAYBEE WILLIAM J SOUTHFIELD ; KILIBARDA VELIBOR BIRMINGHAM ; MAYBEE WILLIAM ; DUGAS MICHAEL R BRIGHTON ; HANS NIKESCH

Agent(s): SIM AND MCBURNEY; MARKS AND CLERK LUXEMBOURG LLP; HALLAM ARNOLD VINCENT; BHIMANI ALAN; VALLEJO JUAN PEDRO; YOUNG AND BASILE PC; YOUNG BASILE

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO RS SE SI SK TR YU

International class
(IPC 8-9): B23K101/00 B23K11/11 B23K11/36 B23K37/00 B23K37/02 B23K37/04 B23K37/047 B23P11/00 B62D65/00 B62D65/18 F16B31/00 F16B31/02 F16B7/04 (Advanced/Invention);
B23K101/00 (Advanced/Non-invention);
B23K11/11 B23K11/36 B23K37/00 B23K37/02 B23K37/04 B23K37/047 B62D65/00 F16B7/04 (Core/Invention)

CPC: F16B31/021 Y10T29/49863 Y10T29/49874 B23K37/047 B23K37/04 B23K2201/006

European class: B23K37/04 B23K37/047 L23K201/00N

US class:

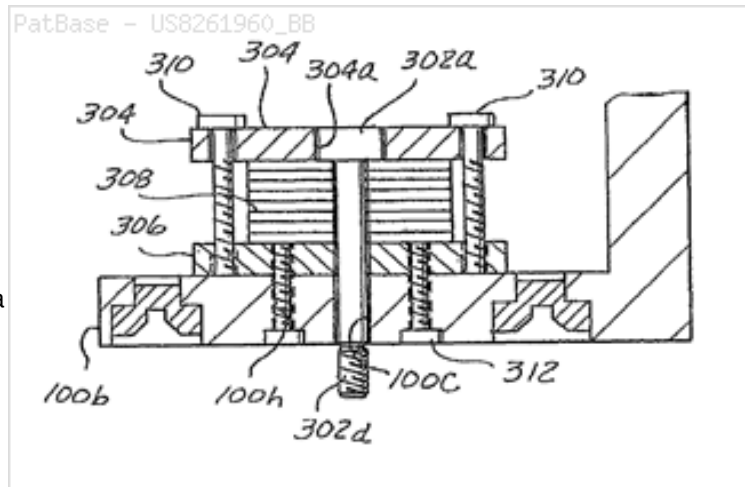
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Forward Citations: WO12095277, US9032609, US8651358, US8474682, US8261960, US8109429, US7896217, US7677428, US2015246700, US2011162191, US2010122664, US2009289043, US2008116247, US2006242823, US2006218767, DE102011008194, CN105537830, CN103302426, CN103302426, CN103286467, CN103286467, CN102909507,

Abstract:

Source: US2006289414A A motor vehicle car body framing apparatus for use at a welding station, the apparatus including a gate having a frame structure and a plurality of tooling members carried by the frame structure for use in positioning components of the vehicle body at the welding station for welding. The tooling members are mounted on the frame structure by a plurality of mounting brackets. Each mounting bracket includes a base member mounted on the frame structure and a riser mounted on the base and mounting a respective tooling member. The riser is fixedly mounted on the base by a single central fastener bolt which may include a reduced diameter portion sized to breakaway in response to predetermined impact against the riser. The interface between the riser and the base comprises a plurality of contact points arranged in concentric relation with respect to the fastener bolt. The contact points may comprise a plurality of circumferentially spaced balls mounted on the base for coaction with circumferentially spaced grooves defined on the riser.



0) US2014276822A – RATCHETING STRUT

104) Family number: 57428755 (US2014276822A)

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Title: RATCHETING STRUT
Priority: US20130826735 20130314
Family:

Publication number	Publication date	Application number	Application date
<u>US2014276822 AA</u>	20140918	US20130826735	20130314

Probable Assignee: BIOMET MFG LLC
Assignee(s):^(std): CRESINA JEFFERY T ; LESTER MARK
Assignee(s): BIOMET MFG LLC
Inventor(s):^(std): CRESINA JEFFERY T ; LESTER MARK

International class A61B17/64 (Advanced/Invention)
 (IPC 8-9):

CPC: A61B17/6416 A61B17/66

US class: 606/57

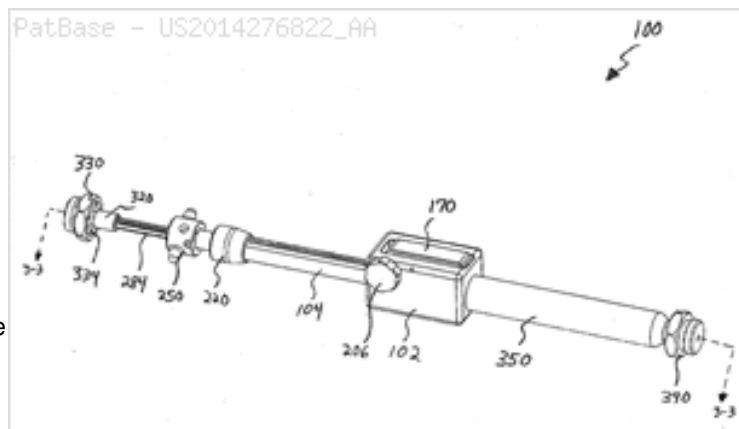
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Cited documents: US6451019 BA, US5725526 A, US5601551 A, US4308863 A, US2238869 A, US2010312243 AA, US2003149378 AA, US2002193666 AA,

Forward Citations: US9463045, US9427261, US9393045, US2016338746, US2016030088, US2015080892, US2013338713,

Abstract:

Source: US2014276822A A ratcheting strut comprising: (a) a ratchet box including a through passage; (b) a first tube sized to extend at least partially through the passage, the first tube including teeth that engage corresponding teeth of the ratchet box; (c) a second tube mounted to the ratchet box in parallel with the first tube, the second tube operatively coupled to a second fixation adapter; and, (d) a threaded rod operatively coupled to a nut and a first fixation adapter, the threaded rod repositionably mounted to the first tube, where the nut is operatively coupled and repositionable with respect to the first tube.



105) Family number: 43480228 (WO06023683A1)

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Title: IMPLANTABLE SPINAL DEVICE REVISION SYSTEM

Priority: US20040602827P 20040818 US20050071541 20050302 US20050643556P 20050113
WO2005US29476 20050817

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2005277375 AA</u>	20060302	AU20050277375	20050817
	<u>CA2576958 AA</u>	20070212	CA20052576958	20050817
	<u>EP1784147 A1</u>	20070516	EP20050790406	20050817
	<u>EP1784147 B1</u>	20160706	EP20050790406	20050817
	<u>WO06023683 A1</u>	20060302	WO2005US29476	20050817

Probable Assignee: ARCHUS ORTHOPEDICS INC**Assignee(s):^(std):** GMEDELAWARE 2 LLC ; SUH SEAN S ; TOKISH LEONARD JR ; REILEY MARK A ; MCLEER THOMAS ; ARCHUS ORTHOPEDICS INC ; BROMAN RICHARD**Assignee(s):** FSI ACQUISITION SUB LLC ; MCLEER THOMAS J**Inventor(s):^(std):** BROMAN RICHARD ; MCLEER THOMAS ; REILEY MARK A ; SUH SEAN S ; TOKISH LEONARD JR**Inventor(s):** THOMAS MCLEER ; RICHARD BROMAN ; SEAN S SUH ; MCLEER THOMAS J ; LEONARD JR TOKISH ; MARK A REILEY**Agent(s):** GRIFFITH HACK; SMART AND BIGGAR; POTTER CLARKSON LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61B17/58 A61B17/70 A61F2/30 A61F2/44 A61F2/46 (Advanced/Invention);
A61B17/00 A61B17/15 A61B17/70 A61F2/00 A61F2/02 A61F2/30
A61F2/46 (Advanced/Non-invention)

International class
(IPC 1-7): A61B17/70 A61F2/44

CPC: A61B90/39 A61B17/7011 A61B17/15 A61B17/686 A61B17/7013 A61B17/7032
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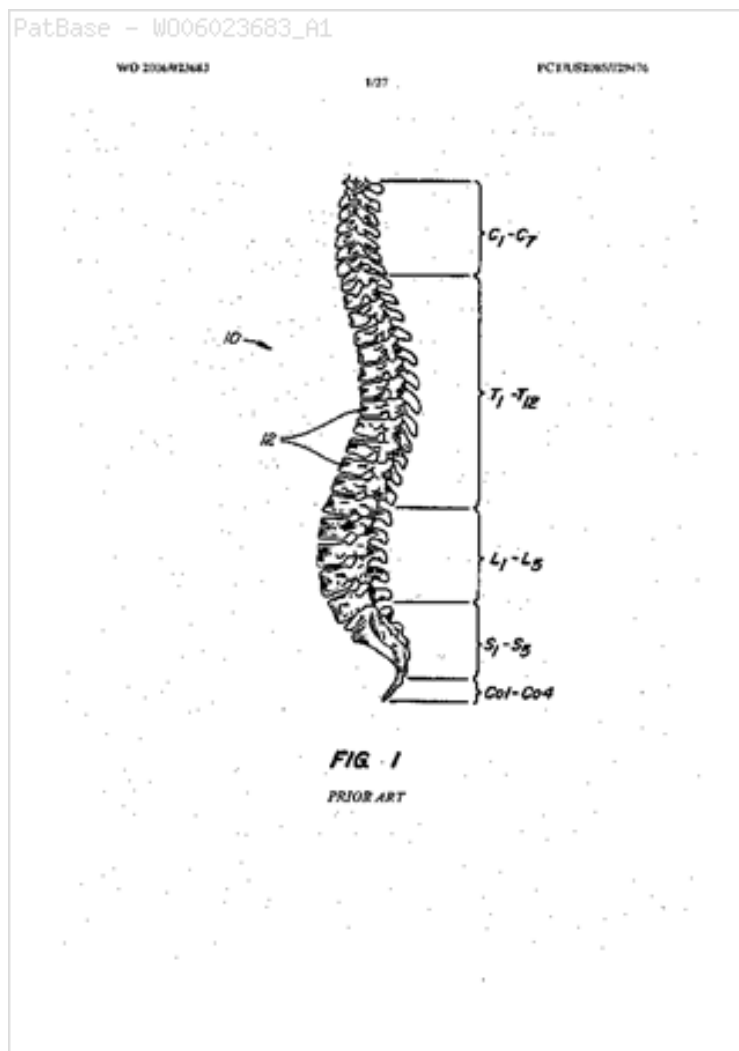
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Forward Citations: WO12006627, US8986355, US8551142, US8523865, US8267969, US8226690, US8096996,

Abstract:

The invention discloses devices, methods and systems for an implantable revision device useful for altering the biomechanics of an implanted spinal arthroplasty device. The revision device has a first surface adapted to communicate with a natural anatomical surface; and a second surface adapted to engage a portion of the arthroplasty device. The device alters the biomechanics of the implanted spinal arthroplasty device permanently semi-permanently and/or temporarily.



106) Family number: 11122223 (US6443978B)

© PatBase

Title: Photomatrix device**Priority:** RU19980106764 19980410 WO1999RU00111 19990409

Family:	Publication number	Publication date	Application number	Application date
	AU199935425 A1	19991101	AU19990035425	19990409
	AU750260 B2	20020711	AU19990035425	19990409
	CA2325928 AA	20000925	CA19992325928	19990409
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	JP2002511323 T2	20020416	JP20000543204T	19990409
	RU2000127088 A	20030827	RU20000127088	19990409
	RU2145247 C1	20000210	RU19980106764	19980410
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	US6443978 BA	20020903	US20000646824	20000922
	WO9952597 A1	19991021	WO1999RU00111	19990409

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International class [A61B18/02](#) [A61F7/00](#) [A61N2/00](#) [A61N5/06](#) (Advanced/Invention);
 (IPC 8-9): [A61F7/00](#) [A61N2/00](#) (Advanced/Non-invention);
[A61B18/00](#) [A61F7/00](#) [A61N2/00](#) [A61N5/06](#) (Core/Invention)

International class [A61B18/02](#) [A61F7/00](#) [A61N2/00](#) [A61N5/006](#) [A61N5/06](#)
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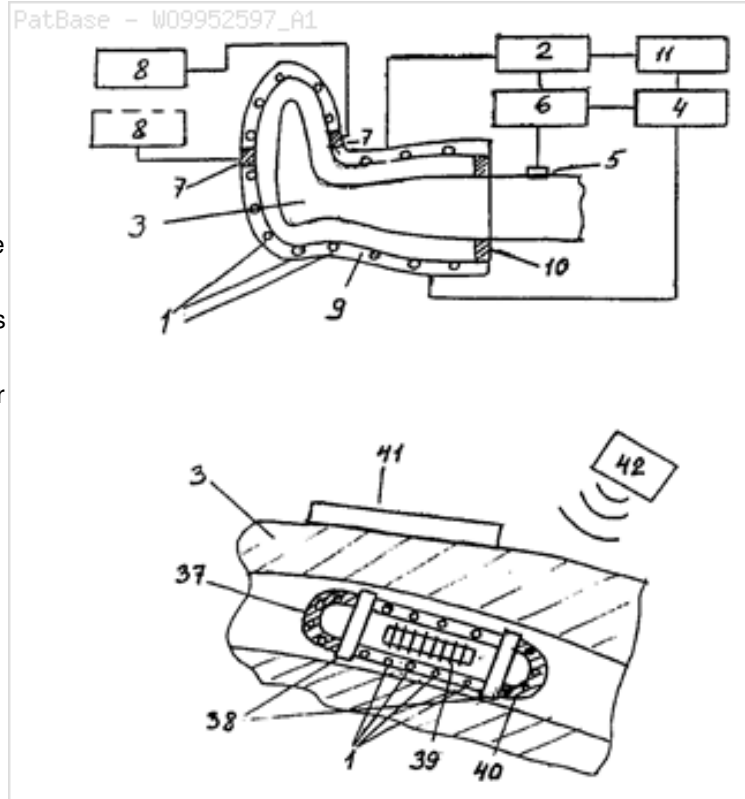
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WO16168385, WO16064293, WO16014264, WO14169006, WO14066765, WO13090058, WO13090058, WO12023086, WO11051467, WO10064036, WO09103165, WO09022460, WO08140855, WO08029001, WO08013524, WO08002183, WO08001242, WO08001242, WO07089744, WO07089744, WO07081339, WO07047892, WO06099413, WO06048162, WO06037599, WO06027657, WO06027657, WO06022220, WO05030317, WO05030317, WO04096343, WO04096343, WO03082372, WO03082372, WO03076013, WO03003989, WO03003989, WO02087700, WO02066080, WO02054933, WO02054933, WO02053231, WO02053231, WO02053224, WO02053224, USRE46208, USRE43881, USRE42594, USD683042, USD679023, USD664260, USD662214, USD662213, USD662212, USD623308, USD622880, US9649396, US9616210, US9592405, US9592404, US9561385, US9498650, US9440092, US9433525, US9421394, US9421385, US9375586, US9370449, US9364683, US9351792, US9278232, US9227082, US9192539, US9180041, US9149650, US9144690, US9119705, US9067061, US9050452, US9044397, US9031792, US9028536, US9017391, US8980332, US8980174, US8940034, 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GB2522583, GB2479029, GB2441007,

Abstract:

Source: US6443978B A device for the physiotherapeutic irradiation of spatially extensive pathologies by light with the help of a matrix of the sources of optical radiation such as lasers or light diodes placed on the surface of a substrate whose shape is adequate to the shape of the zone of pathology is disclosed. In addition, the device contains stops and a holder to fix the substrate against the bioobject. Additional modules are provided to adjust the temperature, pressure, gas composition over the pathological area. As a source of radiation, chemical reactions accompanied by the luminescence of the products of reaction are suggested. The power supply unit can be autonomous with remote feeding through pulse magnetic field. A supplementary hood optically transparent is provided to localize the pathology as well as the strips that scatter the radiation to get a more uniform bioobject's exposure. Application: light-therapy to treat various extensive pathologies on the bioobject's surface including dermatology, cosmetology; the treatment of traumas, bruises, oedemas, varicose veins, blood therapy, treatment of infectious processes.



Title: Spinal disc space distractor

Priority: CA19992345797 19990928 CA19992541886 19990928 EP19990944216 19990928
 US19980102669P 19981002 US19990411161 19991001 WO1999CH00459 19990928
 US20010880000 20010614 US20050108030 20050414 US20010879911 20010614

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 (IPC 8-9): [A61F2/28](#) (Advanced/Invention);
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International class
(IPC 1-7):

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US class:

600/219 600/235 606/105 606/105P 606/205 606/247 606/86 606/86.00RS 606/86A 606/86R 606/90

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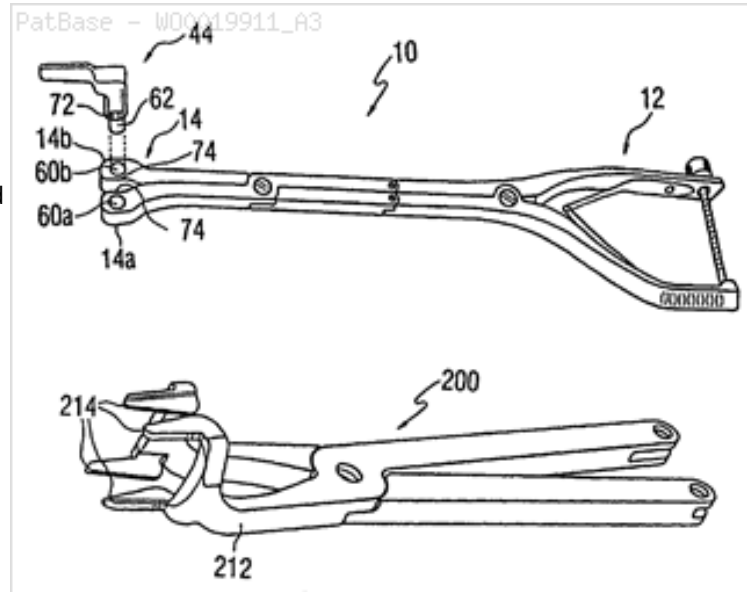
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Abstract:

Source: US2001029377A A distractor for separating adjacent elements, such as vertebrae. The distractor preferably has a scissors-type distracting mechanism, either in a simple scissors or double-acting scissors configuration. A set of blades is provided on each jaw such that an implant may be inserted between the spaced apart blades. The set of blades includes at least two blades.



108) Family number: 51740766 (US2012209332A)

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Title: SPINAL FIXATION SYSTEM AND METHOD**Priority:** US20110442617P 20110214 US20120366117 20120203

Family:	Publication number	Publication date	Application number	Application date
	US2012209332 AA	20120816	US20120366117	20120203
	US9186184 BB	20151117	US20120366117	20120203

Probable Assignee: PIONEER SURGICAL TECH INC**Assignee(s):^(std):** JANOWSKI BRIAN P ; PIONEER SURGICAL TECH INC ; PIONEER SURGICAL TECHNOLOGY INC**Assignee(s):** TD BANK NA ADMINISTRATIVE AGENT AS**Inventor(s):^(std):** JANOWSKI BRIAN P**Agent(s):** FITCH EVEN TABIN AND FLANNERY LLP**International class**
(IPC 8-9): [A61B17/70](#) (Advanced/Invention);
[A61B19/00](#) (Advanced/Non-invention)**CPC:** [A61B17/7038](#) [A61B17/7041](#) [A61B17/7082](#) [A61B17/7085](#) [A61B2090/037](#)**European class:** [A61B17/70B5D](#) [A61B17/70B6](#) [A61B17/70T2D](#) [A61B17/70T4C](#) [K61B19/30H](#)**US class:** [1/1 606/278 606/278P](#)[Classification Explorer](#)

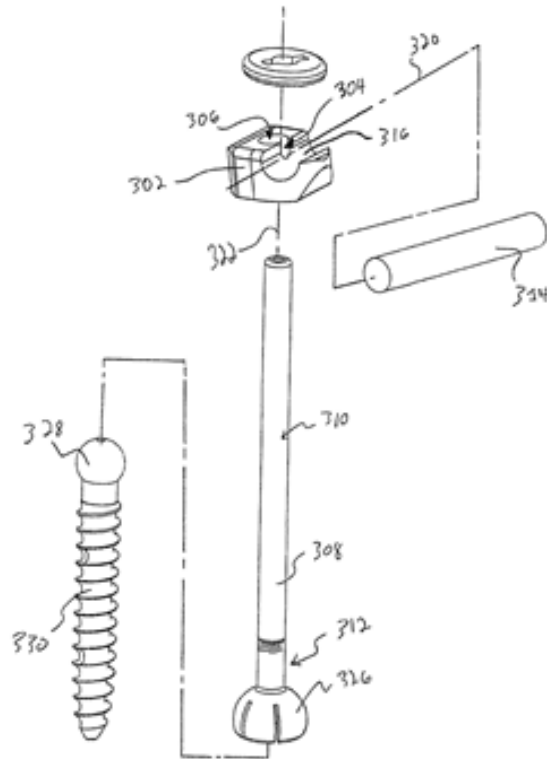
Cited documents: WO13014589 A1, WO12029025 A1, WO10150140 A1, WO09011929 A1, WO05000136 A1, US8894690 BB, US8617216 BB, US8470001 BB, US8333770 BB, US8308775 BB, US8308772 BB, US8246623 BB, US8226656 BB, US8221470 BB, US8221457 BB, US8162990 BB, US8083773 BB, US8057518 BB, US8043343 BB, US8021396 BB, US7846093 BB, US7789897 BB, US7763057 BB, US7753939 BB, US7731734 BB, US7344537 BA, US7166108 BB, US7163539 BB, US6887242 BB, US6786907 BB, US6554831 BA, US6371957 BA, US6267765 BA, US6254602 BA, US6248104 BA, US6123706 A, US6050997 A, US5800435 A, US5735851 A, US5733285 A, US5725528 A, US5584831 A, US5030220 A, US4653481 A, US2013072991 AA, US2011282400 AA, US2011245877 AA, US2011112581 AA, US2011015679 AA, US2010292739 AA, US2010249798 AA, US2010241172 AA, US2010168796 AA, US2009270916 AA, US2009222045 AA, US2009222044 AA, US2009062864 AA, US2009030457 AA, US2008312696 AA, US2008091213 AA, US2007270810 AA, US2007233066 AA, US2007149973 AA, US2007106123 AA, US2007100339 AA, US2007093832 AA, US2007093831 AA, US2007078460 AA, US2007072493 AA, US2007032162 AA, US2007016190 AA, US2006229606 AA, US2006184178 AA, US2006167455 AA, US2006111712 AA, US2006083603 AA, US2006079899 AA, US2006079892 AA, US2005228382 AA, US2005192579 AA, US2005192572 AA, US2005192571 AA, US2005171537 AA, US2005096654 AA, US2005010215 AA, US2004254577 AA, US2004064140 AA, US2003093078 AA, US2003073996 AA, US2003045874 AA, US2003028191 AA, US2003023240 AA, US2002169450 AA, FR2956803 A1, FR2867375 A1, EP2445427 A1, EP1638472 A1, BR06005284,

Forward Citations: WO16094588, US9636152, US9408642, US2016331361, US2016183983, US2016066957, US2016000479, US2014371746, US2014114358, US2013150898,

Abstract:

Source: US2012209332A A spinal fixation system is provided that, in one form, comprises a pedicle screw assembly having a coupling device with an elongate member for guiding a fixation element, such as a spinal rod, into the coupling device and a lock device for fixing the spinal rod to the coupling device. The pedicle screw assembly may be passed through a small incision and connected to a vertebral bone. By connecting a second pedicle screw assembly to a second vertebral bone, the elongate members of the pedicle screw assemblies provide guideposts for directing the spinal rod subcutaneously between the pedicle screw assemblies and into the coupling devices thereof.

PatBase - US9186184_BB



Title: KLEINER FIXATEUR EXTERNE SMALL FIXATOR EXTERNAL (Machine translation)

Priority: DD19880316297 19880602

Family:	Publication number	Publication date	Application number	Application date
	<u>DD287600 A7</u>	19910307	DD19880316297	19880602

Probable Assignee: MED LAB GMBH DEUTSCHE

Assignee(s):^(std): MED LAB GMBH DEUTSCHE

Assignee(s): DEUTSCHE MED LAB GMBH DE

Inventor(s):^(std): MENNICKE PETER ; SWACZYNA SIEGFRIED

Inventor(s): SWACZYNA SIEGFRIED DE ; MENNICKE PETER DE

International class A61B17/60 (Advanced/Invention);
(IPC 8-9): A61B17/60 (Core/Invention)

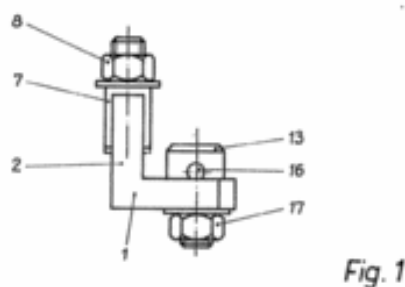
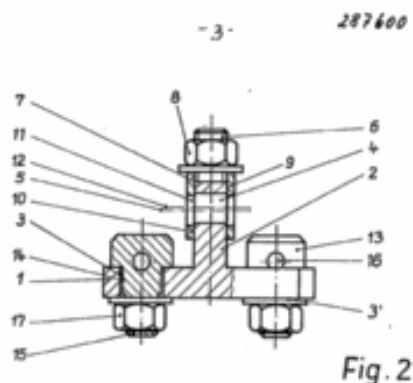
International class A61B17/60
(IPC 1-7):

[Classification Explorer](#)

Abstract:

Source: DD287600A [Source: Claim 1] 1, Fixateur externe zur Stabilisierung von Schaedigungen der Hand und des Vorderarmes, bestehend aus auf Laengstraegern mit Rundprofil laengsbeweglichen und mittels einer Klemmvorrichtung arretierbaren, mit Bohrungen versehenen L- und T-foermig ausgebildeten Klemmbacken, die in ihren waagerechten Schenkeln jeweils eine Implantatklemmvorrichtung aufweisen, dadurch gekennzeichnet, dass die Klemmvorrichtung aus einer Schraubverbindung und einem U-foermigen Profilstueck (7) besteht, in dessen parallelen Seitenwaenden (9; 10) sich eine Durchgangsbohrung (11) befindet, deren Achse (12) mit der Achse (5) der im senkrechten Schenkel (2) der Klemmbacke angeordneten Bohrung (4) korrespondiert. [Source: claim 1] 1, fixator external stabilisation of injuries of the hand and the front arm, consisting of longitudinally moveable on Rails with round profile and locking by means of a clamping device, marked with holes L and t trained clamping jaws, which each have an implant clamping device in their horizontal legs, characterized that the clamping device consists of a bolt and a u-shaped profile piece (7) in its parallel sides (9, 10) is a through hole (11) that corresponds to their axle (12) with the axis (5) of the hole (4) arranged in the vertical Shank (2) of the jaw.

PatBase - DD287600_A7



110) Family number: 4648667 (US5026372A)

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Title: Fixation device for the external adjusting of bone fragments

Priority: DE19873737617 19871105 DE19883837228 19881102 EP19880118531 19881107
EP19880118531 19881107 EP19880118531 19881107 DE19883878155 19881107

Family:	Publication number	Publication date	Application number	Application date
	<u>AT85200 E</u>	19930215	AT19880118531T	19881107
	<u>DE3737617 A1</u>	19890601	DE19873737617	19871105
	<u>DE3837228 A1</u>	19900503	DE19883837228	19881102
	<u>DE3878155 D1</u>	19930318	DE19883878155	19881107
	<u>EP0315215 A2</u>	19890510	EP19880118531	19881107
	<u>EP0315215 A3</u>	19891206	EP19880118531	19881107
	<u>EP0315215 B1</u>	19930203	EP19880118531	19881107
	<u>ES2037799 T3</u>	19930701	ES19880118531T	19881107
	<u>US5026372 A</u>	19910625	US19880266809	19881103

Probable Assignee: STURTZKOPF ROBERT

Assignee(s):^(std): STEDTFELD HANS WERNER ; STEDTFELD HANS WERNER DR ; STURTZKOPF ROBERT ; STURTZKOPF ROBERT DR

Assignee(s): STURTZKOPF ROBERT DR 8000 MUENCHEN DE ; STEDTFELD HANS WERNER DR 8500 NUERNBERG DE

Inventor(s):^(std): STEDTFELD HANS WERNER ; STEDTFELD HANS WERNER DR ; STURTZKOPF ROBERT ; STURTZKOPF ROBERT DR

Inventor(s): STURTZKOPF ROBERT DR 8000 MUENCHEN DE ; STEDTFELD HANS WERNER DR 8500 NUERNBERG DE

Designated states: AT CH DE ES FR GB IT LI NL SE

International class A61B17/60 A61B17/64 (Advanced/Invention);
(IPC 8-9): A61B17/66 (Advanced/Non-invention)

International class A61B17/60 A61F5/04
(IPC 1-7):

CPC: A61B17/6458 A61B17/6491 A61B17/66

European class: A61B17/64K A61B17/64P K61B17/66

US class: 606/105 606/54 606/59

[Classification Explorer](#)

Cited documents: WO8803395 A1, US4745913 A, US4714076 A, US4628922 A, US4621627 A, US4600000 A, US4523585 A, US4102339 A, US3709219 A, FR1569090 A, EP0011258 B1, DE3543042 A1, DE11258 A,

Forward Citations: WO9904714, WO9516401, WO9406364, WO9402078, WO04026156, US9655648, US9610103, US9468466, US9398957, US9278004, US9125746, US9114016, US9060867, US9044270, US9034049, US9005298, US8894714, US8845724, US8801795, US8758343, US8709090, US8679178, US8597362, US8523948, US8409281, US8382757, US8192449, US8123805, US8100967, US8088166, US7763020, US7678147, US7655041, US7611540, US7147640, US6171309, US6171308, US6162224, US6036691, US5976125, US5746763, US5743898, US5662650, US5405347, US5376090, US5358504, US5342360, US5320622, US5209750, US2014276819, US2011202138, US2011196371, US2011137415, US2011093080, US2010145449, US2010145336, US2010137996, US2010121457, US2010114322, US2010106248, US2010106247, US2009248026, US2008275567, US2008275565, US2008275561, US2008275560, US2008275559, US2008275558, US2008275557, US2008275556, US2008275555, US2007123916, US2005261680, TR27104, FR2679765, EP0880942,

Abstract:

Source: US5026372A The invention relates to a fixation device for externally adjusting bone fragments. A pair of members anchored to the bone fragments are connected to each other to allow a longitudinal displacement of the fixing unit. According to the invention the connection of the members is defined by a hinge configuration which allows guiding and aligning both members when the fixing unit is released for stimulating the healing process. A bracket is mounted on a parallelogram hinge to generate a pressure or, respectively, a tension force to move the bone fragments apart or draw them together. According to the invention the hinge configuration comprises telescopic members centered by spring means.

PatBase - US5026372_A

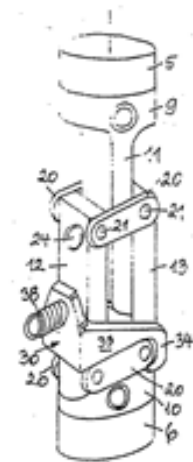
POOR QUALITY

FIG. 3

111) Family number: 12461633 (US5443465A)

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Title: Osteosynthesis aid**Priority:** DE19924231443 19920919 DE19935004915 19930911 WO1993DE00852 19930911**Family:**

Publication number	Publication date	Application number	Application date
<u>AR247478 A1</u>	19950131	AR19930326025	19930916
<u>AT146665 E</u>	19970115	AT19930918989T	19930911
<u>AU199349440 A1</u>	19940412	AU19930049440	19930911
<u>AU673004 B2</u>	19961024	AU19930049440	19930911
<u>BRPI9307068 A</u>	20000620	BR1993PI07068	19930911
<u>CZ282260 B6</u>	19970611	CZ19950000691	19930911
<u>CZ9500691 A3</u>	19950913	CZ19950000691	19930911
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<u>DE59304915 D1</u>	19970206	DE19935004915	19930911
<u>DK0660689 T3</u>	19970414	DK19930918989T	19930911
<u>EP0660689 A1</u>	19950705	EP19930918989	19930911
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<u>HU217599 B</u>	20000228	HU19950000784	19930911
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<u>HU9500784 A0</u>	19950529	HU19950000784	19930911
<u>JP2665401 B2</u>	19971022	JP19940507673	19930911
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<u>KR100232448 B1</u>	19991201	KR19950701037	19950317
<u>MX9305724 A1</u>	19940531	MX19930005724	19930920
<u>NO312612 B1</u>	20020610	NO19950000973	19950314
<u>NO950973 A</u>	19950314	NO19950000973	19950314
<u>NO950973 A0</u>	19950314	NO19950000973	19950314
<u>PL172198 B1</u>	19970829	PL19930307849	19930911
<u>PL307849 A1</u>	19950626	PL19930307849	19930911
<u>US5443465 A</u>	19950822	US19930123302	19930917
<u>WO9406363 A1</u>	19940331	WO1993DE00852	19930911
<u>ZA9306865 A</u>	19940701	ZA19930006865	19930917

Probable Assignee: PENNIG DIETMAR DR MED PRIV DOZ 5000 KOELN DE**Assignee(s):^(std):** PENNIG ; PENNIG DIETMAR ; PENNING DIETMAR**Assignee(s):** PENNIG DIETMAR DR MED PRIV DOZ 5000 KOELN DE ; DIETMAR PENNIG ; DR MED PENNIG DIETMAR ; PENNIG DIETMAR DR MED ; PENNIG DIETMAR DR MED 50935 KOELN DE ; PENNIG DIETMAR DR MED PRIV DOZ**Inventor(s):^(std):** PENNIG DIETMAR ; PENNIG DIETMAR DR MED ; PENNING DIETMAR**Inventor(s):** DIETMAR PENNIG ; PENNIG DIETMAR DR MED PRIV DOZ**Agent(s):** GRIFFITH HACK**Designated states:** AT AU BE BR CH CY CZ DE DK ES FI FR GB GR HU IE IT JP KR LI LU MC NL NO PL PT SE**International class**
(IPC 8-9): A61B17/60 A61B17/64 G01N30/02 G01N30/60 G01N30/96 (Advanced/Invention);
A61B17/60 G01N30/60 (Advanced/Non-invention)A61B17/60 A61B17/64 A61F2/32 A61F5/04

International class
(IPC 1-7):

CPC: A61B17/6425 A61B17/6433 G01N30/96 G01N2030/965

European class: A61B17/64D A61B17/64F G01N30/96 S01N30/96A

US class: 606/301 606/329 606/54 606/59

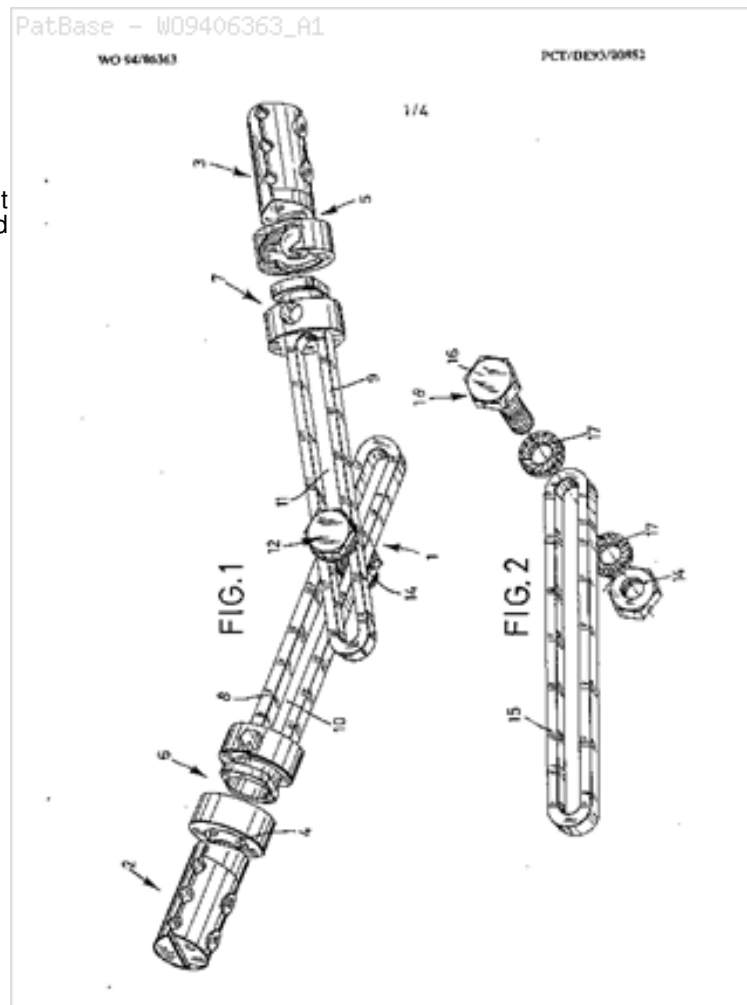
[Classification Explorer](#)

Cited documents: US5320622 A, US5312403 A, US5112340 A, US4895141 A, US4621627 A, US4312336 A, US4299212 A, US4244360 A, US4098269 A, GB2229096 A1, GB2101488 A1, FR2673835 A1, FR2557933 A1, FR2301222 A1, DE3917916 C1, DE3805178 A1,

Forward Citations: WO9922661, WO9717031, WO9717031, WO9617557, WO07139031, WO07138722, WO07017097, WO07017097, WO06102230, WO05053549, WO0038584, USD720853, USD704840, USD683461, USD682426, USD663030, USD633207, US9610105, US9597117, US9597116, US9468480, US9427259, US9402651, US9259242, US9050135, US8945129, US8940021, US8827998, US8808289, US8753349, US8685023, US8523949, US8414617, US8398637, US8382757, US8382755, US8372120, US8366710, US8172840, US8162944, US8066743, US8029543, US8021397, US7927355, US7905924, US7887537, US7842071, US7758582, US7744633, US7608074, US7588571, US7575575, US7507240, US7261713, US7201753, US7048735, US7004943, US6875211, US6793655, US6716248, US6491694, US6217578, US6162223, US5885285, US5683389, US5643263, US2016095626, US2011125161, US2011066151, US2010298882, US2009264884, US2008108989, US2008015588, US2007255280, US2006271051, US2006052795, US2005245939, US2005119656, US2005080428, US2005080420, US2005021034, US2004138659, US2004133203, US2004127903, US2004116928, US2003109879, US2003069580, JP2014512854, EP1093761, EP0801542, AU691400,

Abstract:

Source: US5443465A The invention refers to an osteosynthesis aid which is used, in particular, for the fixation of a pelvis and includes a central body which is formed of at least two arm or link members, each of which has an elongate slot through which a lock bolt is passed to provide a releasably clamped joint and each of which also has releasably secured ball-joint connection to an end-connecting clamp for bone-pin or bone-screw anchorage to an afflicted bone.



112) Family number: 8675447 (WO9619943A1)

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Title: MEDICAL INSTRUMENT FOR REDUCING OR RECONSTRUCTING FRACTURED OR DEFORMED FACIAL BONES**Priority:** KR19940038155 19941228 WO1995KR00174 19951227

Family:	Publication number	Publication date	Application number	Application date	
	<u>AU199643168 A1</u>	19960719	AU19960043168	19951227	
	<u>KR0139944 B1</u>	19980615	KR19940038155	19941228	
	<u>KR19960020961 A</u>	19960718	KR19940038155	19941228	
	<u>WO9619943 A1</u>	19960704	WO1995KR00174	19951227	

Probable Assignee: KIM YONG OOCK**Assignee(s):**^(std) KIM YONG OOCK ; KIM YONG WOOK ; YONG OOCK KIM**Inventor(s):**^(std) KIM YONG OOCK ; KIM YONG WOOK**Inventor(s):** YONG OOCK KIM**Designated states:** AT AU BE BR CA CH CN DE DK ES FR GB GR IE IT JP LU MC NL PT RU SE US

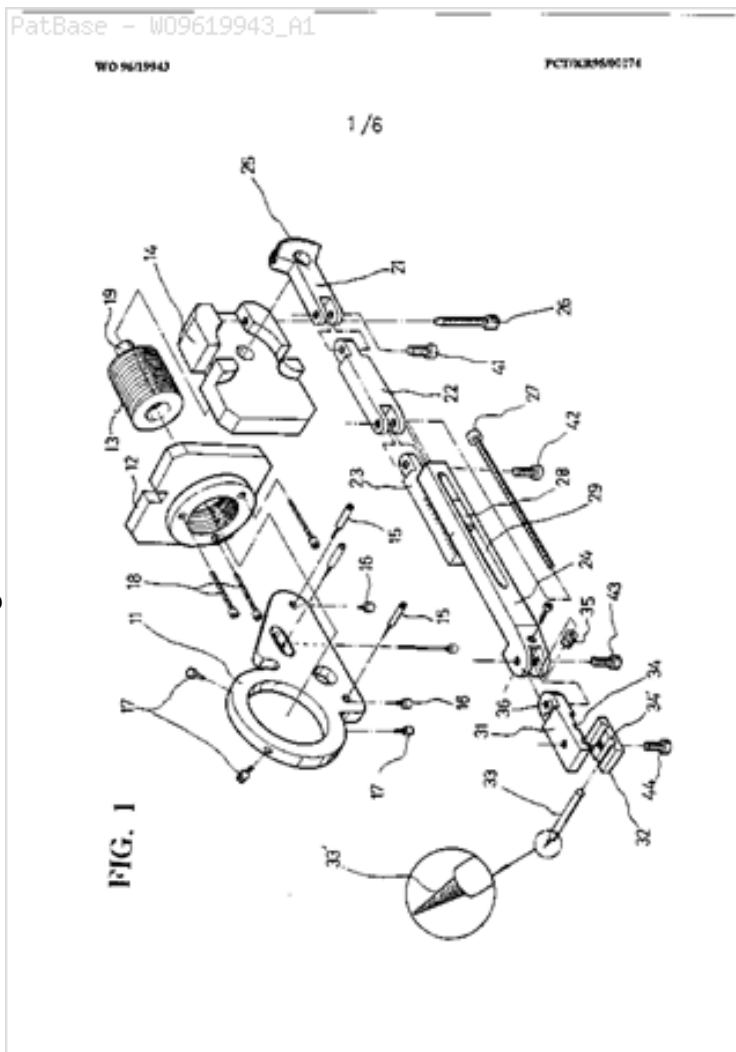
International class
 (IPC 8-9): A61B17/64 A61B17/66 A61F13/12 (Advanced/Invention);
A61B17/66 A61F13/12 (Advanced/Non-invention);
A61B17/60 A61F13/12 (Core/Invention)

International class
 (IPC 1-7): A61B17/60 A61F13/12

CPC: A61B17/6433 A61B17/66**European class:** A61B17/64F K61B17/66[Classification Explorer](#)**Cited documents:** US3072118 A, US2681058 A,**Forward Citations:** US8382757, US7261713, EP1118309,

Abstract:

A medical instrument for reducing or reconstructing fractured or congenitally and posttraumatically deformed facial bones three dimensionally is disclosed. The above medical instrument tightly attaches to a human head outside the skin in order to reduce or reconstruct a fractured or deformed facial bone. The medical instrument thus neither requires complex surgical operations nor the use of foreign substances during the reduction or reconstruction of the fractured or deformed facial bones. Therefore, the medical instrument leaves no scar on the skin, causes neither infection nor ill effects due to the existence of foreign substances. The instrument comprises means (1) for tightly attaching the instrument to a cranial bone (51) said attaching means (1) being screwed to a mastoid area of temporal bone (52) of cranium; means (3) for holding displaced bone segments of a fractured or deformed facial bone thus reducing or reconstructing the facial bone, said holding means (3) being screwed to the displaced bone segments in order to hold the bone segments in their original places thus reducing or reconstructing the facial bone three dimensionally; and means (2) for connecting the attaching and holding means (1, 3) together and adjusting the position of said holding means (3) in order to arrange the holding means (3) on the skin above the bone segments of the facial bone.



113) Family number: 1861916 (GB2101488A)

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Title: External fixation frames and fixing pins therefor**Priority:** GB19810016918 19810603 GB19820015658 19820528

Family:	Publication number	Publication date	Application number	Application date
	<u>GB2101488 A1</u>	19830119	GB19820015658	19820528
	<u>GB2101488 B2</u>	19841010	GB19820015658	19820528

Probable Assignee: RIZK SHOUKRY ABDEL MASSEIH**Assignee(s):^(std):** RIZK SHOUKRY ABDEL MASSEIH**Assignee(s):** SHOUKRY ABDEL MASSEIH RIZK**Inventor(s):^(std):** RIZK SHOUKRY ABDEL MASSEIH**Inventor(s):** SHOUKRY ABDEL MASSEIH RIZK

International class
 (IPC 8-9): A61B17/64 (Advanced/Invention);
A61B17/60 (Core/Invention)

International class
 (IPC 1-7): A61B17/18 A61F5/04

CPC: A61B17/6433 A61B17/645**European class:** A61B17/64F A61B17/64H[Classification Explorer](#)

Forward Citations: WO9748347, WO9406363, WO9309726, WO16193154, WO14122264, US6159210, US5797908, US5643268, US5443465, US5443464, GB2454961, AU673004,

Abstract:

Source: GB2101488A A fixation frame (12) and associated pins (22) for use in fracture surgery, are arranged so that the pins do not transfix the bone. The ends of the pins have a tip which is located in a previously drilled opening in the bone cortex, and a shoulder engages the bone outer wall to prevent penetration of the pin into the central bone tissue. The pins are secured in pin holders 20 which are also used to locate drill guides, the drill guides being used to accurately drill and form the pin openings.

PatBase - GB2101488_A1

2101488

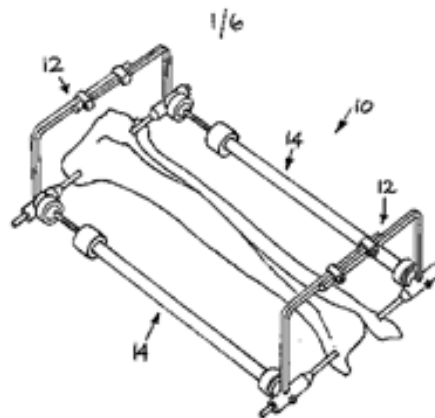


FIG. 1

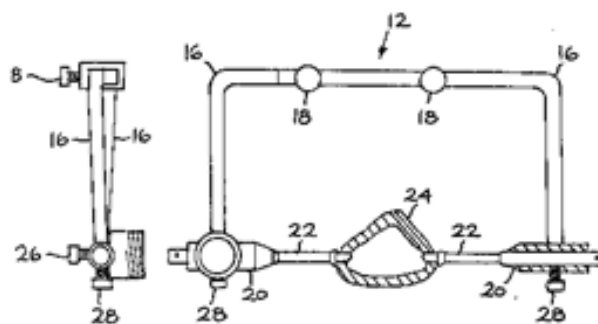


FIG. 2

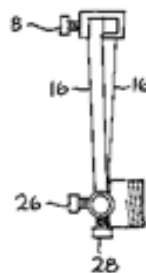


FIG. 3

114) Family number: 4907886 (US4554915A)

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Title: Bone fixation frame**Priority:** US19830473199 19830308

Family:	Publication number	Publication date	Application number	Application date
	<u>US4554915 A</u>	19851126	US19830473199	19830308

Probable Assignee: SMITH AND NEPHEW RICHARDS INC**Assignee(s):^(std):** RICHARDS MEDICAL CO**Assignee(s):** RICHARDS MEDICAL COMPANY ; SMITH AND NEPHEW RICHARDS INC**Inventor(s):^(std):** BRUMFIELD DAVID L

International class A61B17/64 (Advanced/Invention);
^{(IPC 8-9):} A61B17/66 (Advanced/Non-invention)

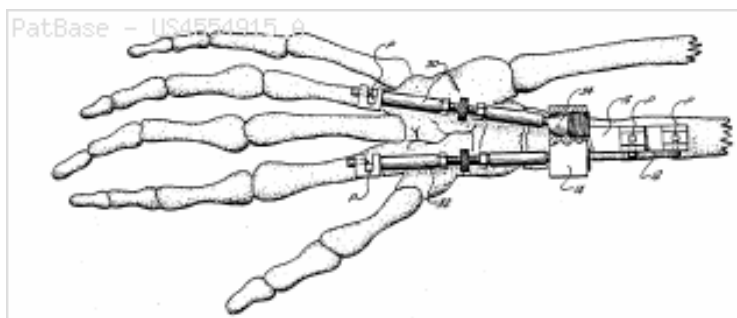
International class A61F5/04
^{(IPC 1-7):}

CPC: A61B17/6425 A61B17/66**European class:** A61B17/64D K61B17/66**US class:** 128/92A 128/92R 606/54[Classification Explorer](#)**Cited documents:** US4312236 A, US4299212 A, US4135505 A, US4127119 A, US4106128 A, US3909853 A, US2702031 A, US2346346 A, US2238870 A, US2238869 A, US1789060 A, SU194247 T,

Forward Citations: WO9716128, WO9111151, WO8905126, WO08075097, WO0053109, USRE40914, USRE34985, US9220533, US9101398, US9044271, US8945128, US8834467, US8628530, US8608741, US8377061, US8366710, US8333766, US8262657, US8192434, US8123747, US8057474, US7731738, US7717916, US7588571, US7575575, US7507240, US7291148, US6932086, US6585736, US6530925, US6428540, US6245071, US6197027, US6171308, US6123704, US6030386, US6024745, US6010501, US5976125, US5968043, US5951556, US5897555, US5766173, US5743898, US5741251, US5681309, US5662650, US5209750, US4998935, US4988349, US4978347, US4968316, US4936843, US4919119, US4895141, US4782842, US4628921, US4628919, US2016022315, US2015250502, US2012143191, US2011066153, US2010234844, US2010087819, US2010076436, US2009287212, US2009275944, US2009198234, US2004039394, GR88100814, GR880100814, FR2665353, EP0902657, EP0380674, CN104837422,

Abstract:

Source: US4554915A One external fixation frame, for immobilizing bone segments adjacent a fracture or joint, includes a fixation block with a pair of arms extending from the block across the fracture or joint. Another embodiment has but a single arm while a third embodiment includes one or two arms projecting from each end of the block. A ball and socket joint connects each arm to the block for universal movement thereabout. Length adjustment is accomplished via a turnbuckle formed in each arm. The outer end of each arm includes a slot for connecting to pins inserted in the respective bone segments. Set screws are provided for tightening the ball and socket joints and for holding the pins in the slots.



115) Family number: 62411429 (WO16075659A1)

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Title: PERSON BED HAVING A SENSING APPARATUS FOR BODY STATICS FOR IMAGING MEDICAL EXAMINATION DEVICES**Priority:** CH20140001764 20141113

Family:	Publication number	Publication date	Application number	Application date
	<u>CH710363 A2</u>	20160513	CH20140001764	20141113
	<u>WO16075659 A1</u>	20160519	WO20151B58771	20151113

Probable Assignee: STYFOLOGIE CENTER GMBH**Assignee(s):**^(std) STYFOLOGIE CENTER GMBH ; STYFOLOGIE CT GMBH**Inventor(s):**^(std) MORGER OTTO ; OTTO MORGER**Agent(s):** FELBER JOSEF

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B5/00 A61B5/107 A61B6/03 A61B6/04 (Advanced/Invention)
(IPC 8-9) :

CPC: A61B5/0064 A61B5/1079 A61B5/1036 A61B5/0033 A61B5/0555 A61B5/1072 A61B5/70 A61B6/032 A61B6/0407 A61B6/0492

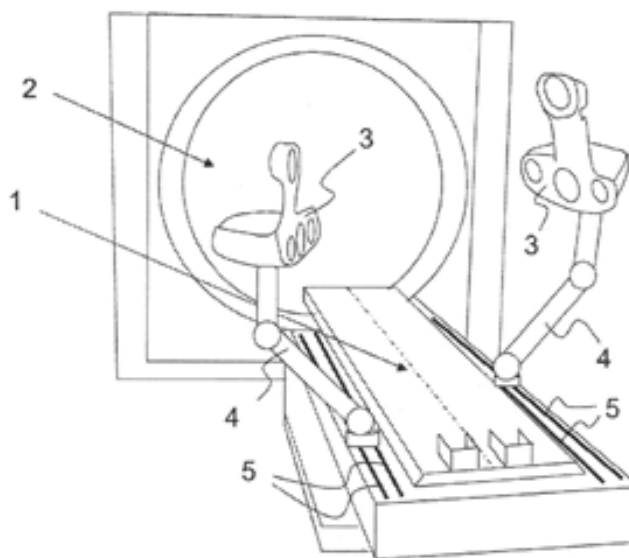
[Classification Explorer](#)

Cited documents: EP1811726 A2, EP1408833 B1, DE69514625 T2, DE3629801 A1,
 DE102011083876 A1

Abstract:

The invention relates to a person bed (1) which is used to perform radiological imaging medical examinations by means of x-ray, tomography, nuclear magnetic resonance, and other imaging methods. The person rests on the person bed in a lying position for the creation of tomograms and other images. The person bed (1) is equipped with a sensing apparatus for the optical, laser-optical mechanical, or electromechanical measurement of the patient body or certain locations of the patient body. The person bed has footrests for positioning the soles of the feet as during standing on vertical supporting surfaces with natural foot spread and has means for sensing at least the positions of the knee joints, the hip joint, the pelvic bone, the shoulders, and the head. Furthermore, the bed is equipped with pressure sensors for measuring the local contact weights of the various contacting body locations in order to reproducibly sense the position of the skeleton in relation to the center axis of the skeleton and possible rotations of the shoulder and/or hip.

PatBase - W016075659_A1

Fig. 2

116) Family number: 3072762 (US4883576A)

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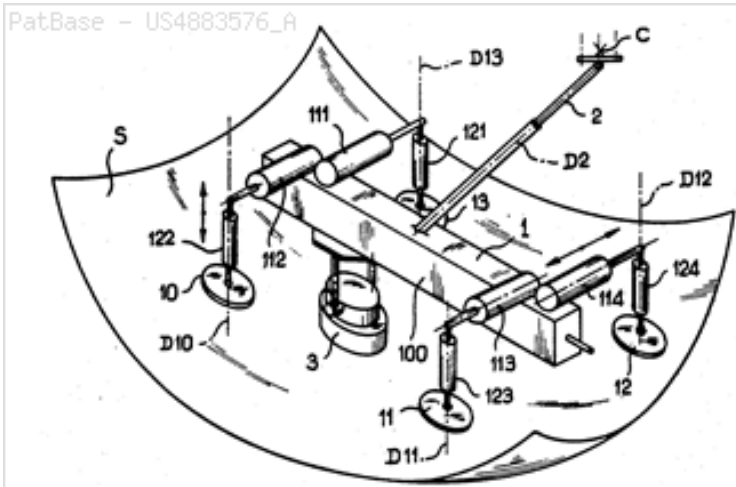
Title: Apparatus for survey and/or treatment of a smooth, curved surface**Priority:** FR19860016725 19861201

Family:	Publication number	Publication date	Application number	Application date
	DE3775742 D1	19920213	DE19873775742	19871130
	EP0274925 A1	19880720	EP19870402695	19871130
	EP0274925 B1	19920102	EP19870402695	19871130
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	FR2607421 B1	19890324	FR19860016725	19861201
	JP1995397 C3	19951122	JP19870303056	19871130
	JP63163198 A2	19880706	JP19870303056	19871130
	JP7021547 B4	19950308	JP19870303056	19871130
	US4883576 A	19891128	US19870126859	19871130

Probable Assignee: ELECTRICITE DE FRANCE SERVICE NATIONAL A CORP OF F**Assignee(s):^(std):** ELECTRICITE DE FRANCE**Assignee(s):** ELECTRICITE DE FRANCE (SERVICE NATIONAL) A CORP OF ; ELECTRICITE DE FRANCE SERVICE NATIONAL ; ELECTRICITE DE FRANCE SERVICE NATIONAL A CORP OF F ; ELECTRICITE DE FRANCE SERVICE NATIONAL PARIS FR**Inventor(s):^(std):** GEMMA ANTOINE**Inventor(s):** GEMMA ANTOINE F 92190 MEUDON FR ; ANTOINE GEMMA ; ANTONII JIENMA**Designated states:** BE CH DE ES GB IT LI**International class**
(IPC 8-9): [B62D57/00](#) [C25F7/00](#) [F22B37/00](#) [G21C17/003](#) [G21C17/013](#) [G21F9/00](#) [G21F9/28](#) (Advanced/Invention)**International class**
(IPC 1-7): [B25J5/00](#) [B60S9/02](#) [B60T7/16](#) [B62D1/24](#) [B62D57/02](#) [C25D17/00](#) [C25F3/24](#) [C25F7/00](#) [F22B37/00](#) [G21C17/00](#) [G21C17/003](#) [G21C21/00](#) [G21F9/28](#)**CPC:** [F22B37/006](#) [B62D57/00](#) [C25F7/00](#) [F22B37/003](#) [G21C17/013](#)**European class:** [B62D57/00](#) [C25F7/00](#) [F22B37/00C2](#) [F22B37/00C3](#) [G21C17/013](#) [R22B257/14](#) [R22B261/21](#) [R22B261/24PQ](#) [R22B271/22C1](#) [R22B273/32](#) [R22B273/46](#) [R22B273/57M11](#) [R22B273/57M13](#) [R22B273/64](#) [R22B313/00](#)**US class:** [180/168](#) [204/224.00M](#) [204/224M](#) [204/225](#) [204/275](#) [204/278.5](#) [280/765.1](#) [976/DIG.213](#)[Classification Explorer](#)**Cited documents:** US4634511 A, US4609450 A, US4353785 A, US4190513 A, US4101405 A, US3909388 A, US3857764 A, US3772163 A, FR2242750 A1, EP0186488 A2, EP0112576 A1, EP0010034 A1, EP0007557 A1,**Forward Citations:** WO9518452, WO9217734, WO07103304, WO07103304, US8616075, US6224040, US6089603, US5467813, US5151006, US5135632, US5087071, US4986889, US2011235058, US2007222460, US2005236824, GB2280155, GB2280155, FR2838193, FR2659875, FR2658104, FR2635036, EP1482518, EP0442803,

Abstract:

Source: US4883576A The invention relates to an apparatus for survey and/or treatment of a smooth curved surface. The apparatus comprises a vehicle able to be moved on the surface along a predetermined path, the vehicle being provided with abutment means movable with respect to the body of the vehicle. A support arm of the vehicle is fixed to this by a swivel pivot point. The support arm is fixed close to the center of curvature of the curved surface. The axes of the abutment means and of the arm of two supports can be oriented to be substantially concurrent in the vicinity of the center of curvature of the curved surface. Means for survey and/or treatment of the curved surfaces are fixed to the vehicle. Means for control of driving of the vehicle and of the survey and/or treatment means are also provided. Application to the survey and to the maintenance of water boxes of steam generators of electro-nuclear power stations.



117) Family number: 15298611 (WO0113823A2)

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Title: FEMUR HEAD–SEGMENT PROSTHESIS AND INSTRUMENT FOR PRECISE INSERTION OF A SEGMENT PROSTHESIS**Priority:** CH19990001522 19990823 WO2000CH00447 20000823

Family:	Publication number	Publication date	Application number	Application date
	<u>AT306877 E</u>	20051115	AT20000951181T	20000823
	<u>AU200064231 A5</u>	20010319	AU20000064231D	20000823
	<u>CH690397 A</u>	20000831	CH19990001522	19990823
	<u>DE50011376 D1</u>	20051124	DE20005011376	20000823
	<u>EP1143883 A2</u>	20011017	EP20000951181	20000823
	<u>EP1143883 A3</u>	20020911	EP20000951181	20000823
	<u>EP1143883 B1</u>	20051019	EP20000951181	20000823
	<u>WO0113823 A2</u>	20010301	WO2000CH00447	20000823
	<u>WO0113823 A3</u>	20010823	WO2000CH00447	20000823

Probable Assignee: GAUTIER EMANUEL**Assignee(s):^(std):** GAUTIER EMANUEL**Assignee(s):** EMANUEL GAUTIER**Inventor(s):^(std):** EMANUEL GAUTIER ; GAUTIER EMANUEL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class A61F2/36 A61F2/46 (Advanced/Invention);
 (IPC 8-9): A61B17/80 A61B17/86 A61B5/107 A61F2/00 A61F2/02 A61F2/30 (Advanced/Non-invention);
A61F2/36 A61F2/46 (Core/Invention);
A61B17/68 A61B5/107 A61F2/00 A61F2/02 A61F2/30 (Core/Non-invention)

International class A61B17/58 A61F2/30 A61F2/36
 (IPC 1-7):

CPC: A61B5/107 A61B5/4514 A61B5/4528 A61B17/8057 A61B17/8635 A61F2/30756 A61F2/3603 A61F2/4603 A61F2/4607 A61F2/4657 A61F2/4684 A61F2002/30217 A61F2002/30219 A61F2002/30299 A61F2002/30332 A61F2002/30408 A61F2002/30418 A61F2002/30474 A61F2002/30538 A61F2002/30555 A61F2002/30611 A61F2002/30616 A61F2002/30738 A61F2002/30774 A61F2002/30906 A61F2002/30909 A61F2002/4631 A61F2002/4659 A61F2220/0025 A61F2220/0033 A61F2230/0067 A61F2230/0093 A61F2250/0006 A61F2250/0063 A61F2250/0064 A61F2310/00011 A61F2310/00017 A61F2310/00023 A61F2310/00179 A61F2310/00401 A61F2310/00407 A61F2310/00964

European class: A61F2/36A1 A61F2/46B A61F2/46B4 A61F2/46M A61F2/46T K61B17/80F2 K61B17/86B4 K61B5/107 K61B5/45D K61B5/45K K61F2/30A2Y23 K61F2/30A2Y2T K61F2/30A2Y2T1 K61F2/30A3T1C K61F2/30A3T32 K61F2/30A3T4C K61F2/30A3T4N K61F2/30A3W2A K61F2/30A3W2L K61F2/30A3W32N K61F2/30A3W32S K61F2/30B6S K61F2/30C K61F2/30L2A4 K61F2/30L3 K61F2/30L4N K61F2/46C K61F2/46M1D K61F220/00T K61F220/00T1 K61F230/00Y2 K61F230/00Y23 K61F250/00G1 K61F250/00W2N K61F250/00W2S K61F310/00A2 K61F310/00A2A K61F310/00A2E K61F310/00A6 K61F310/00L2A K61F310/00L2E K61F310/00L30

[Classification Explorer](#)**Cited documents:** WO9807393 A1, FR2728157 A1, FR2578739 A1, EP0773007 A1, EP0505634 A1, EP0485326 A1,**Forward Citations:** US9445911, US9254135, US9107758, US8974458, US8882776, US8814943, US8545506, US8444646, US8366713, US8282649, US8182541, US8105327, US8070755, US7879042, US7527631, US7517364, US7338498, EP1470802, DE102011018365,

Abstract:

The invention relates to a method in which a cartilaginous, osseous or osteocartilaginous lesion in the region of a joint surface of a femur head is repaired by inserting a modularly constructed segment prosthesis (ball segment-, ball segment-prosthesis). The segment prosthesis comprises a carrier component, a prosthesis calvaria and a conical corrective ring system which is placed between the prosthesis calvaria and the support components for the precise vertical and angular positioning of the prosthesis calvaria relative to the carrier components used. Conical insertable-connections located between individual prosthesis components create a modular prosthesis system. The carrier components are produced in two different embodiments: one is suitable for uncemented implantation by radial clamping and/or screwing of the prosthetic component into the bone and the other one is suitable for cemented implantation. The prosthesis calvaria has an opening angle of between 90 DEG and 120 DEG and is produced with a diameter between 38 mm and 60 mm. Alternatively, a prosthesis calvaria with an altered design can be used as a carrier for the direct in vitro culturing of cartilage cell or tissue layers. It has been shown that precise implantation of the prosthesis components increases the life-time of the prosthesis and reduces the incidence of secondary arthritic alterations on the acetabular side. To this end, a guide instrument which can be positionally fixed in the region of the lesion is used. Said guide instrument has a pliers-shape with a ring-shaped opening located on the side of the defect and centered at the opposite side of the defect to enable precise axis-aligned guidance of grinding-, cutting- and insertion instruments.

PatBase - W00113823_A2

WO 01/13823

PCT/CH00/00447

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Fig. 1a

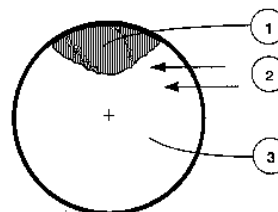


Fig. 1b

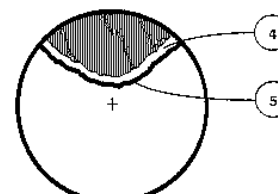


Fig. 1c

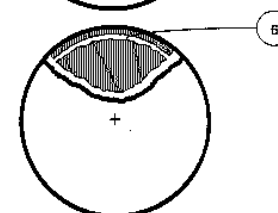
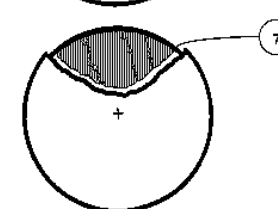


Fig. 1d



118) Family number: 11359658 (WO9925265A1)

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Title: STABLE DYNAMIC AXIAL FIXATOR**Priority:** TR19970001377 19971117 WO1998TR00018 19980805

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199888221 A1</u>	19990607	AU19980088221	19980805
	<u>TR9701377 A2</u>	19990621	TR19970001377	19971117
	<u>TR9701377 A3</u>	19990621	TR19970001377	19971117
	<u>WO9925265 A1</u>	19990527	WO1998TR00018	19980805

Probable Assignee: HACI KUTLU**Assignee(s):**^(std): HACI KUTLU ; KUTLU HACI**Inventor(s):**^(std): KUTLU HACI**Inventor(s):** HACI KUTLU

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
^(IPC 8-9): [A61B17/64](#) [A61B17/66](#) (Advanced/Invention);
[A61B17/66](#) (Advanced/Non-invention);
[A61B17/60](#) (Core/Invention)

International class
^(IPC 1-7): [A61B17/64](#) [A61H](#)

CPC: [A61B17/6458](#) [A61B17/66](#)**European class:** [A61B17/64K](#) [K61B17/66](#)[Classification Explorer](#)**Cited documents:** WO9605777 A1, US4312336 A, GB2168255 A1, DE4139700 A1,**Forward Citations:** WO04026156, WO0115611, US8758343, JP2001293004, FR2840191, EP1136041, AU2004242480,

Abstract:

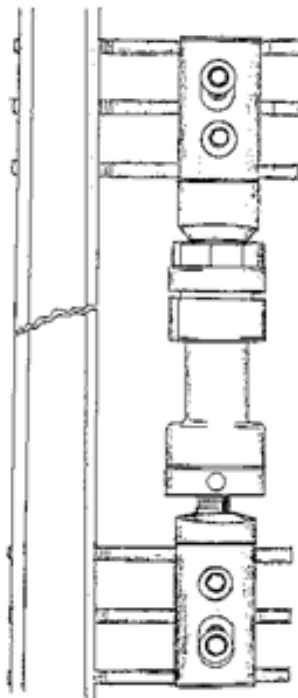
Stable Dynamic Axial Fixator is a ball-socket type, monoarticulated which can be cancelled for the stability, external fixator used in orthopaedic and traumatological surgery. This fixator was designed for a new and unique application technique which increases the stability and also minimise the need of X-ray usage. The additional advantages were superposition of fixator on X-ray image was minimised, the risk of loosening of the pin was also minimised by decreasing the weight, and hospitalisation time was reduced. To increase the stability of the articulation, "body contact of the clamp" was achieved at the final position of the application and also the surgeon can cancel the articulation (if not need) by sliding the clamp on the articulation globe (13). Secondly to increase the stability the height of the eccentric pin was reduced. By this way the load arm can be shortened, thus the surgeon can fix the articulation globe (13) with more force, which increases the stability. The polyplanar clamp can fix the fragments in different combination and in different angle without using articulation. Also it can translate the fragments of the bone. By the means of new distraction-compressing unit the surgeon and the patient can easily distract or compress the fragments of the bone only by turning the extension nut (7) in one direction up click sound was heard. No other work is needed to stabilise or anything else. So adaptation time of the patient and the hospitalisation time was reduced.

PatBase - W09925265_A1

WO 99/25265

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PCT/TR99/00018



119) Family number: 32626898 (US2006036264A)

© PatBase

Title: RIGIDLY GUIDED IMPLANT PLACEMENT

Priority: US20040913178 20040806 US20060497877 20060731 US20120453421 20120423

Family:

Publication number	Publication date	Application number	Application date
<u>US2006036264 AA</u>	20060216	US20040913178	20040806
<u>US2007055291 AA</u>	20070308	US20060497877	20060731
<u>US2012209290 AA</u>	20120816	US20120453421	20120423
<u>US8016835 BB</u>	20110913	US20060497877	20060731
<u>US8182491 BB</u>	20120522	US20040913178	20040806
<u>US8852210 BB</u>	20141007	US20120453421	20120423

Probable Assignee: DEPUY SYNTHES PRODUCTS LLC

Assignee(s):^(std): BIRKMEYER PAUL ; DEPUY SPINE INC ; DEPUY SYNTHES PRODUCTS LLC ; NAUGHTON RONALD ; SELOVER SEAN ; SICVOL CHRISTOPHER W ; SHEEHY NANCY M

Assignee(s): HAND INNOVATIONS LLC ; DEPUY SPINE LLC

Inventor(s):^(std): BIRKMEYER PAUL ; NAUGHTON RONALD ; SELOVER SEAN ; SERHAN HASSAN ; SHEEHY NANCY M ; SICVOL CHRISTOPHER W

Inventor(s): SICVOL CHRISTOPHER ; SHEEHY NANCY

Agent(s): LAHIVE AND COCKFIELD LLP; NELSON MULLINS RILEY AND SCARBOROUGH LLP

International class A61B17/58 A61B17/60 A61B17/88 A61B19/00 A61F2/00 A61F2/46 (Advanced/Invention);
(IPC 8-9): A61B17/34 (Advanced/Non-invention);
A61B19/00 (Core/Invention)

CPC: A61B34/20 A61B90/50 A61B2034/107 A61B2034/2055 A61B90/13 A61B19/201 A61B90/11 A61B17/3421 A61B2017/3409 B07C2501/0009 A61B17/1671

European class: A61B19/20B K61B17/34D1D K61B19/20B2 K61B19/26 K61B19/50D K61B19/52H12 K61B19/52H12B6

US class: 606/104 606/130 606/130P 606/279 606/86R 606/96 606/97 606/99

[Classification Explorer](#)

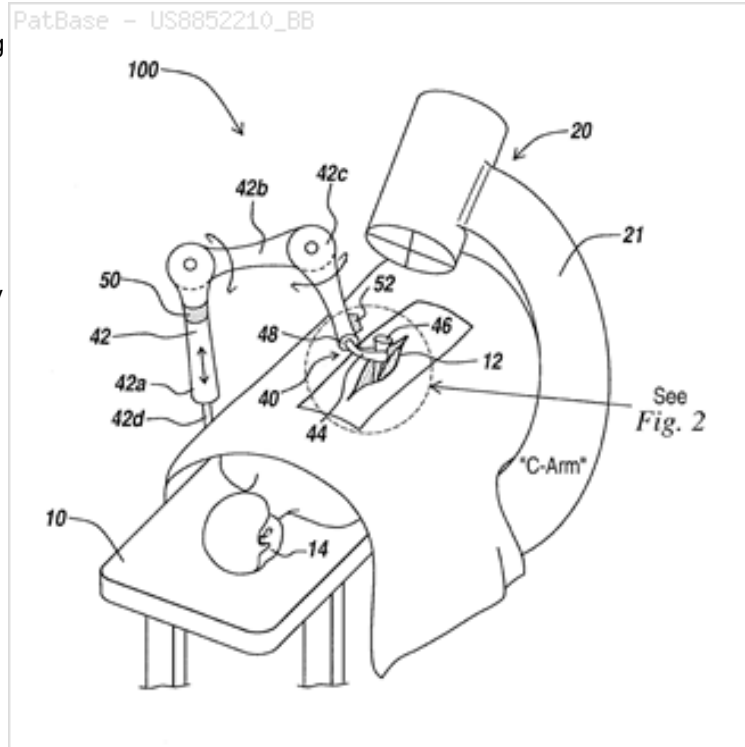
Cited documents: WO05032325 A2, WO05009215 A2, WO04100758 A2, WO03105659 A2, WO03009768 A1, US6951538 BB, US6951538 A, US6949105 BB, US6949105 A, US6929606 BB, US6929606 A, US6921406 BA, US6872213 BB, US6872213 A, US6837892 BB, US6837892 A, US6796988 BB, US6796988 A, US6725080 BB, US6725080 A, US6626830 BA, US6575899 BA, US6546279 BA, US6546277 BA, US6529765 BA, US6409735 BA, US6351662 BA, US6334067 BA, US6298262 BA, US6298262 A, US6246200 BA, US6206890 BA, US6159179 A, US6120465 A, US6096049 A, US6071295 A, US6059790 A, US5961527 A, US5957933 A, US5855583 A, US5844583 A, US5814038 A, US5810841 A, US5808665 A, US5445166 A, US5433198 A, US5410638 A, US5397323 A, US5250055 A, US5236432 A, US5212720 A, US5184601 A, US5016489 A, US5016486 A, US2919599 A, US2007055291 AA, US2006036264 AA, US2005216026 AA, US2005171559 AA, US2005171557 AA, US2005171551 AA, US2005149054 AA, US2005132837 AA, US2005113809 AA, US2005101866 AA, US2005085714 AA, US2005070789 AA, US2005033315 AA, US2004176779 AA, US2004158260 AA, US2004049191 AA, US2003236447 AA, US2003189351 AA, US2003187431 AA, US2003167061 AA, US2003149430 AA, US2002123668 AA, US2002038118 AA, US2002035321 AA, US2001027271 AA, EP1018963 B1, EP0654244 B1,

Forward Citations: WO17064050, WO15193479, WO15142762, WO15107099, WO15079323, WO15041516, WO12089529, WO11044084, WO10047967, WO10047966, WO09137388, WO08136877, WO08127415, WO07113703, USD637721, USD631967, USD629905, USD629904, USD629896, USD629520, USD629519, USD629107, USD629106, USD629105, USD627460, USD623749, USD623748, USD623747, USD622851, USD622843, USD615653, USD610257, USD608001, USD605289, USD601251, USD600806, US9592109, US9585678, US9526583, US9498260, US9480472, US9452276,

US9387048, US9370379, US9314276, US9308050, US9241771, US9241769, US9220567, US9220472, US9179926, US9161800, US9138265, US9125679, US9119572, US9101380, US9084624, US9078693, US9066739, US9060793, US9060678, US9039685, US8992580, US8986220, US8945184, US8852210, US8784435, US8675930, US8535337, US8535300, US8425519, US8403312, US8396598, US8337504, US8208708, US8182519, US8182491, US8170717, US8152720, US8142479, US8123699, US8075593, US8075591, US8041459, US8016835, US8005571, US2017071682, US2015351733, US2015216541, US2015216540, US2015209088, US2015148819, US2015112387, US2013218216, US2013079794, US2012083849, US2012065470, US2012022544, US2011319941, US2011282351, US2011224689, US2011224684, US2011130718, US2011125165, US2011034781, US2011034779, US2010331994, US2010312291, US2010312103, US2010234889, US2010225036, US2010198052, US2010185158, US2010172541, US2010106147, US2010106146, US2010063630, US2009292316, US2009054988, US2008292161, US2008287963, US2008255667, US2008161830, US2008161677, US2008065105, US2008004632, US2007288096, US2007255292, US2007055291, US2007032906, US2006167454, US2006036264, RU2470595, KR101611645, JP5226066, JP2010525870, GB2472066, EP2787910, CN103892922, CN103892922, AU2011229881,

Abstract:

Source: US2006036264A A system for guiding an implant to an optimal placement within a patient includes a trajectory guide for guiding instruments along a selected trajectory and a trajectory fixation device for fixing the trajectory guide in a selected position. The trajectory guide defines a path configured to align with the selected trajectory. A movable support mounts the trajectory guide and selectively moves the trajectory guide to align the trajectory guide with the selected trajectory prior to fixing the trajectory guide in the selected position. After fixing the trajectory guide, instruments can be inserted along the trajectory through the path defined by the trajectory guide.



120) Family number: 11724142 (DE4421223A1)

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Title: Fixator for solid, inorganic or organic bodies partic. human bone**Priority:** DE19944421223 19940617

Family:	Publication number	Publication date	Application number	Application date
	<u>DE4421223 A1</u>	19951221	DE19944421223	19940617

Probable Assignee: FISCHER JUERGEN**Assignee(s):^(std):** FISCHER JUERGEN**Assignee(s):** FISCHER JUERGEN DR MED ; FISCHER JUERGEN DR MED 69488 BIRKENAU DE**Inventor(s):^(std):** FISCHER JUERGEN DR MED

International class A61B17/60 A61B17/62 (Advanced/Invention);
 (IPC 8-9): A61B17/66 A61B19/00 (Advanced/Non-invention)

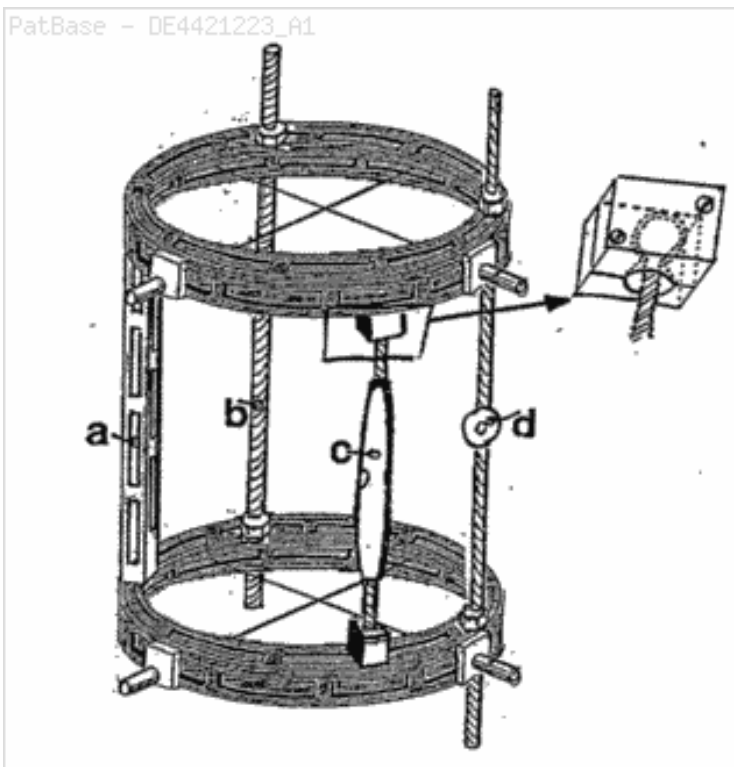
International class A61B17/58 A61B17/60
 (IPC 1-7):

CPC: A61B17/60 A61B17/62 A61B17/66 A61B2017/00902**European class:** A61B17/60 A61B17/62[Classification Explorer](#)

Forward Citations: WO9812975, WO9812975, WO9730650, WO16193154, WO14163591, WO09127663, WO09127663, WO09127661, US9456849, US9443302, US9381042, US9295493, US9220533, US9155559, US9101398, US9078700, US9011438, US8951252, US8945128, US8864750, US8834467, US8574232, US7955334, US5928230, EP2110090, EP2110089, EP1959837, EP1959837,

Abstract:

Source: DE4421223A1 Each element comprises perforations orthogonal to the shanks of the cross-section, with variable opening angles. The individual elements are mutually connectable by fixed and variable couplers, using bolts, hinges, or threaded spindles. The spindle free ends contain each a ball insert coveting with a ball retainer in each clamping element. There is a support element whose entire length is fitted with clamping couplings for screws or nails in case of rod-shaped fixation elements. The couplings are on the periphery with segment-shaped or annular fixation elements.



121) Family number: 25477988 (US3272523A)

© PatBase

Title: SAFETY FRONT JAW FOR SKI BINDINGS OR FASTENINGS**Priority:** DE1963M055747 19630211 FR19640962815 19640206

Family:	Publication number	Publication date	Application number	Application date
	AT244820 B	19660125	AT19630002384	19630326
	CH418927 A	19660815	CH19640000489	19640117
	DE1184682 B	19641231	DE1963M055747	19630211
	FR1381869 A	19641214	FR19640962815	19640206
	GB1052048 A	00000000		00000000
	GB1052049 A	00000000		00000000
	US3272523 A	19660913	US19640342595	19640131

Probable Assignee: MARKER PATENTVERWERTUNGSGESELLSCHAFT MBH A SWISS CORP**Assignee(s):^(std):** HANNES MARKER ; MARKER HANNES**Assignee(s):** MARKER PATENTVERWERTUNGSGESELLSCHAFT MBH ; MARKER PATENTVERWERTUNGSGESELLSCHAFT MBH A SWISS C ; MARKER PATENTVERWERTUNGSGESELLSCHAFT MBH A SWISS CORP**Inventor(s):^(std):** HANNES MARKER ; MARKER HANNES**International class**
(IPC 8-9): [A63C9/00](#) [A63C9/085](#) (Advanced/Invention);
[A63C9/00](#) (Advanced/Non-invention)**International class**
(IPC 1-7): [A63C9/08](#) [A63C9/085](#)**CPC:** [A63C9/08592](#) [A63C9/005](#) [A63C9/0855](#) [A63C9/08564](#) [A63C9/08578](#)**European class:** [A63C9/085B2](#) [A63C9/085C1](#) [A63C9/085C3](#) [A63C9/085P](#) [K63C9/00E](#)**US class:** [280/629](#)[Classification Explorer](#)**Cited documents:** US3179434 A, US3029085 A, US3027173 A, US2994543 A, US2836428 A, IT543150 A, FR1201865 A, FR1198203 A, CH331880 A, CH269062 A, AT193770 B, AT193770,**Forward Citations:** US4234208, US3819201, US3561781, US3544124, US3490790, US3445123,

Abstract:

Source: US3272523A 1,052,049. Ski bindings.
H. MARKER. Jan. 28, 1964 [Feb. 11, 1963],
No. 32172/66. Divided out of 1,052,048.
Heading A6D. The subject matter of this
application is the same as that disclosed in
Specification 1,052,048 but the claims differ.

PatBase - US3272523_A

Sept. 13, 1966

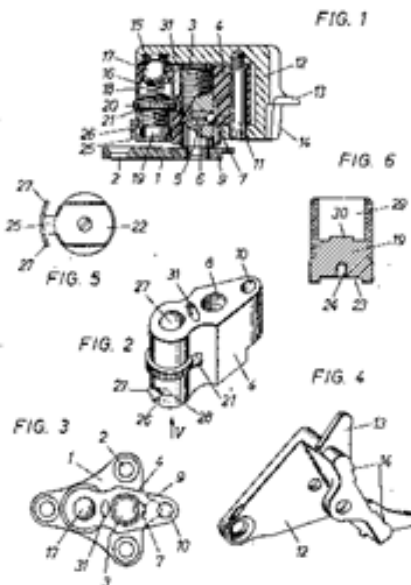
H. MARKER

3,272,523

PATENT PHOTO JAN 28 1964 DIVISION OF PATENTING

Filed Jan. 21, 1964

2 Sheets-Sheet 1



Inventor
Hannel Marker
By S. Loren, Kevin Miller & Hender
Attorneys

122) Family number: 28442039 (CN2543494Y)

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Title: External fixator for humerus, ulna and radius fracture**Priority:** CN20022067740U 20020616

Family:	Publication number	Publication date	Application number	Application date
	<u>CN2543494 Y</u>	20030409	CN20022067740U	20020616

Probable Assignee: SHANG WEIMIN**Assignee(s):^(std):** SHANG WEIMIN**Inventor(s):^(std):** SHANG WEIMIN**Inventor(s):** WEIMIN SHANG

International class A61B17/60 (Advanced/Invention);
 (IPC 8-9): A61B17/60 (Core/Invention)

International class A61B17/60
 (IPC 1-7):

[Classification Explorer](#)**Abstract:**

Source: CN2543494Y The utility model discloses an external fixator for humerus, ulna and radius fracture belonging to the technical field of a medical machinery device. The structure of the external fixator comprises a shoulder unit; upper arm internal lateral short and long distances units; an upper lateral unit; an elbow unit; a front arm scale, radialis, palm and back lateral unit, a swallow tail convex and concave groove and an air vent-hole.

Wherein, the jointed position of the shoulder unit and the upper arm external lateral unit is combined through a ball-type arthrosis insert.

The upper arm external lateral unit and the front arm scale are overlapped with the elbow unit through the insert of the long convex and concave groove. The arch shape curve on the shoulder unit, the upper arm internal lateral unit, the elbow unit, the front arm scale, radialis, palm and back lateral unit; the ball-type arthrosis between the shoulder unit and the upper external lateral unit; the swallow tail convex and concave groove between the upper arm internal lateral short and long distances units, and amongst the upper arm external lateral unit, the front arm scale and the elbow unit; all of which can be inserted and jointed as well as adjusted. The air vent-holes are arranged on each unit and big and small

buckled noses. The utility model has the advantages of smart flexibility, convenient and free operation, release of patient pain and also improving curative effect; furthermore, the utility model also has other advantages such as compact and bearable application, simple producing procedure and low cost. Without adding any equipment, the common injection mould manufacturers can continue to produce.

123) Family number: 1235599 (US3886600A)

© PatBase

Title: JOINT PROSTHESIS

Priority: US19700060804 19700804 US19710162936 19710715 US19730102173 19730909
 US19730401506 19730927 US19730401021 19730926

Family:

Publication number	Publication date	Application number	Application date
<u>AU197131948 A1</u>	19730208	AU19710031948	19710803
<u>AU197473530 A1</u>	19760325	AU19740073530	19740920
<u>BE819395 A1</u>	19750228	BE19740148082	19740830
<u>BR7104957 A0</u>	19730412	BR19710004957	19710803
<u>BR7407924 A0</u>	19750916	BR19740007924	19740924
<u>CA1023101 A1</u>	19771227	CA19740210008	19740925
<u>CA991352 A1</u>	19760622	CA19710119687	19710803
<u>CH587048 A</u>	19770429	CH19740012990	19740925
<u>DE2138881 A1</u>	19720210	DE19712138881	19710803
DE2138881 B2	19740725	DE19712138881	19710803
<u>DE2138881 C3</u>	19790920	DE19712138881	19710803
<u>DE2444668 A1</u>	19750327	DE19742444668	19740918
DE2444668 B2	19790607	DE19742444668	19740918
<u>DE2444668 C3</u>	19800207	DE19742444668	19740918
<u>FR2103930 A5</u>	19720414	FR19710028484	19710803
<u>FR2244445 A1</u>	19750418	FR19740031412	19740917
<u>FR2244445 B1</u>	19790216	FR19740031412	19740917
<u>GB1306027 A</u>	19730207	GB19710035093	19710727
<u>GB1479693 A</u>	19770713	GB19740035871	19740814
<u>JP50060092 A2</u>	19750523	JP19740110425	19740925
<u>NL7412032 A</u>	19750401	NL19740012032	19740910
<u>SE392566 B</u>	19770404	SE19710009932	19710803
<u>SE392566 C</u>	19770714	SE19710009932	19710803
<u>SE411510 B</u>	19800114	SE19740012090	19740925
<u>SE411510 C</u>	19800424	SE19740012090	19740925
<u>SE7412090 A</u>	19750327	SE19740012090D	19740925
<u>US3886600 A</u>	19750603	US19730401021	19730926
<u>US3938198 A</u>	19760217	US19730401506	19730927

Probable Assignee: CUTTER LAB**Assignee(s):^(std):** CUTTER LAB INC BERKELEY CAL US ; JOINT PROSTHESIS CUTTER LABORA ; CUTTER LAB

Assignee(s): CUTTER LAB INC ; JOINT PROSTHESIS CUTTER LABORATO US ; JOINT PROSTHESIS CUTTER LABORATO ; CUTTER LABORATORIES INC TE BERKELEY ORNIE VER ST V AM ; STUBSTAD JAMES A ; KAHN PAUL ; CUTTER LABOR INC ; CUTTER LABORATORIES ; CUTTER LABORATORIES INC ; CUTTER LABORATORIES INC BERKELEY CAL US ; CUTTER LABORATORIES INC BERKELEY CALIF V ST A ; CUTTER LABORATORIES INC PAUL KAHN AND JAMES ALFRED STOKSTAD

Inventor(s):^(std): KAHN P ; KAHN PAUL ; STUBSTAD J A ; STUBSTAD JAMES A ; STUBSTAD JAMES ALFRED ; STUBSTAD J ; KALM P

Inventor(s): ALFRED STUBSTAD JAMES ; J A STUBSTAD ; JAMES ALFRED STUBSTAD ; STUBSTAD JAMES ALFRED LAFAYETTE ; STUBSTAD JAMES ALFRED LAFAYETTE CALIF V ST A ; KAHN PAUL SAN FRANCISCO ; P KAHN ; PAUL KAHN

International class
(IPC 8-9): A61F2/30 A61F2/32 A61F2/38 A61F2/42 A61L27/00 A61L27/04 A61L27/34 A61L27/56 (Advanced/Invention);
A61F2/00 A61F2/34 A61F2/36 A61F2/38 (Advanced/Non-invention);
A61F2/30 A61F2/38 A61F2/42 A61L27/00 (Core/Invention);
A61F2/00 A61F2/32 A61F2/36 A61F2/38 (Core/Non-invention)

International class
(IPC 1-7): A61F1/00 A61F1/04 A61F1/06 A61F1/24

CPC: A61F2/3804 A61L27/34 Y10S128/21 A61L27/56 A61F2/30767 A61F2/30907 A61F2/30965 A61F2/3662 A61F2/38 A61F2/4225 A61F2/4241 A61F2002/3007 A61F2002/30448 A61F2002/30461 A61F2002/30462 A61F2002/30563 A61F2002/30596 A61F2002/30906 A61F2002/30914 A61F2002/3092 A61F2002/3429 A61F2002/3448 A61F2002/3631 A61F2220/005 A61F2220/0075 A61L27/04

European class: A61F2/30L A61F2/30L4 A61F2/38B A61F2/42H A61L27/04 A61L27/34 A61L27/56 K61F2/30A1W3L K61F2/30A3T11 K61F2/30A3T12 K61F2/30A3T8 K61F2/30A3W24A K61F2/30A3W8 K61F2/30L K61F2/30L3 K61F2/30L4N8 K61F2/30L5 K61F2/30M4 K61F2/34G K61F2/34M3 K61F2/36C2G K61F2/36D K61F2/38 K61F2/42F K61F220/00T11 K61F220/00T8

US class: 128/DIG.21 623/20.24 623/22.15

[Classification Explorer](#)

Cited documents: US3805300 A, US3739403 A, US3623212 A, US3623164 A, US3593342 A, US3545008 A, US3462765 A, US2679245 A, FR1047640 A, DE939226 A,

Forward Citations: WO9921515, WO9710776, WO9710776, WO9210150, WO9116014, WO8903663, WO16010895, WO11022258, WO03047470, WO0123014, USRE43282, USD610686, US9649117, US9642632, US9603711, US9579110, US9566075, US9517093, US9495483, US9486226, US9452051, US9451972, US9439767, US9408615, US9387079, US9381025, US9375222, US9370427, US9364584, US9358018, US9333085, US9326780, US9320620, US9314256, US9308091, US9308053, US9308005, US9295482, US9295481, US9286686, US9249055, US9241725, US9241724, US9220517, US9220516, US9216025, US9186254, US9186161, US9180015, US9125753, US9125673, US9125672, US9113921, US9113914, US9107680, US9107679, US9089342, US9084617, US9072531, US9066728, US9055953, US9023050, US9020788, US9017334, US8998915, US8974539, US8965088, US8961518, US8951260, US8951259, US8945230, US8932363, US8926706, US8906107, US8906022, US8882847, US8862202, US8852284, US8849621, US8834573, US8814946, US8808303, US8771365, US8768028, US8735773, US8709089, US8702809, US8690945, US8682052, US8657827, US8641716, US8634617, US8623026, US8617242, US8617172, US8585708, US8568480, US8568479, US8562618, US8562611, US8561278, US8556983, US8556907, US8556906, US8551169, US8551103, US8551102, US8551099, US8545571, US8545569, US8529630, US8506642, US8500740, US8480754, US8460304, US8439926, US8377129, US8369926, US8366771, US8343218, US8337507, US8337501, US8306601, US8265730, US8234097, US8226697, US8187312, US8128619, US8123813, US8122582, US8112142, US8105330, US8083802, US8083745, US8077950, US8066708, US8062302, US8036729, US7981161, US7981158, US7881768, US7803193, US7799077, US7796791, US7776098, US7758653, US7647123, US7572295, US7449019, US7400930, US7309336, US7282061, US7267683, US7255712, US7150747, US7135044, US7069087, US6997941, US6984236, US6878155, US6875235, US6832997, US6767347, US6749605, US6733496, US6726685, US6695844, US6695839, US6652592, US6645204, US6645203, US6638276, US6547810, US6517568, US6482204, US6475242, US6461353, US6391028, US6350262, US6283960, US6261311, US6245111, US6221110, US6214001, US6176857, US6168593, US6135999, US6132470, US6126682, US6122549, US6099514, US6095149, US6090998, US6073051, US6068628, US6007570, US6007533, US6004320, US5997543, US5984970, US5984968, US5980504, US5954716, US5899942, US5826304, US5735905, US5714105, US5658516, US5534033, US5496371, US5489306, US5443512, US5405401, US5405400, US5397358, US5387243, US5222985, US5219363, US5171268, US5147408, US5133746, US5108432, US5062854, US5011497, US5002580, US4978354, US4957510, US4938767, US4919667, US4919665, US4888013, US4880426, US4839215, US4813961, US4790846, US4784663, US4731088, US4718911, US4714467, US4650489, US4642124, US4551863, US4502161, US4491987, US4483331, US4454612, US4406023, US4365359, US4336618, US4314381, US4313232, US4307472, US4304011, US4292695, US4292694, US4281420, US4280233, US4268468, US4261063, US4255820, US4224699, US4213208, US4206517, US4198713, US4158895, US4101985, US4089071, US4024639, US4012796, US3934347, US2014296988, US2011238073, US2011230888, US2011218584, US2011218539, US2011213431, US2011213430, US2011213429, US2011213428, US2011213427,

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US2009312805, US2009306676, US2009276045, US2009228113, US2009222103,
US2009222014, US2009076371, US2009048682, US2008281426, US2008281329,
US2008281328, US2008275452, US2008255675, US2008200990, US2008195220,
US2008195219, US2008195216, US2008188943, US2008091274, US2008091252,
US2008058910, US2008051859, US2008039941, US2008039908, US2008015433,
US2007276224, US2007233269, US2007203430, US2007100462, US2007083266,
US2007015995, US2006149228, US2005267584, US2005203634, US2005202371,
US2005187599, US2005177244, US2005149199, US2005149011, US2005143836,
US2005137710, US2005085915, US2004243246, US2004204760, US2004193151,
US2004167390, US2004153079, US2004138754, US2004127963, US2004111137,
US2004102824, US2004030398, US2004030386, US2004002766, US2003181964,
US2003130736, US2003120347, US2002087274, JP4226651, JP3380563, GB2169512,
FR2525105, FR2485367, FR2485366, FR2485365, FR2282852, FR2194123, EP2754419,
EP2710967, EP2671522, EP2671521, EP2671520, EP2649951, EP2520255,
EP2335654, EP2324799, EP2292189, EP2292188, EP2145604, EP1955678,
EP0909149, EP0648478, EP0518278, EP0454645, EP0269745, EP0242719,
EP0057597, DE4413037, DE4413037, DE4004475, DE3130732, DE2660458,
DE2641906, DE2614170, DE2610922, AU730474, AU642158,

Source: US3886600A This prosthesis for replacement of a skeletal hinged joint comprises a unitary member of elastomer having a central hinge portion with a stem at each end, the stems being inclined with respect to each other. Each stem has a base adapted for insertion into a medullary canal of a bone of the joint. The hinge has a web portion lying between thicker end portions adjoining the stems, to provide uniplanar hinging movement, the angle of inclination lying in this plane and providing a suitable normal rest position for the joint where the prosthesis has no restorative tensile or compressive forces. The elastomer is internally reinforced throughout, including the web. An open-pore, three-dimensional reticular outer layer over the stems insures tissue ingrowth right into this outer layer, thereby providing firm anchorage, the hinge portion being free from such tissue ingrowth.

124) Family number: 4667866 (US5029841A)

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Title: Supply magazine for stacked sheets**Priority:** DE19893906984 19890304 DE19893942326 19891221 DE19905009239 19901218
DE19906009239 19900301**Family:**

Publication number	Publication date	Application number	Application date
<u>AT123642 E</u>	19950615	AT19900124555T	19901218
<u>DE3906984 A1</u>	19900906	DE19893906984	19890304
<u>DE3942326 A1</u>	19910627	DE19893942326	19891221
<u>DE59009239 D1</u>	19950720	DE19905009239	19901218
<u>DE69009239 D1</u>	19940707	DE19906009239	19900301
<u>DE69009239 T2</u>	19950112	DE19906009239T	19900301
<u>EP0386627 A2</u>	19900912	EP19900103981	19900301
<u>EP0386627 A3</u>	19910410	EP19900103981	19900301
<u>EP0386627 B1</u>	19940601	EP19900103981	19900301
<u>EP0436885 A2</u>	19910717	EP19900124555	19901218
<u>EP0436885 A3</u>	19911211	EP19900124555	19901218
<u>EP0436885 B1</u>	19950614	EP19900124555	19901218
<u>ES2075125 T3</u>	19951001	ES19900124555T	19901218
<u>JP2305725 A2</u>	19901219	JP19900053472	19900305
<u>JP2736288 B2</u>	19980402	JP19900404510	19901220
<u>JP2839323 B2</u>	19981216	JP19900053472	19900305
<u>JP6154240 A2</u>	19940603	JP19900404510	19901220
<u>US5029841 A</u>	19910709	US19900486981	19900301
<u>US5147363 A</u>	19920915	US19900629996	19901219

Probable Assignee: KODAK AG**Assignee(s):**^(std) ANTON HERURE ; EASTMAN KODAK CO ; HAERLE ANTON PROF DR ; HAERLE ANTON ; KODAK AG ; HARLE ANTON**Assignee(s):** HAERLE ANTON PROF DR 4400 MUENSTER DE ; KODAK AKTIENGESSELLSCHAFT ; KODAK AG 7000 STUTTGART DE ; KODAK AG 70327 STUTTGART ; KODAK AG 70327 STUTTGART DE ; HAERLE ANTON PROF DR 48161 MUENSTER DE ; HARLE ANTON PROF DR ; IISUTOMAN KODATSUKU CO ; EASTMAN KODAK COMPANY ; EASTMAN KODAK CO ROCHESTER N Y ; EASTMAN KODAK CO ROCHESTER N Y US**Inventor(s):**^(std) ANTON OZUBUARUTO ; ETTISCHER HELMUT ; ANTON HERURE ; HAERLE ANTON ; HAERLE ANTON PROF DR ; HERUMUUTO ETEISHIYAA ; OSWALD ANTON ; HARLE ANTON PROF DR**Inventor(s):** HERUMUUTO ETEISHAA ; OSWALD ANTON 7300 ESSLINGEN DE ; OSWALD ANTON D 7300 ESSLINGEN ; OSWALD ANTON D 7300 ESSLINGEN DE ; HAERLE ANTON PROF DR 48161 MUENSTER DE ; ANTON OZUARUTO ; ETTISCHER HELMUT 7302 OSTFILDERN DE ; ETTISCHER HELMUT D 7301 OSTFILDERN 1 ; ETTISCHER HELMUT D 7301 OSTFILDERN 1 DE**Designated states:** AT CH DE ES FR GB IT LI NL SE**International class**
^{(IPC 8-9):} A61B17/56 A61B17/58 A61B17/86 B65H1/04 F16B35/04 G03G15/00 (Advanced/Invention);
A61B17/80 (Advanced/Non-invention);
A61B17/56 A61B17/58 A61B17/68 B65H1/04 F16B35/04 G03G15/00 (Core/Invention)**International class**
^{(IPC 1-7):} A61B17/56 A61B17/58 B65H1/04 B65H31/20 F16B35/04 F16B35/04 G03G15/00**CPC:** A61B17/8047 A61B17/8605 A61B17/8625 F16B35/04 F16B35/048 B65H1/04**European class:** A61B17/86A A61B17/86B B65H1/04 F16B35/04 F16B35/04B4 K61B17/80D6**US class:** 271/171 271/223 606/305 606/309 606/328 606/72 606/73

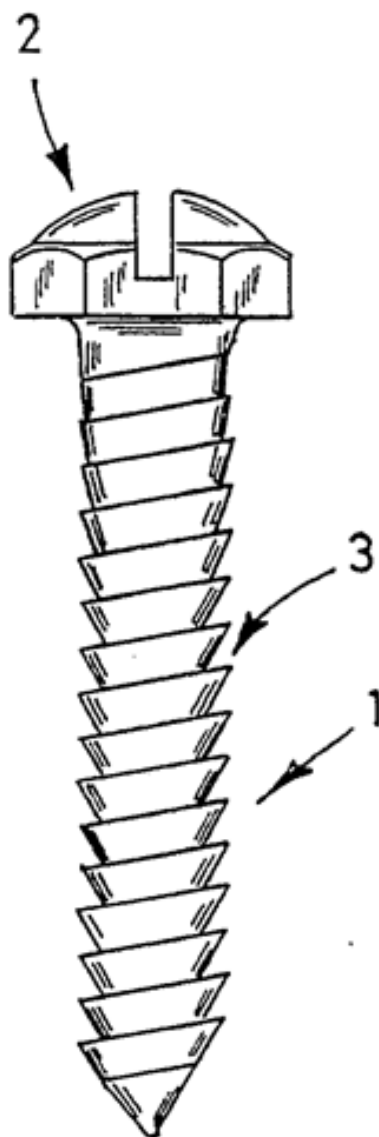
Cited documents: WO9002526 A1, WO8904150 A1, WO8900028 A1, US4943043 A, US4887595 A, US4836196 A, US4786042 A, US4773638 A, US4569338 A, US4493317 A, US4468200 A, US4463753 A, US4280692 A, US3997138 A, US3695259 A, US3488779 A, US3466748 A, US324768 A, US3236141 A, JP55084731 A2, GB2015346 A1, FR2642958 A1, FR1266386 A, EP0325682 A1, EP0242708 A2, EP0201024 A1, EP0181433 A1, DE8713879 U, DE8416663 U, DE3027138 A1, DE2951199 C2, DE251246 A, DE2416782 B2, DE2243964 C3, DE2243964 A1, DE2013968 A1,

Forward Citations: WO9410928, WO04043276, USD630327, USD630326, USD626230, USD625817, US9636151, US9636146, US9629669, US9615866, US9603643, US9597119, US9566092, US9545274, US9532815, US9522021, US9510865, US9504582, US9504496, US9498273, US9498266, US9480517, US9474561, US9468471, US9468469, US9468468, US9451997, US9451993, US9451989, US9451987, US9439683, US9433453, US9414863, US9408638, US9393047, US9358044, US9333009, US9308034, US9308027, US9216041, US9216039, US9211150, US9199808, US9173681, US9168071, US9168069, US9161793, US9144444, US9113959, US9101426, US9101404, US9095444, US9072564, US9055978, US9050148, US9050139, US9011491, US8998960, US8998959, US8979904, US8936623, US8932332, US8926672, US8926670, US8920472, US8911478, US8911477, US8906075, US8900272, US8894657, US8870928, US8852239, US8845649, US8828058, US8814913, US8696711, US8651866, US8636740, US8613760, US8591560, US8591515, US8556938, US8518086, US8506599, US8475498, US8460345, US8444681, US8419779, US8394133, US8377067, US8366745, US8357183, US8357182, US8353932, US8292926, US8292892, US8273089, US8211145, US8162979, US8162948, US8152810, US8142485, US8123785, US8114158, US8105368, US8100915, US8092500, US8070786, US8066739, US8048131, US8043089, US8029285, US8012177, US8002270, US7951176, US7951170, US7901437, US7837716, US7776076, US7766915, US7637496, US7578836, US7464927, US7455695, US7419499, US7377509, US7314467, US7311712, US7306604, US7235079, US7214227, US7204838, US7052499, US6989014, US6984235, US6979334, US6945975, US6945974, US6918912, US6830245, US6770075, US6730093, US6682561, US6655566, US6527777, US6468277, US6395030, US6325803, US6302390, US6299615, US6296642, US6170817, US6149653, US6129728, US6030162, US5984924, US5976141, US5964768, US5871486, US5814046, US5797912, US5776134, US5709382, US5607428, US5520687, US5498265, US5403136, US2011301652, US2011218579, US2011210501, US2011137355, US2011066191, US2010179600, US2009295072, US2009281579, US2009281576, US2009281571, US2009206544, US2009105755, US2009076620, US2008249573, US2008018045, US2007282342, US2006269903, US2006149235, US2006122612, US2006113723, US2006083603, US2006079893, US2006025771, US2005288794, US2005261688, US2005216000, US2005192580, US2005065521, US2005038434, US2005010219, US2005010218, US2005010217, US2004188924, US2004092938, US2004006346, US2003057634, US2003014054, US2002128654, FR2846869, FR2739151, FR2683445, EP1416872, EP0592266, DE20014648, DE10000591, AU682839,

Abstract:

Source: US5029841A A supply magazine (1) for stacked sheets (5) comprises on its bottom surface a slideway (13, 14) adapted for cooperation with a limiting member (11, 12) allowing a continuous size adjustment. The slideway (13, 14) is moreover provided at selected points with abutments (37); and a limiting member (11, 12) which has complementary counterabutments can be arrested by positive engagement with the abutments respectively against shifting movement on the slideway (13, 14) in positions corresponding to given sheet sizes.

PatBase - US5147363_A

Fig. 1

125) Family number: 49612831 (US2013012955A)

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Title: SYSTEM AND METHOD FOR PEDICLE SCREW PLACEMENT IN VERTEBRAL ALIGNMENT

Priority: US20100314619P 20100317 US20110634976 20110225 WO2011US26166 20110225

Family:

Publication number	Publication date	Application number	Application date
EP2547272 A2	20130123	EP20110756709	20110225
EP2547272 A4	20141126	EP20110756709	20110225
US2013012955 AA	20130110	US20110634976	20110225
WO11115738 A2	20110922	WO2011US26166	20110225
WO11115738 A3	20120105	WO2011US26166	20110225

Probable Assignee: SPINAL USA LLC

Assignee(s):^(std): LIN DEAN ; SPINAL USA INC

Assignee(s): SPINAL USA LLC ; MC ADMIN CO LLC

Inventor(s):^(std): LIN DEAN

Agent(s): KIPA AB; EFRON MARGARET H ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A61B17/16](#) [A61B17/56](#) [A61B17/70](#) [A61B17/86](#) [A61B17/88](#) [A61M29/00](#) (Advanced/Invention)

CPC: [A61B17/1671](#) [A61B17/7001](#) [A61B17/708](#) [A61B17/8635](#) [A61B17/8897](#) [A61M29/00](#)

European class: [A61B17/16S4](#) [A61B17/70T2B5](#) [A61M29/00](#) [K61B17/70B](#) [K61B17/86B4](#) [K61B17/88T](#)

US class: [606/104](#)

[Classification Explorer](#)

Cited documents: WO9600530 A1, WO09150175 A1, WO08040537 A1, US8043343 BB, US5840078 A, US5766221 A, US2010036443 AA, US2009036746 AA, US2008255556 AA, US2007239159 AA, US2005143823 AA, US2005043742 AA, US2004243178 AA, US2004147928 AA,

Forward Citations: WO17007891, WO15003224, US9545280, US9480516, US9241739, US9204906, US2017086896, US2015073487, EP3109916,

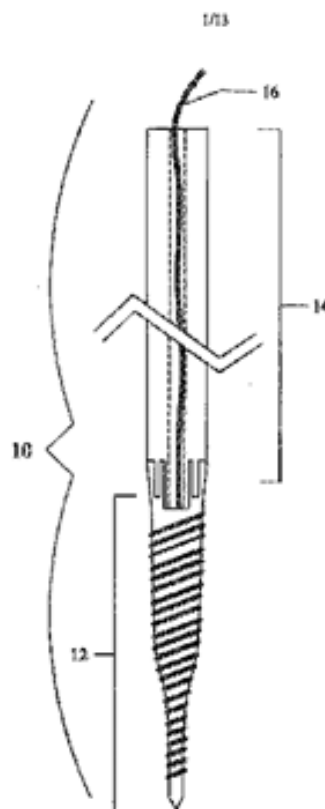
Abstract:

Source: US2013012955A A system and minimally invasive method for the placement of pedicle screws without the use of a trocar needle and/or guidewires. The system and method comprises at least one pedicle finder and at least one dilator. The pedicle finder preferably comprises an extender that is removably attached to a pedicle anchor. Attached to a pedicle anchor is a flexible tether. The extender preferably includes a passage through which the flexible tether extends. The dilator comprises a tubular body with two ends, where a first end comprises a means for securing the dilator into bony process of vertebra and a second end comprises at least two arm attachments. The tubular body of the dilator is configured to slide easily over an extender and secure the first end into bony vertebra to prevent the dilator from dislodging. The arm attachment of the second end of the dilator can be interconnected with another arm attachment via a linking element and/or the dilator can be secured to a stable object such as a table via a securing element.

PatBase - W011115738_A2

WO 2013/115738

PCT/US2011/026046

**FIG. 1**

Title: CONICAL, THREADED SUBTALAR IMPLANT**Priority:** US20040777514 20040211 US20050219603 20050901

Family:	Publication number	Publication date	Application number	Application date
	US2005177165 AA	20050811	US20040777514	20040211
	US2006004378 AA	20060105	US20050219603	20050901
	US7922730 BB	20110412	US20050219603	20050901
	US8628581 BB	20140114	US20040777514	20040211
	WO05077287 A1	20050825	WO2005US01743	20050120

Probable Assignee: OSTEOMED LP**Assignee(s):**^(std) AHMAD SHAHER A ; OSTEOMED L P ; OSTEOMED LLC ; OSTEOMED LP ; THORNHILL LISA R ; ZANG KERRY**Inventor(s):**^(std) RAINES JR AARON T ; THORNHILL LISA R ; ZANG KERRY ; AHMAD SHAHER A ; RAINES AARON T JR**Inventor(s):** RAINES AARON T ; RAINES AARON ; THORNHILL LISA ; AHMAD SHAHER ; RAINES AARON TJR**Agent(s):** BAKER BOTTS LLP; FULBRIGHT AND JAWORSKI LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [A61B17/56](#) [A61B17/58](#) [A61F2/42](#) (Advanced/Invention);
[A61B17/86](#) [A61F2/00](#) [A61F2/30](#) (Advanced/Non-invention);
[A61B17/56](#) [A61B17/58](#) [A61F2/42](#) (Core/Invention);
[A61B17/68](#) [A61F2/00](#) [A61F2/30](#) (Core/Non-invention)

International class
(IPC 1-7): [A61B17/58](#) [A61B17/86](#) [A61F2/42](#)

CPC: [Y10S606/916](#) [A61F2/4202](#) [A61B17/562](#) [A61F2002/3021](#) [A61F2002/30214](#)
[A61F2002/30215](#) [A61F2002/30563](#) [A61F2002/30565](#) [A61F2002/30594](#) [A61F2002/30616](#)
[A61F2002/30777](#) [A61F2002/3079](#) [A61F2002/30851](#) [A61F2002/30858](#) [A61F2002/30874](#)
[A61F2002/4207](#) [A61F2002/4223](#) [A61F2230/0067](#) [A61F2310/00023](#)

European class: [A61B17/56J](#) [A61F2/42A](#) [K61F2/00Y2F](#) [K61F2/30A2Y2F](#) [K61F2/30A2Y2M](#)
[K61F2/30A2Y2S](#) [K61F2/30A3W10](#) [K61F2/30A3W24](#) [K61F2/30A3W32S](#) [K61F2/30A3W8](#)
[K61F2/30L2A11](#) [K61F2/30L2A5](#) [K61F2/30L2Q2](#) [K61F2/30L2Q22C](#) [K61F2/30L2Q3](#)
[K61F2/42A3](#) [K61F2/42A33](#) [K61F230/00Y2](#) [K61F310/00A2E](#)

US class: [606/104](#) [606/301](#) [606/301S](#) [606/321](#) [606/73](#) [606/916](#) [606/99](#) [606/99P](#) [623/21.18](#)
[623/21.180P](#)

[Classification Explorer](#)

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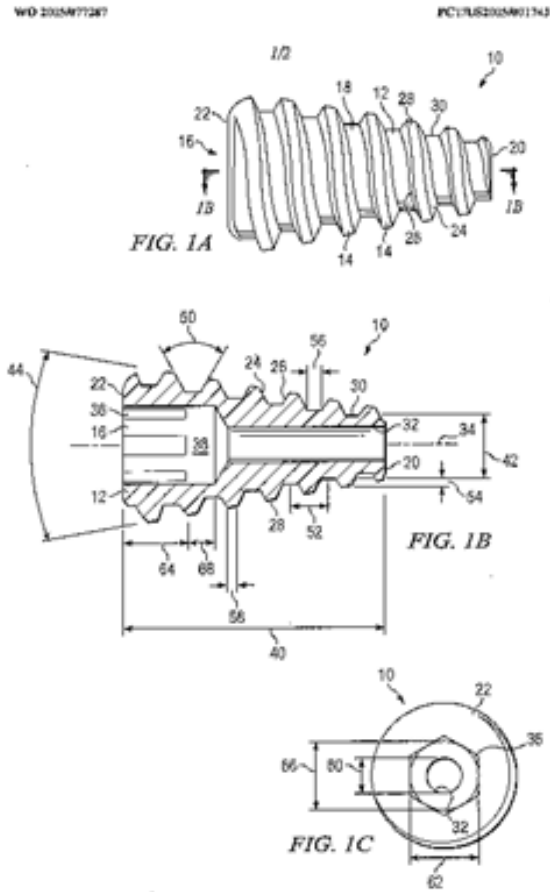
Forward Citations: WO15017860, WO12100054, WO10054400, WO07052094, US9610109, US9597192, US9566058, US9452007, US9370429, US9314237, US9289218, US9204971, US9078757, US9005301, US8900301, US8784489, US8764830, US8747480, US8740935, US8628582, US8574305, US8551137, US8439593, US8398717, US8357203, US8292955, US8292954, US8147546, US8100916, US8080015,

US8002778, US7967826, US7905907, US7896917, US7837718, US7569061, US7235079, US7033398, US2016128741, US2013261630, US2013211522, US2011320005, US2011224790, US2011110716, US2011029094, US2010280625, US2010228353, US2010168864, US2010121390, US2010087821, US2010049244, US2009292313, US2009281581, US2009276046, US2009099664, US2009082874, US2009005871, US2008275459, US2008255501, US2008208349, US2008200989, US2007173954, US2007043378, US2006293679, US2006190088, US2006106390, US2005273003, US2005229433, US2005197711, US2005187636, US2005149187, GB2477481, GB2477481, EP3061423, EP2156795, EP2156795, CN104337591, AU2004316283,

Abstract:

Source: US2005177165A A medical implant includes a body having a conical portion and adapted for implantation into a person's body. A plurality of threads formed around an exterior surface of the conical portion of the body are adapted to help secure the implant in place within the person's body.

PatBase - W005077287_A1



0) DE19544551A1 – EXTERNAL SURGICAL JOINT FIXATION DEVICE EXTERNE...

127) Family number: 11979084 (DE19544551A1)

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Title: External surgical joint fixation device

Priority: FR19940014274 19941129

Family:	Publication number	Publication date	Application number	Application date
	<u>DE19544551 A1</u>	19960613	DE19951044551	19951129
	<u>FR2727303 A1</u>	19960531	FR19940014274	19941129

Probable Assignee: AGHION MICHAEL

Assignee(s):^(std): AGHION MICHAEL ; AGHION MICHEL

Assignee(s): AGHION MICHEL COURBEVOIE FR

Inventor(s):^(std): AGHION MICHEL

Inventor(s): AGHION MICHEL COURBEVOIE FR

International class
(IPC 8-9): A61B17/60 (Advanced/Invention);
A61B17/60 (Core/Invention)

International class
(IPC 1-7): A61B17/60

CPC: A61B17/60

European class: A61B17/60

[Classification Explorer](#)

Cited documents: FR2697994, FR2632515, DE8901908 U,

Forward Citations: FR2749499, DE10129942, DE10129942,

Abstract:

Source: DE19544551A1 The fixation device (F) has two arms (1,2) which can move relative to each other to form a V-shaped construction. Each arm is equipped with a movable clamp block which contains two clamp holders (4) arranged on a guide piece (3). The clamp holders support rotatable clamp holder heads (5) which have two through holes (6) at right angles to each other which accept a clamp shaft (7). Two jaws (52,53) form a clamp to hold the bone implant frame and which can be operated by two screws (20). The guide piece is cruciform with two extension pieces which allow for the fixing and moving of the guide piece on an arm and also support the clamp holder.

PatBase - FR2727303_A1

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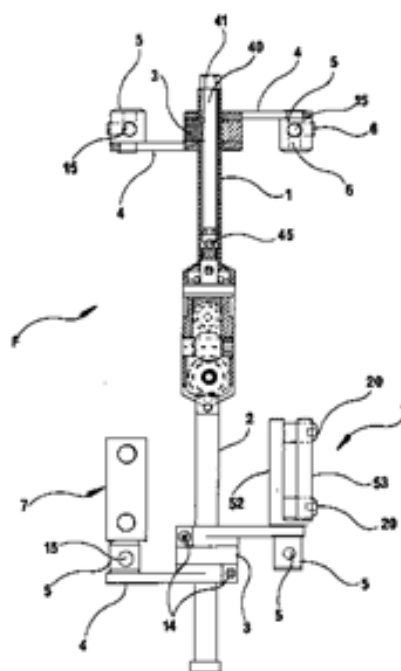


FIG. 1

128) Family number: 42113639 (WO08098307A1)

© PatBase

Title: SURGICAL BONE CLAMP**Priority:** AU20070900838 20070215

Family:	Publication number	Publication date	Application number	Application date
	<u>WO08098307 A1</u>	20080821	WO2008AU00202	20080215

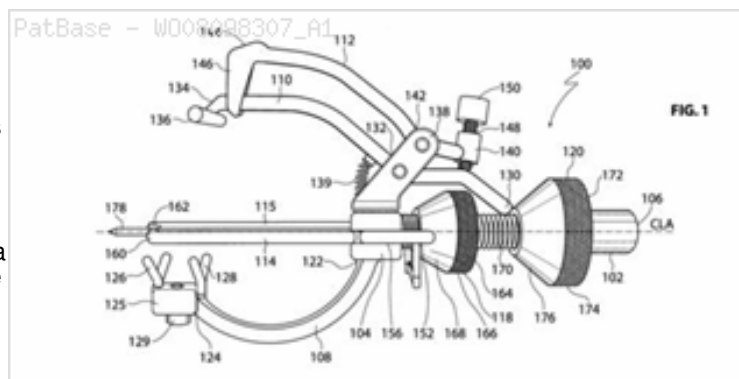
Probable Assignee: LYE ROBERT**Assignee(s):^(std):** LYE ROBERT**Inventor(s):^(std):** LYE ROBERT**Agent(s):** SPRUSON AND FERGUSON

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B17/15 A61B17/17 (Advanced/Invention);
 (IPC 8-9): A61B17/14 A61B17/16 (Core/Invention)

CPC: A61B17/1753**European class:** A61B17/17S2P[Classification Explorer](#)**Cited documents:** US5624444, US4896663, US2005113841, EP1813215, EP1588669,**Forward Citations:** WO11000036,**Abstract:**

A surgical instrument (100) for clamping to a ball end of a femur. The instrument includes a body (102) and first (108), second (110) and third (112) clamping arms. The body (102) has a central longitudinal axis (CLA). The first clamping arm (108) is connected to the body (102) and has a proximal end (122) and a distal end (124). The second clamping arm (110) is connected to the body (102) and has a proximal end (130) and a distal end (134). The third clamping arm (112) is connected to the body (102) and has a proximal end (140) and a distal end (144). The distal ends of at least two of the first (108), second (110) and third (112) clamping arms are moveable toward the central longitudinal axis (CLA) of the body (102) to permit the surgical instrument (100) to clamp around at least a portion of the ball end of the femur. The at least two clamping arms are independently moveable relative to one another.



129) Family number: 6110070 (SU749392T)

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Title: ARM JOINT ENDOPROTHESIS**Priority:** SU19782652893 19780602

Family:	Publication number	Publication date	Application number	Application date
	SU749392 T	19800723	SU19782652893	19780602

Probable Assignee: VOROSH G MED I**Assignee(s):^(std):** VOROSH G MED I**Assignee(s):** VOROSHILOVGRADSKIJ G MED INST ; VOROSHILOVGRADSKIJ G MED INSTITUT**Inventor(s):^(std):** GRABOVOJ ADZHONALD F ; RODICHKIN VLADIMIR A**Inventor(s):** RODICHKIN VLADIMIR A SU ; GRABOVOJ ADZHONALD F SU

International class
^(IPC 8-9): [A61F2/40](#) (Advanced/Invention);
[A61B17/74](#) [A61B17/86](#) [A61F2/00](#) [A61F2/30](#) [A61F2/32](#) (Advanced/Non-invention);
[A61F2/30](#) (Core/Invention);
[A61B17/68](#) [A61F2/00](#) [A61F2/32](#) (Core/Non-invention)

International class
^(IPC 1-7): [A61F1/06](#)

CPC: [A61B17/742](#) [A61B17/8665](#) [A61B17/8695](#) [A61F2/40](#) [A61F2/4003](#) [A61F2/4014](#) [A61F2/4081](#)
[A61F2002/30434](#) [A61F2002/30438](#) [A61F2002/30443](#) [A61F2002/30663](#) [A61F2002/30665](#)
[A61F2002/30886](#) [A61F2002/3216](#) [A61F2002/4062](#) [A61F2220/0041](#)

European class: [A61F2/40](#) [K61B17/74D](#) [K61B17/86N](#) [K61B17/86W](#) [K61F2/00T7B](#) [K61F2/00T7N](#)
[K61F2/00T7W](#) [K61F2/30A3T7B](#) [K61F2/30A3T7N](#) [K61F2/30A3T7W](#) [K61F2/30A4Z10](#)
[K61F2/30A4Z12](#) [K61F2/30L2S4](#) [K61F2/32B2](#) [K61F2/40A](#) [K61F2/40C](#) [K61F2/40D4](#)
[K61F2/40G](#) [K61F220/00T7](#)

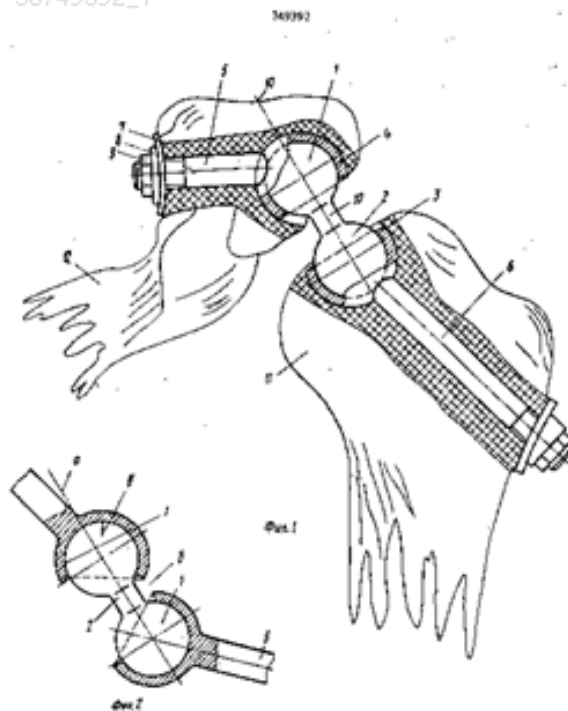
[Classification Explorer](#)

Forward Citations: WO9834567, WO0149218, WO0009044, WO0009044, WO0009038, US9545312,
US9474619, US9433507, US9408652, US9283075, US9089435, US8974536,
US8864834, US8303665, US8277511, US8187282, US8080063, US7887544,
US7678150, US7470287, US7465319, US6755862, US5702457, US5176711,
NL1009832, NL1009831, NL1005234, FR2863865, EP1543801, EP0966240,

Abstract:

Source: SU749392T 1 Invention relates to medical technique, namely the joint endoprosthesis. Known shoulder joint prosthesis which contains bonded together distal and proximal part and zlementy attachment 1. Odiako light shows zndoprotez s provides a full range of motion reduction hands and maximize the preservation of the proximal humerus, which reduces functional | f1nyuy zffektivnost grafting. aim of the invention is to regain full range of motion and maximum preservation of the proximal humerus. This is achieved in that the distal and proximal prosthesis portion vsholnen in the form of ball bearings, mounted in a hollow spherical cup, and attachment zlementy – in the form of threaded rods and nuts, washers, spol soediiennyh spherical cups. Fig. 1 shows zndoprotez shoulder joint, cross-section; by VNG. 2 – diagram illustrating the position of parts zndoproteza when approaching walls spherical cups. endoprosthesis comprises a distal and proximal part, made in the form of ball bearings 1 and 2, which are installed in the hollow spherical cups 3 and 4. fixing element is formed as threaded rods 5 and 6 with 7 support washers, leveling washers and nuts 8 9 connected hollow spherical cups 3 and 4. Ball joints 1 and 2 is rigidly bonded transition crosspiece 10 extending through both prrdolnuyu axis and supports. Transverse Headroom is 03–0,5 diameter poles. This provides sufficient sootnosheie both dynamic and fatigue strength. Length jumpers received equal at least twice the thickness of the walls enfold spherical cups 3 and 4 to the wall at the moment of convergence in cups used were not infringed periarticular soft tissues (see Fig. 2). diameter of ball bearings is 0,5–0,2 diameter of the humeral head 11. This provides an adequate margin of the endoprosthesis and smooth rotation. Covering the inner contour of the bowl is formed in the form of supports and scharovyh depth of at least 2/3 of their diameter. Details of the attachment of spherical cups 3 and 4 are in the form of rods 5 and 6, having at the outer ends of the threads. Inner ends are rigidly affixed to the external surface of their tyl tion spherical cups with deviation from the longitudinal axis of the sphere at angles defining the medium–physiological position of the upper limb. These angles korriruyuts performing implantation process. On the threaded rod portions 5 and 6 are mounted first abutment washers 7 whose profile coincides with the profile of the surface of the bone fixation location is then superimposed alignment vayuts schayby 8 providing alignment surfaces for the nut 9. Thus obtained uniform circumferential pressure was 9 on the nut bone 11 and 12, precluding deformation of the vertical layer of bone and the formation of unwanted slots between the washers and nuts. The endoprosthesis is used as follows. Endoprosthesis implantation is performed after preliminary drilling a corresponding drill schim transossalnyh channels humerus scapula No 12 with subsequent blowing introduction to these channels rods 5 and 6. After administration of the rods in the bone channels 11 and 12 tons production alternately with water covering the installation of each of the spherical cup and 3 4 relative to the articular surfaces. As each covering spherical cups ustanovleya in position, producing tons of consolidation. Initially applied i.podgon added to bone surfaces bearing washers 7, they impose interim – leveling schayby 8, and then clamp them tons of production and securing rods nuts to 9 pm cost clamping force is determined by the operator. After securing both terminals in bone 11 and 12 checked the degree of freedom motions of the upper extremity and correct movement of the floating element, ie sliding and vraschenie.sharovykh supports 1, 2 cups 3 and 4. Floating element consisting of two ball pit, legs fused together with bows spherical cups, forming a double ball joint, allowing movement of the bones connected with respect to the joint amount equal traffic volumes of each 4 dogo constituting joints, ie more normal range of motion in the shoulder joint. In this case, the amount of movement in the implanted endoprosthesis is limited only by the bone formation in E and soft tissues of the joint and natural fit. Thus, due to the presence of the floating element and endoprosthesis transossalno actuated secured parts in the form of rods, washers and nuts on the ends of the endoprosthesis implantation operation is simplified, shortened the time of its implementation. The force acting on the endoprosthesis, thanks to the double ball joint of the floating element is decomposed into its constituent, which reduces the load on each functional element of the device and increases its durability. Transossalna fixation prosthesis allows preserve the natural volume of the medullary canal of the humerus, prevent high pressure in it, which is extremely painful and prevent fat embolism is a frequent complication of operational data surgical interventions. Of all the elements and parts of the prosthesis is positioned vnekostno

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Изобретение относится к медицинской технике, а именно к эндопротезу плечевого сустава. Известный плечевой суставной протез, содержащий жестко соединенные дистальную и проксимальную части и элемент крепления 1. Одиакосвет показывает, что эндопротез обеспечивает полную свободу движений рук и максимальное сохранение проксимального отдела плеча, что уменьшает функциональную эффективность трансплантации. Цель изобретения – вернуть полную свободу движений и максимальное сохранение проксимального отдела плеча. Это достигается тем, что дистальная и проксимальная части протеза выполнены в виде шаровых подшипников, установленных в полых сферических чашках, а элемент крепления – в виде threaded rods и nuts, washers, соединенных сферических чашек. Фиг. 1 показывает эндопротез плечевого сустава, поперечный разрез; Фиг. 2 – диаграмма, иллюстрирующая положение частей эндопротеза при приближении к стенкам сферических чашек. эндопротез состоит из дистальной и проксимальной частей, выполненных в виде шаровых подшипников 1 и 2, которые установлены в полых сферических чашках 3 и 4. фиксирующий элемент выполнен в виде threaded rods 5 и 6 с 7 опорными прокладками, выравнивающими прокладками и гайками 8 9, соединенными полыми сферическими чашками 3 и 4. Шаровые подшипники 1 и 2 жестко соединены переходным поперечником 10, проходящим через обе продольные оси и опоры. Поперечное пространство составляет 0,3–0,5 диаметра полюсов. Это обеспечивает достаточное соотношение как динамическое, так и усталостное. Длина переходников получена равной по крайней мере в два раза толщине стенок сферических чашек 3 и 4 к стенке в момент схождения в чашках использованных, не нарушая периартикулярных мягких тканей (см. Фиг. 2). диаметр шаровых подшипников 0,5–0,2 диаметра головки плеча 11. Это обеспечивает адекватный запас прочности эндопротеза и плавное вращение. Покрытие внутреннего контура чаши выполнено в виде опор и шаровых подшипников глубиной не менее 2/3 их диаметра. Детали крепления сферических чашек 3 и 4 выполнены в виде стержней 5 и 6, имеющих на наружных концах резьбы. Внутренние концы жестко зафиксированы к наружной поверхности их тыльной стороны сферических чашек с отклонением от продольной оси сферы под углами, определяющими средн-физиологическое положение верхней конечности. Эти углы корректируются при выполнении имплантации процесса. На threaded rod частях 5 и 6 установлены первые опорные прокладки 7, чей профиль совпадает с профилем поверхности места фиксации кости, затем накладывают выравнивающие прокладки 8, обеспечивая выравнивающие поверхности для гайки 9. Таким образом, получается равномерное окружное давление 9 на гайку кости 11 и 12, исключающее деформацию вертикального слоя кости и образование нежелательных щелей между прокладками и гайками. Эндопротез используется следующим образом. Эндопротез имплантируется после предварительного сверления соответствующего сверла трансооссальных каналов в плечевой кости лопатки № 12 с последующим введением в эти каналы стержней 5 и 6. После введения стержней в костные каналы 11 и 12 тоннами производят попеременно с водой покрытие установки каждой из сферической чашки 3 и 4 относительно суставных поверхностей. По мере покрытия сферических чашек устанавливают в положение, производя тоннами консолидации. Сначала применяют i.podgon добавку к костным поверхностям опорных прокладок 7, они накладывают промежуточные – выравнивающие прокладки 8, а затем зажимают тоннами производя и фиксируют стержни гайками 9 по стоимости зажимающей силы, определяемой оператором. После фиксации обоих терминалов в кости 11 и 12 проверяют степень свободы движений верхней конечности и правильное движение плавающего элемента, т.е. скольжение и вращение шаровых подшипников 1, 2 чашек 3 и 4. Плавающий элемент, состоящий из двух шаровых подшипников, шаровых подшипников, соединенных вместе с сферическими чашками, образуя двойной шаровый подшипник, позволяющий движение костей, соединенных с суставом, в объеме, равном объему движения каждой из 4 составляющих суставов, т.е. более нормальный диапазон движений в плечевом суставе. В этом случае, количество движений в имплантированном эндопротезе ограничено только образованием кости в E и мягких тканях сустава и естественным прилеганием. Таким образом, благодаря наличию плавающего элемента и эндопротеза трансооссально закрепленные части в виде стержней, прокладок и гаек на концах эндопротеза имплантация операции упрощается, сокращается время ее выполнения. Сила, действующая на эндопротез, благодаря двойному шаровому подшипнику плавающего элемента разлагается на составляющие, что уменьшает нагрузку на каждый функциональный элемент устройства и увеличивает его долговечность. Трансооссальная фиксация протеза позволяет сохранить естественный объем костного канала плечевой кости, предотвратить высокое давление в нем, которое является чрезвычайно болезненным и предотвращает жировую эмболию, являющуюся частой complication оперативных данных хирургических вмешательств. Из всех элементов и частей протеза размещены внекостно

БЛД ORIGINAL

only one floating element delimited by the soft tissues around the edges of the articular surface of the blade, which provides painless movement. Small size double scharovogo compound allows to save proksimalnsh humerus affixing lolschts natural bed and tendon of the biceps muscles and prevent shortening of the upper limb reimplantation endyproteza if necessary followed by surgery or secondary PROTHESIS arthrodesis. The claims Endoprotee shoulder joint containing bonded between a distal and proximal part and the attachment elements, tlichayuschiys about that, to recover the full range of motion, maximum preservation of the proximal humerus, proximal and distal portions are in the form scharovyh supports mounted a hollow spherical cup, and attachment elements in the form of threaded rods with nuts and washers coupled to the hollow spherical chaschkami. Sources of information received into account in the examination 1. U.S. Patent number 4,003,095, Cl. 3.1 1977.

130) Family number: 53661686 (US2013110116A)

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Title: PATIENT-SPECIFIC GLENOID GUIDES

Priority: US20110552071P 20111027 US20110552079P 20111027 US20120653886 20121017
 US20120653868 20121017 US20120653878 20121017 US20120653893 20121017
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Family:

Publication number	Publication date	Application number	Application date
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US2016361073 AA	20161215	US20160245365	20160824
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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
 CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
 GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA
 LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA
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International class
 (IPC 8-9): [A61B17/17](#) [A61B17/56](#) [A61B17/58](#) [A61B17/60](#) [A61B17/88](#) [A61B19/00](#) [A61B34/10](#)
[A61F2/00](#) [A61F2/28](#) [A61F2/30](#) [A61F2/40](#) [A61F2/46](#) [A61F5/00](#) [B29C33/38](#) [B29C67/00](#)
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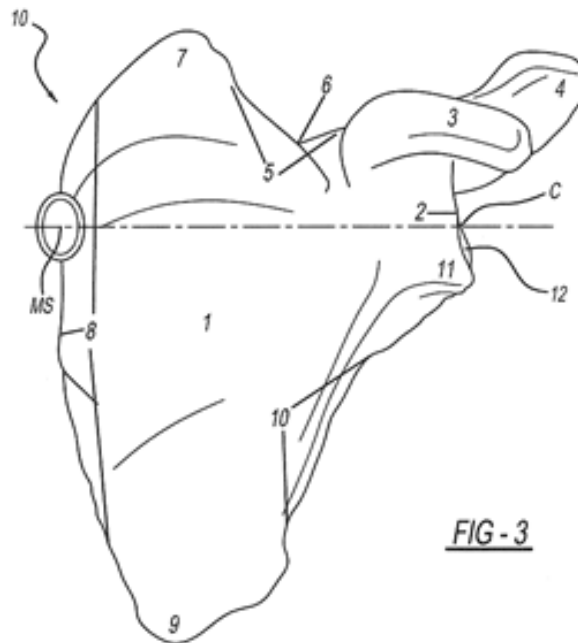
CN1913844 A, CN1729484 A, CN1729483 A, CN1728976 A, CN1630495 A, CN102335742 A, CN102038553 A, CN101111197 A, CA2590534 AA, CA2588907 AA, CA2546965 AA, CA2546958 AA, CA2506849 AA, CA2505419 AA, CA2505371 AA, CA2501041 AA, CA2447694 AA,

Forward Citations: WO16172572, WO16053837, WO15084831, WO15052586, WO14191790, US9642633, US9629725, US9615839, US9610167, US9603711, US9603613, US9597201, US9579107, US9579106, US9572590, US9561040, US9554910, US9545312, US9539013, US9522010, US9517145, US9498345, US9498233, US9480580, US9480490, US9474539, US9456833, US9451973, US9451972, US9445907, US9439659, US9427320, US9408686, US9408616, US9393028, US9387083, US9386993, US9351743, US9345548, US9339278, US9301812, US9295497, US9289253, US9271744, US9241745, US9241725, US9241724, US9237950, US9220517, US9220516, US9204977, US9180015, US9173666, US9173661, US9113971, US9107680, US9107679, US9084618, US9084617, US9066734, US9060788, US9020788, US9005297, US8979936, US8956364, US8920512, US8903530, US8900244, US8764760, US8632547, US2016095709, US2016059489, US2016030067, US2015223941, US2013338673, US2013123850, US2012078258, US2011213376, US2010292743,

Abstract:

Source: US2013110116A A glenoid guide has an upper surface and a lower surface, wherein the lower surface is a patient-specific surface configured as a negative surface of a glenoid face based on a three-dimensional image of a shoulder joint of a patient reconstructed preoperatively from image scans of the shoulder joint of the patient. The glenoid guide includes an anatomic tubular drill guide extending from the upper surface along an anatomic alignment axis configured preoperatively with a patient-specific orientation and insertion location for guiding a glenoid implant into the glenoid face for anatomic shoulder arthroplasty. The glenoid guide includes a reverse tubular drill guide extending from the upper surface along a reverse alignment axis configured preoperatively with a patient-specific orientation and insertion location for guiding a glenoid baseplate into the glenoid face for reverse shoulder arthroplasty.

PatBase - W013062851_A1



131) Family number: 13350015 (WO9848717A1)

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Title: APPARATUS FOR INTERLOCKING TWO CONTIGUOUS, IN PARTICULAR LUMBAR, VERTEBRAE**Priority:** IE19970000323 19970430 WO1998FR00880 19980430

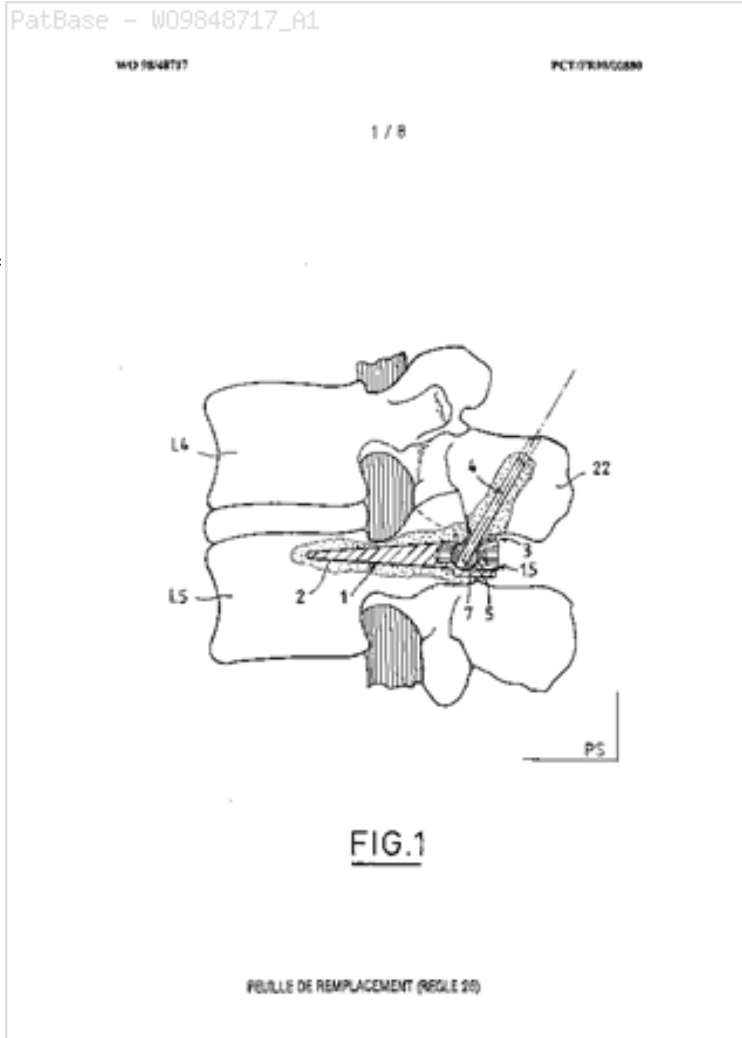
Family:	Publication number	Publication date	Application number	Application date
	<u>EP0996383 A1</u>	20000503	EP19980922912	19980430
	<u>IE80150 B3</u>	19980603	IE19970000323	19970430
	<u>IE970323 A2</u>	19980603	IE19970000323	19970430
	<u>WO9848717 A1</u>	19981105	WO1998FR00880	19980430

Probable Assignee: ESKINA DEVELOPMENTS LIMITED**Assignee(s):^(std):** ESKINA DEVELOPMENTS LIMITED ; ESKINA DEVELOPMENTS LTD ; TAYLOR JEAN ; VILLARET BERNARD ; HERRERA HARMODIO**Inventor(s):^(std):** HERRERA MR HARMODIO ; MR HERRERA HARMODIO ; TAYLOR JEAN ; VILLARET BERNARD ; HERRERA HARMODIO**Inventor(s):** HERRERA HARMODIO MR ; MR HARMODIO HERRERA**Designated states:** AT BE CA CH CY DE DK ES FI FR GB GR IE IT JP LI LU MC NL PT SE US**International class**
(IPC 8-9): A61B17/17 A61B17/70 A61B17/88 A61F2/44 (Advanced/Invention);
A61F2/00 A61F2/02 (Advanced/Non-invention)**International class**
(IPC 1-7): A61B17/70 A61F2/44**CPC:** A61B17/7064 A61B17/1757 A61B17/7032 A61B17/704 A61B2017/7073 A61F2/4405
A61F2/4455 A61F2002/30507 A61F2002/30538 A61F2220/0025 A61F2250/0006**European class:** A61B17/17S4 A61B17/70B2 A61B17/70B5F A61B17/70P2 A61F2/44A K61B17/70S
K61F2/00T33V K61F2/02G1 K61F2/30A3T33V K61F2/30A3W2A K61F2/44F
K61F220/00T K61F250/00G1[Classification Explorer](#)**Cited documents:** WO9600049 A1, US5571191 A, US5527312 A,**Forward Citations:** WO11014135, WO11014135, WO09052315, WO05107655, WO05107655, WO05079711, WO05020850, WO04103227, WO0053126, USD780315, USD777921, USD765853, USD748793, USD748262, USD724733, US9572602, US9554909, US9517077, US9456855, US9421109, US9421044, US9381045, US9333090, US9301786, US9271765, US9265620, US9198766, US9179943, US9095384, US9060787, US9056016, US9050144, US8998953, US8992533, US8974496, US8926700, US8906063, US8900273, US8882804, US8858597, US8790375, US8777994, US8764801, US8740949, US8740942, US8721688, US8702759, US8702755, US8675930, US8652137, US8579941, US8562649, US8551142, US8523907, US8523865, US8496687, US8496686, US8491635, US8425557, US8425530, US8419770, US8409254, US8398681, US8353933, US8333789, US8317838, US8313511, US8308768, US8267969, US8252027, US8231655, US8226690, US8221461, US8211147, US8206418, US8202299, US8187303, US8182529, US8172877, US8163017, US8162985, US8128660, US8118838, US8100944, US8096996, US8092532, US8075595, US8070811, US8070778, US8070777, US8066771, US8066749, US8066740, US8062336, US8048117, US8029540, US8025680, US8012209, US7998178, US7998177, US7998175, US7998172, US7993373, US7988712, US7959652, US7955390, US7955356, US7935134, US7931674, US7918877, US7914560, US7914556, US7909853, US7905907, US7901432, US7846183, US7837729, US7833246, US7828822, US7815648, US7803190, US7776090, US7763050, US7758619, US7753937, US7749252, US7722647, US7695513, US7691145, US7674293, US7635387, US7635378, US7621955, US7621939, US7618455, US7618453, US7618442, US7608106, US7608104, US7601170, US7591851, US7588590, US7588588, US7588578, US7566345, US7549999, US7524324, US7510567, US7507242, US7476251, US7473268, US7445635, US7406775, US7335203, US7306628, US7290347, US7201751, US7189234, US7101375, US7090698, US7087084, US7074238, US7074237, US7051451, US7041136, US7029473, US6974478, US6949123,

US6926728, US6902580, US6902566, US6796983, US6746485, US6712819, US6699247, US6699246, US6695842, US6652534, US6652527, US6582433, US6579319, US6565605, US6514256, US6478796, US6419703, US6419677, US6419676, US2014288601, JP2007506528, JP2007503884, JP2006528533, EP2098178, EP1919384, EP1854433, EP1677711, EP1659954,

Abstract:

The disclosed device comprises means for joining two contiguous vertebrae at their respective pedicular and laminar facets. The invention specifically comprises, for each pair of articular facets, a pedicular implant (1) consisting of a screw (2) with a head (3) containing an inset ball-and-socket joint (5) rotating in the horizontal and frontal planes. The device further comprises a translaminar implant (4) which extends from the cord (22) of the vertebra (L4) through the plate; the end (7) of said implant (4) is inserted into the entire length of a threaded bore (11) completely intersecting the rotating ball-and-socket joint (5). The mechanical locking of the two implants thereby ensures that the two articular facets are joined, and are homologous due to the predetermined position of the ball-and-socket joint and the translaminar implant (4). The paired device allows the procedure to be restricted to only the pedicles of the vertebra concerned by the monosegmental immobilization, thereby ensuring rotatory as well as translatory immobilization. In other words, rotation is neutralized by the two translaminar screws, while translation is secured by the pedicular axis.



Title: Pressing patella external fixer
Priority: CN200620023882U 20060323

Family:	Publication number	Publication date	Application number	Application date
	<u>CN2894634 Y</u>	20070502	CN200620023882U	20060323

Probable Assignee: ZIXIAO DI

Assignee(s):^(std): ZIXIAO DI

Assignee(s): DI ZIXIAO

Inventor(s):^(std): DI ZIXIAO

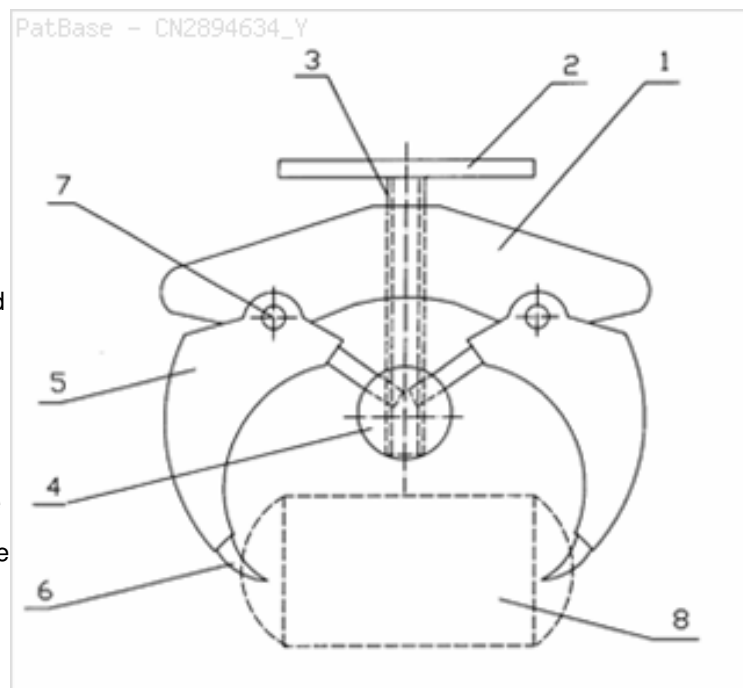
Inventor(s): ZIXIAO DI

International class A61B17/60 (Advanced/Invention);
 (IPC 8-9): A61B17/60 (Core/Invention)

[Classification Explorer](#)

Abstract:

Source: CN2894634Y This utility model discloses a pressurization patella external fixation. The present external fixation for patella fracture universally adopts a way of operative open reduction and internal fixation, by which the patient feel more suffering and should pay higher medical fee and require the recuperation after the operation. The utility model has a fixation to support to coordinate with the thread of a screw, with upper end of the screw is fixed with a wrench and lower end of the screw is connected with the thread of a sliding ball, which is connected with a arc clamp arm, which is articulated with the fixation and is equipped with a jaw on the end. The utility model carries on the treatment of Closed Reduction and External Fixation upon the patella fracture, not only avoiding suffering of the operation upon the patient, reducing the infection and medical fee, but also having the advantage of convenient operation and reliable fixation.



Title: SHOULDER JOINT IMPLANT

Priority: US20100343783P 20100504 US20100395686P 20100514 US20110068119 20110503
US20100402120P 20100824

Family:	Publication number	Publication date	Application number	Application date
	US9561111 BA	20170207	US20110068119	20110503

Probable Assignee: GOODMAN FLOYD G

Assignee(s):(std): GOODMAN FLOYD G

Inventor(s):^(std): GOODMAN FLOYD G

Agent(s): CHRISTOPHER JOHN

International class A61F2/40 (Advanced/Invention)
(IPC 8-9).

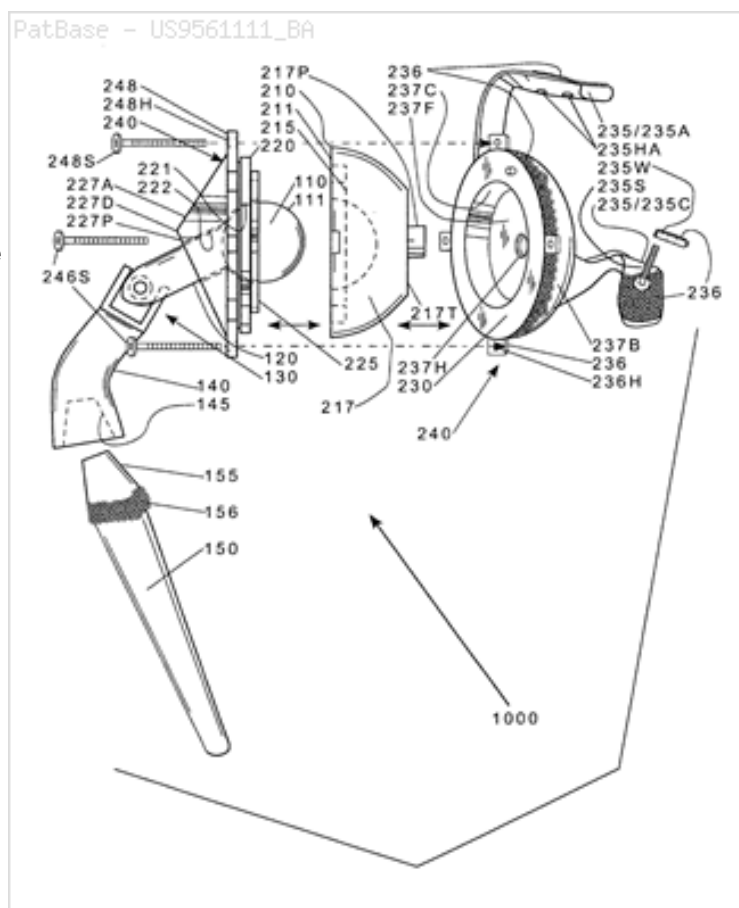
CPC: A61F2/40

Classification Explorer

Cited documents: US7959680 BB, US6248132 BA, US4550450 A, US2007179624 AA, US2006079963 AA, US2004039449 AA,

Abstract:

Source: US9561111B Captured element shoulder joint implant may be configured with a captured humeral ball; in a reverse shoulder configuration; to have a barrel- or disc-like humeral head to recessed glenoid articulation; and so forth. Multi-point fixation glenoid component may be provided. A humeral implant may have a universal joint connection, which can be mounted to or in a humeral bone and provide for a center of movement generally within a volume defined by an upper head of a normal humerus.



134) Family number: 17586076 (CN2219680Y)

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Title: Combined single arm type external fixation device for reduction of fracture**Priority:** CN19952030781U 19950408

Family:	Publication number	Publication date	Application number	Application date
	<u>CN2219680 Y</u>	19960214	CN19952030781U	19950408

Probable Assignee: ZHAO SHENGPU**Assignee(s):^(std):** ZHAO SHENGPU**Inventor(s):^(std):** SHENGPU ZHAO ; ZHAO SHENGPU

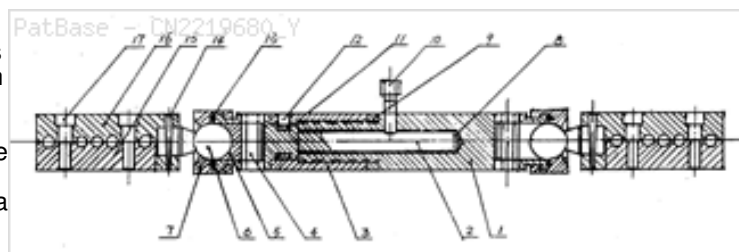
International class A61B17/60 (Advanced/Invention);
 (IPC 8-9): A61B17/60 (Core/Invention)

International class A61B17/60
 (IPC 1-7):

[Classification Explorer](#)**Forward Citations:** CN102599966,**Abstract:**

Source: CN2219680Y The utility model relates to a combined single arm type external fixation device for the reduction of fractures, which belongs to medical instruments. The utility model is composed of a needle-holding device and a connecting rod assembly, wherein, the needle-holding device is integrally formed by a needle-holding body and a body clamping block which are fixed by a bolt; a universal joint is connected with the connecting rod assembly by a taper pin. A guiding rod and an adjusting arm of the

connecting rod assembly are respectively provided with an eccentric fixed shaft and a sphere seat, and the universal joint is connected with the sphere seat. Three kinds of adjusting arms are used for being suitable for the reduction and the fixation of ordinary fractures and multiple-section fractures so that the utility model has the advantages of good mechanical performance and firm fixation. The universal joint is used for satisfying the angle selection of the fracture part so that reduction and fixation are synchronous. The utility model can be widely applied to different fractures, particularly thighbone fractures.



0) CO4870749A – SILLA SINCRO-INCLINABLE CON ASIENTO MOVIBLE HAC...

135) Family number: 43631151 (CO4870749A)

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Title: SILLA SINCRO-INCLINABLE CON ASIENTO MOVIBLE HACIA ADELANTE CHAIR
SYNCHRO-TILT FORWARD SEAT WITH INSERT (Machine translation)

Priority: CO19980980620 19981023 CO19980062002 19981023

Family:	Publication number	Publication date	Application number	Application date
	<u>CO4870749 A1</u>	19991227	CO19980062002	19981023

Probable Assignee: STEELCASE INC

Assignee(s):^(std): STEELCASE INC

Inventor(s):^(std): HEIDMANN KURT R ; KNOBLOCK GLEN A ; DEKRAKER LARRY ; TEPPPO DAVID S

Inventor(s): DAVID S TEPPPO ; GLEN A KNOBLOCK ; KURT R HEIDMANN ; LARRY DEKRAKER

Agent(s): LUIS PATINO LEYVA

International class A47C1/30 A47C3/30 (Advanced/Invention) ;
^(IPC 8-9) A47C3/20 (Core/Invention)

International class A47C1/30 A47C3/30
^(IPC 1-7)

[Classification Explorer](#)

Abstract:

Source: CO4870749A 1.- Se proporciona una silla de trabajo que tiene un marco de base con una armadura de configuracion particular y brazos laterales verticales rigidos, un marco de espaldar pivotado al marco de base para movimiento entre posiciones vertical y reclinada, y un asiento apoyado deslizablemente en el marco de base y pivotado al marco de base de tal modo que el asiento se mueve hacia adelante y su parte trasera se mueve hacia adelante y hacia abajo con el marco de espaldar al tener lugar el reclinamiento. Un espaldar flexible esta conectado al marco de espaldar en sitios superior e inferior y esta provisto de ajuste lumbar para mejor fuerza/apoyo y forma lumbares. Se proporciona un asiento con ajuste de profundidad y con apoyo de flexion activo y pasivo para los muslos. Se proporciona un nuevo mecanismo de energia que incluye un ajustador de movimiento de brazo de momento para ajustar la tension del resorte sobre el marco de espaldar. El ajustador de movimiento de brazo de momento es facilmente ajustable e incluye un dispositivo de sobretorsion para evitar dano a los componentes del mecanismo de energia.

1. a work chair having a base frame with a particular configuration armor and rigid vertical side arms a backrest frame pivoted to the base frame for movement between upright and recumbent positions, and a seat slidably supported is provided in the base frame and pivoted to the base frame such that the seat moves forward and back moves forward and down within the backrest recline occur. A flexible backrest is connected to the backrest frame upper and lower sites is provided with lumbar adjustment for better strength / lumbar support and shape. a seat is provided with depth adjustment and support of active and passive flexion thigh. A new mechanism of energy that includes an adjuster arm

movement time to adjust the spring tension on the backrest frame is provided. The movement adjuster moment arm is easily adjustable and includes a overtorque device to prevent damage to the components of the mechanism of energy.

- 55 -

una segunda manija rotatable 234 operativamente conecta a un mecanismo neumático de ajuste de altura vertical para ajustar la altura de la silla mediante un cable Bowden 235, manguito 235', y soporte lateral 235". Los detalles del mecanismo de ajuste de altura de la sila son bien conocidos, de tal modo que no es necesario discutirlos aquí.

La armadura de asiento 164 y su estructura de soporte (Figura 4B) está configurada para apoyar flexiblemente los muslos de un usuario sentado. Por esta razón el acojinamiento de asiento 170 incluye una indentación 170A ubicada ligeramente hacia adelante de la articulación ilíacofemoral del usuario sentado (Figura 12). La tapicería que cubre el acojinamiento de asiento 170B incluye un pliegue en la indentación 170A para permitir que material se estire durante la flexión de la región de apoyo de muslos hacia abajo ya que esto resulta en un estiramiento en la indentación debido al hecho de que la superficie superior de la tapicería está distanciada por encima del eje de articulación de flexión de la armadura de asiento 164. Alternativamente se puede utilizar una tela estirable o acojinamientos tapizados frontal y trasero separados.

Apoyo de muslos pasivo/flexible (sin resorte de gas) en el asiento: Un dispositivo pasivo flexible de apoyo de muslos 237 (Figura 30) incluye una placa de refuerzo 238 fijada al lado inferior de la porción frontal de apoyo de muslos 166 de la armadura de asiento 164 (Figura 4B). Un par de apéndices de detención en forma de L 239 (Figura 29) se doblan hacia abajo del cuerpo de la placa 238. Los apéndices en forma de L 239 incluyen dedos horizontales 240 que se extienden hacia atrás hasta una posición donde los dedos 240 sobrelapan un borde frontal 241 del marco de asiento 163. Los manguitos 242 están ubicados dentro de los apéndices en forma de L 239 e

136) Family number: 56389251 (MX2012008572A)

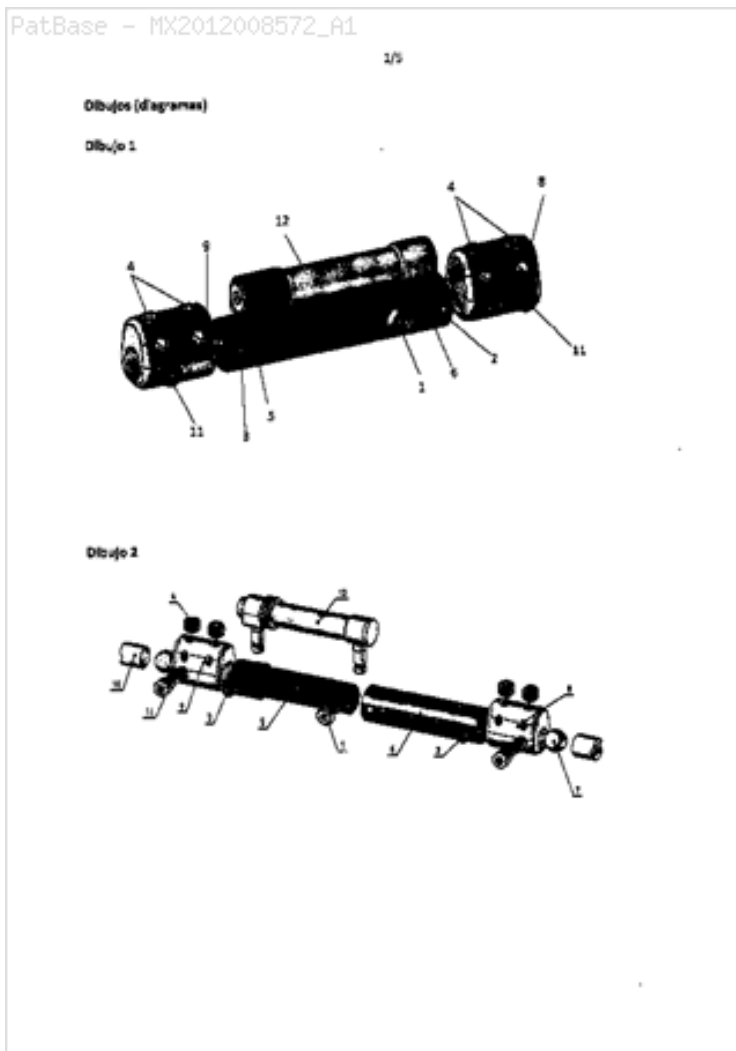
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Title: RADIOLUCENT WRIST AXIAL CLAMP.**Priority:** MX20120008572 20120724

Family:	Publication number	Publication date	Application number	Application date
	<u>MX2012008572 A1</u>	20140123	MX20120008572	20120724

Probable Assignee: TECNOLOGIA Y DISEÑO INDUSTRIAL SAPI DE CV**Assignee(s):^(std):** TECNOLOGIA Y DISEÑO INDUSTRIAL SAPI DE CV**Assignee(s):** TECNOLOGIA Y DISEÑO INDUSTRIAL SAPI DE CV**Inventor(s):^(std):** TORRES JOSE ADAN ORTEGA**Inventor(s):** JOSE ADAN ORTEGA TORRES**International class** A61B17/064 (Advanced/Invention)
(IPC 8-9).[Classification Explorer](#)**Abstract:**

DESCRIBED IS A DEVICE USED IN EXTERNAL OSTEOSYNTHESIS, WHICH IS USEFUL FOR JOINING BONES CLOSE TO THE WRIST REGION FOR DISTRACTING OR CONTRACTING THE SAME. THE DEVICE IS MAINLY INTEGRATED BY FOUR MAIN BODIES, THE CENTRAL BODY BEING A CYLINDER THAT TRAVELS LONGITUDINAL THE ARM AND IS USEFUL FOR JOINING TWO EQUIDISTANT BODIES WITH SIMILAR SIZE AND CONFIGURATION. THESE BODIES MAY RECEIVE THE NAILS FOR THE OSTEOSYNTHESIS. THE BODIES ARE CHARACTERIZED IN THAT THEY CAN BE ROTATED IN DIFFERENT ANGLES UPON INCORPORATING A SPHERICAL-SHAPED MECHANISM, IMITATING THE NATURAL MOTION OF THE HAND WITH REGARD TO THE FOREARM AND FACILITATING THE PATIENT THE MOVEMENT OF THE UPPER LIMB. FINALLY, THE CENTRAL CYLINDER IS COUPLED TO A DISTRACTOR ELONGATING DEVICE FOR DEFINING THE DEGREE OF DISTRACTION OF THE CENTRAL BODY.



137) Family number: 56278575 (US2016004142A)

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Title: WATERPROOF HOUSING FOR CAMERA
Priority: CN201410005856 20140106 CN201420006655U 20140106 WO2014CN078171 20140522
Family:

Publication number	Publication date	Application number	Application date
CN103744253 A	20140423	CN201410005856	20140106
CN103744253 B	20170201	CN201410005856	20140106
CN203705794 U	20140709	CN201420006655U	20140106
EP2911000 A1	20150826	EP20140854894	20140522
EP2911000 A4	20160518	EP20140854894	20140522
US2016004142 AA	20160107	US20140418450	20140522
US9377671 BB	20160628	US20140418450	20140522
WO15100925 A1	20150709	WO2014CN078171	20140522

Probable Assignee: SHENZHEN AEE TECHNOLOGY CO LTD**Assignee(s):**^(std): AN ELECTRIC SHENZHEN TECHNOLOGY CO LTD ; SHENZHEN AEE TECHNOLOGY CO LTD ; ZHANG XIANZHI**Assignee(s):** SHENZHEN AEE TECHNOLOGY COLTD ; SHENZHEN AEE TECHNOLOGY CO**Inventor(s):**^(std): ZHANG XIANZHI**Agent(s):** MANITZ FINSTERWALD AND PARTNER GBR

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

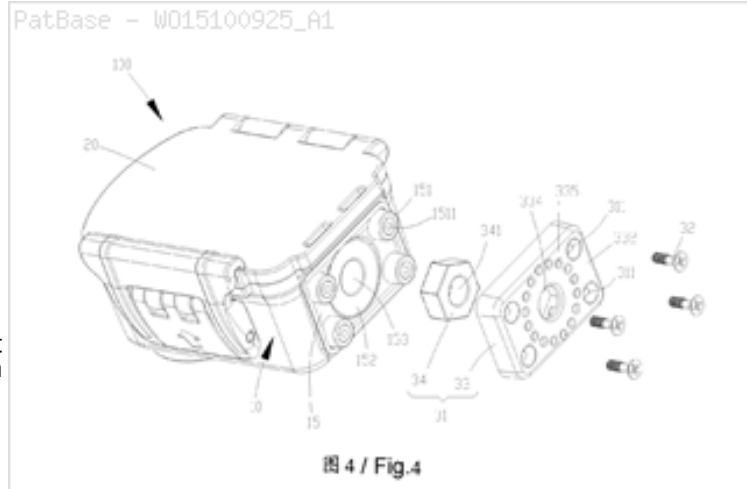
International class [G03B17/08 H04N5/225](#) (Advanced/Invention)
(IPC 8-9).**CPC:** [G03B17/08 H04N5/2252](#)**US class:** [1/1 396/535](#)[Classification Explorer](#)

Cited documents: WO13096927 A1, US5472317 A, US2014092299 AA, US2014028243 AA, US2012275025 AA, US2006098966 AA, US2006086878 AA, US2006008262 AA, JP2013127588 A2, JP2007206137 A2, JP200664796, JP2006064796 A2, JP2005115182 A2, CN203705795 U, CN203705794 U, CN201751873 U, CN201332751 Y, CN103744253 A,

Forward Citations: WO15100925, USD785069, USD768752, CN103744253, CN103744253,

Abstract:

Source: US2016004142A The present disclosure provides a waterproof housing for a camera. The waterproof housing includes a front housing and a back cover engaging with the front housing, the front housing forms a receiving cavity for receiving the camera and an opening allowing the camera to enter the receiving cavity, a lens window corresponding to a lens of the camera is formed on the front housing, the back cover covers the opening to enclose the receiving cavity; the waterproof housing further includes a fixing device for fixing the waterproof housing to an outer object and the fixing device is detachably mounted on the front housing. The waterproof housing of the present disclosure is capable of meeting various fixing requirements as well as reducing the manufacturing and using cost.



138) Family number: 15087078 (US4883489A)

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Title: PELVIS PART PROSTHESIS**Priority:** DE19863629799 19860902 EP19870905590 19870829 WO1987DE00387 19870829
EP19870905590 19870829

Family:	Publication number	Publication date	Application number	Application date
	AT68331 E	19911115	AT19870905590T	19870829
	DE3629799 A1	19880303	DE19863629799	19860902
	DE3629799 C2	19880825	DE19863629799	19860902
	EP0279830 A1	19880831	EP19870905590	19870829
	EP0279830 B1	19911016	EP19870905590	19870829
	JP01500643 T2	19890309	JP19870505116T	19870829
	JP1500643 T2	19890309	JP19870505116T	19870829
	US4883489 A	19891128	US19880192518	19880429
	WO8801491 A1	19880310	WO1987DE00387	19870829

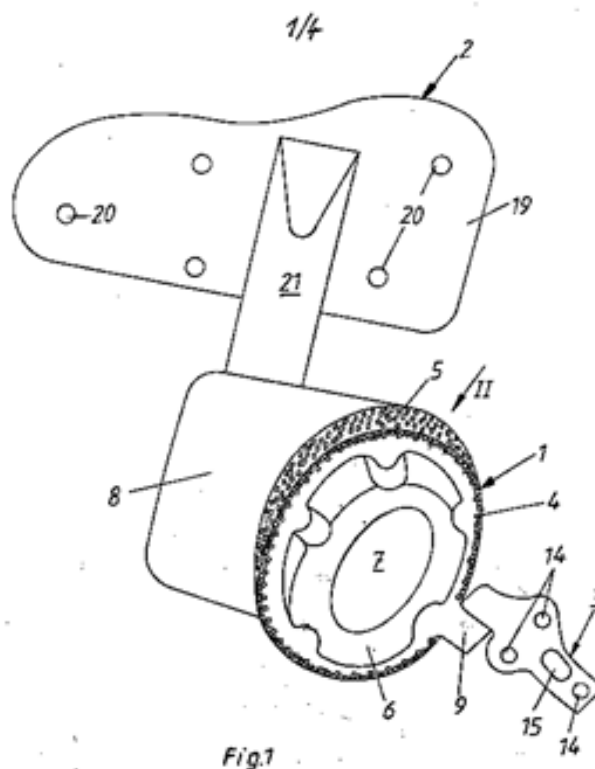
Probable Assignee: S AND G IMPLANTS GMBH**Assignee(s):^(std):** S AND G IMPLANTS GMBH**Assignee(s):** S AND G IMPLANTS GMBH 2400 LUEBECK DE ; ESKA MEDICAL GMBH ; ESKA MEDICAL GMBH AND CO ; G IMPLANTS GMBH ; S AMP AMP**Inventor(s):^(std):** STEINHUBER THOMAS DR ; HIPP ERWIN PROF DR ; HIPP ERWIN ; HEINHUBER BERND ; GRUNDEI HANS**Inventor(s):** HIPP ERWIN PROFDR ; GRUNDEI HANS 2400 LUEBECK DE**Designated states:** AT BE CH DE FR GB IT JP LI LU NL SE US**International class**
(IPC 8-9): [A61F2/28 A61F2/30 A61F2/32 A61F2/34](#) (Advanced/Invention);
[A61B17/80 A61F2/00](#) (Advanced/Non-invention);
[A61F2/28 A61F2/30 A61F2/32](#) (Core/Invention);
[A61B17/68 A61F2/00](#) (Core/Non-invention)**International class**
(IPC 1-7): [A61F2/28 A61F2/30 A61F2/32 A61F2/34 A61L27/00](#)**CPC:** [A61F2/28 A61F2/30749 A61B17/8066 A61F2/30721 A61F2/30907 A61F2/34 A61F2002/30604 A61F2002/3092](#)**European class:** [A61B17/80H2 A61F2/30B A61F2/30B10 A61F2/34 K61B17/80H2 K61F2/30A3W32 K61F2/30L4 K61F2/30L5](#)**US class:** [623/22 623/22.36](#)[Classification Explorer](#)**Cited documents:** US4743262 A, SU1123682 T, GB2016275 A1, FR2225141 A1, DE3205526 A1, DE3027063 A1, DE2809556 B2, DE2809556 A1,**Forward Citations:** WO9829058, WO14121994, WO06025729, US9579208, US9439784, US9333084, US8968415, US8920509, US8915970, US8696757, US8535382, US8425615, US8366781, US8114163, US8110005, US8048166, US7722678, US7670383, US7635391, US7476254, US7141073, US6908486, US6416553, US6162257, US5916268, US5702477, US5507827, US5326367, US5176711, US4959072, US2012046755, US2008021568, US2006161261, US2006129247, US2006116775, US2005187637, US2003171818, NL1026925, JP5192350, FR2651995, EP2764848, EP0628294, EP0554210, EP0531627, EP0328847, DE4319010, DE4133433, DE4106272, CN106037994, CN102614035, CH674140,

Abstract:

Source: US4883489A PCT No. PCT/DE87/00387 Sec. 371 Date Apr. 29, 1988 Sec. 102(e) Date Apr. 29, 1988 PCT Filed Aug. 29, 1987 PCT Pub. No. WO88/01491 PCT Pub. Date Mar. 10, 1988. A pelvis part prosthesis comprises an essentially hemispherically-shaped shell portion provided with two formed appendices, each of which has a positioning aperture and two connection elements connected to the appendices, and each being provided with a pin inserted with a self-locking tight fit in the positioning apertures. The connection elements are preferably designed as curved plates. The material layer, adjacent to the residual bone material of the pelvis, of the aforementioned parts of the prosthesis, may be in the shape of an open-cell structure to allow the bone material to grow into said structure.

PatBase - W08801491_A1
WO 88/01491

PCT/DE87/00387



139) Family number: 34918345 (US2007173849A)

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Title: ADJUSTABLE SURGICAL SUPPORT BASE WITH INTEGRAL HINGE**Priority:** US20060328011 20060109

Family:	Publication number	Publication date	Application number	Application date
	<u>US2007173849 AA</u>	20070726	US20060328011	20060109
	<u>US7520880 BB</u>	20090421	US20060328011	20060109

Probable Assignee: ZIMMER TECHNOLOGY INC**Assignee(s):^(std):** ZIMMER TECH INC**Assignee(s):** ZIMMER TECHNOLOGY INC**Inventor(s):^(std):** CLAYPOOL JODY L ; FOREMAN MATTHEW ; RANGAIAH CHETAN**Agent(s):** JOHN F HOFFMAN ESQ BAKER AND DANIELS LLP; BAKER AND DANIELS LLP

International class
 (IPC 8-9): A61B17/58 A61F5/00 (Advanced/Invention);
A61B17/70 (Advanced/Non-invention);
A61B17/58 A61F5/00 (Core/Invention);
A61B17/70 (Core/Non-invention)

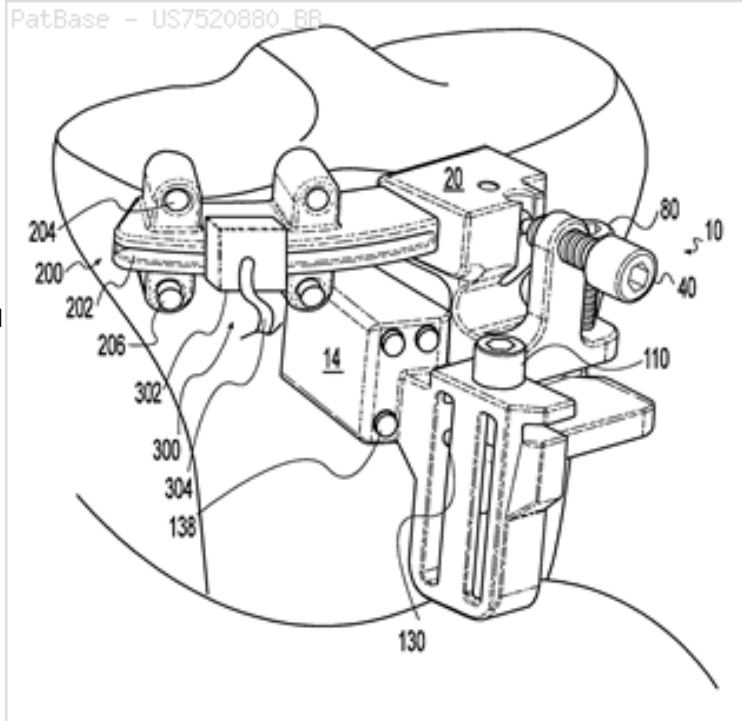
CPC: A61B17/155 A61B17/157**European class:** A61B17/15K2 A61B17/15K4**US class:** 606/246 606/87 606/88[Classification Explorer](#)

Cited documents: WO9629940, WO9607361, US7335206 BB, US7309339 BB, US7241298 BB, US7029477 BB, US6962593 BB, US6942700 BB, US6932823 BB, US6920347 BB, US6859661 BB, US6852115 BB, US6796986 BB, US6758850 BB, US6740092 BB, US6712824 BB, US6695848 BB, US6685711 BB, US6648896 BB, US6638281 BB, US6595997 BB, US6575980 BA, US6554837 BA, US6551325 BB, US6533790 BA, US6514259 BB, US6503249 BA, US6490475 BA, US6490467 BA, US6477400 BA, US6458135 BA, US6450978 BA, US6430434 BA, US6402762 BB, US6396939 BA, US6342056 BA, US6338716 BA, US6285902 BA, US6267770 BA, US6267762 BA, US6234429 BA, US6167145 A, US6162228 A, US6106529 A, US6096082 A, US6096043 A, US6090114 A, US6081741 A, US6077270 A, US6074394 A, US6056756 A, US6033415 A, US6022377 A, US6002859 A, US5995738 A, US5921992 A, US5911723 A, US5904691 A, US5891158 A, US5888034 A, US5871018 A, US5834759 A, US5810831 A, US5788700 A, US5748767 A, US5743916 A, US5743915 A, US5720752 A, US5683398 A, US5683397 A, US5682886 A, US5681316 A, US5676668 A, US5669914 A, US5649928 A, US5643272 A, US5634929 A, US5628750 A, US5611802 A, US5597379 A, US5593411 A, US5584838 A, US5569261 A, US5562674 A, US5551429 A, US5514140 A, US5514139 A, US5486180 A, US5486178 A, US5484446 A, US5474559 A, US5470335 A, US5454816 A, US5445642 A, US5431656 A, US5431653 A, US5417694 A, US5413579 A, US5411505 A, US5364402 A, US5364401 A, US5342368 A, US5342367 A, US5305203 A, US5282803 A, US5275603 A, US5251127 A, US5234433 A, US5230338 A, US5209750 A, US5171277 A, US5154717 A, US5116338 A, US5100408 A, US5092037 A, US5062722 A, US5053037 A, US5037423 A, US5007936 A, US5002547 A, US5002545 A, US4952213 A, US4913137 A, US4907577 A, US4907557 A, US4892093 A, US4841975 A, US4759350 A, US4736737 A, US4653488 A, US4567886 A, US4566448 A, US4524766 A, US4501266 A, US4493317 A, US4487203 A, US4467801 A, US4457307 A, US4421112 A, US4211228 A, US2007173850 AA, US2007149977 AA, US2006149276 AA, US2005273114 AA, US2005273113 AA, US2005234466 AA, US2005234465 AA, US2005234454 AA, US2005228393 AA, US2005209598 AA, US2005203528 AA, US2005187557 AA, US2005182415 AA, US2005171545 AA, US2005149041 AA, US2005149040 AA, US2005149039 AA, US2005070910 AA, US2005055028 AA, US2005049603 AA, US2005021039 AA, US2004172044 AA, US2004153083 AA, US2004153066 AA, US2004122305 AA, US2004073228 AA, US2004039396 AA, US2003212403 AA, US2003187351 AA, US2003181919 AA, US2003171757 AA, US2003083667 AA, US2003069591 AA, US2003069585 AA, US2002165552 AA, US2002151894 AA, US2002133162 AA, US2002133160 AA, JP11244315, EP1579812, EP1574177, EP1442712, EP1430842, EP1424042, EP1323386, EP0839501, EP0778751, EP0720834, EP0556998, EP0538152, EP0384562,

Forward Citations: WO09030484, US9649160, US9572586, US9549742, US9433425, US9427240, US9421019, US9358122, US9339226, US9333018, US9271756, US9265511, US9220510, US9192459, US9192392, US9125675, US9125674, US9113923, US9101443, US9060797, US9033958, US8998911, US8998910, US8986316, US8986314, US8974468, US8974467, US8932334, US8911447, US8888786, US8876830, US8858557, US8840629, US8834490, US8814874, US8784495, US8758354, US8574273, US8546456, US8496663, US8486079, US8333772, US8118815, US8096997, US8057482, US8057479, US7959637, US7744600, US7658741, US2016030028, US2014288562, US2014142579, US2013296873, US2011230889, US2011218543, US2011208093, US2011196377, US2011130761, US2011060373, US2010331991, US2010312350, US2010268240, US2010191244, US2010137869, US2010130986, US2010063508, US2010016705, US2009318931, US2009234360, US2009112213, US2008228189, US2008195109, US2008140081, US2007233137, US2007005073, US2006200161, US2006009768, US2005021044, EP2770929, EP2475313, EP2434991, EP2434991, CN102711671, AU2010253765,

Abstract:

Source: US2007173849A An apparatus is provided for supporting a surgical component adjacent to a bone during a surgical procedure. The apparatus includes an integral body having a hinge platform, a hinge integral with the hinge platform; and a surgical component mounting portion integral with the hinge for rotation generally about a hinge axis relative to the hinge platform. An adjustment mechanism is operably connected between the hinge platform and the surgical component mounting portion to allow selective incremental rotation of the surgical component mounting portion relative to the hinge platform.



140) Family number: 43480267 (US2006058791A)

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Title: IMPLANTABLE SPINAL DEVICE REVISION SYSTEM**Priority:** US20040602827P 20040818 US20050071541 20050302 US20050206676 20050817
US20050643556P 20050113

Publication number	Publication date	Application number	Application date
US2006058791 AA	20060316	US20050206676	20050817

Probable Assignee: FACET SOLUTIONS INC**Assignee(s):^(std):** BROMAN RICHARD ; SUH SEAN S ; TOKISH LEONARD JR ; REILEY MARK A ; MCLEER THOMAS**Assignee(s):** FACET SOLUTIONS INC ; FSI ACQUISITION SUB LLC ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; ARCHUS ORTHOPEDICS INC**Inventor(s):^(std):** BROMAN RICHARD ; MCLEER THOMAS ; REILEY MARK A ; SUH SEAN S ; TOKISH LEONARD JR**Inventor(s):** TOKISH LEONARD ; SUH SEAN ; REILEY MARK**Agent(s):** WILSON SONSINI GOODRICH AND ROSATI**International class**
(IPC 8-9): A61B17/58 A61F2/30 A61F2/44 (Advanced/Invention);
A61B17/15 A61B17/70 A61F2/00 A61F2/02 A61F2/46 (Advanced/Non-invention)**CPC:** A61B17/7011 A61B17/15 A61B17/686 A61B17/7013 A61B17/7032 A61B17/7041
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606/323 606/323S 606/61 606/907 606/907S 606/909 606/909S 623/17.16 623/17.160P[Classification Explorer](#)**Cited documents:** US7011658 BB, US6712849 BB, US6712818 BA, US6524315 BA, US6520963 BA,
US6514253 BA, US6361506 BA, US6342054 BA, US6340477 BA, US6340361 BA,
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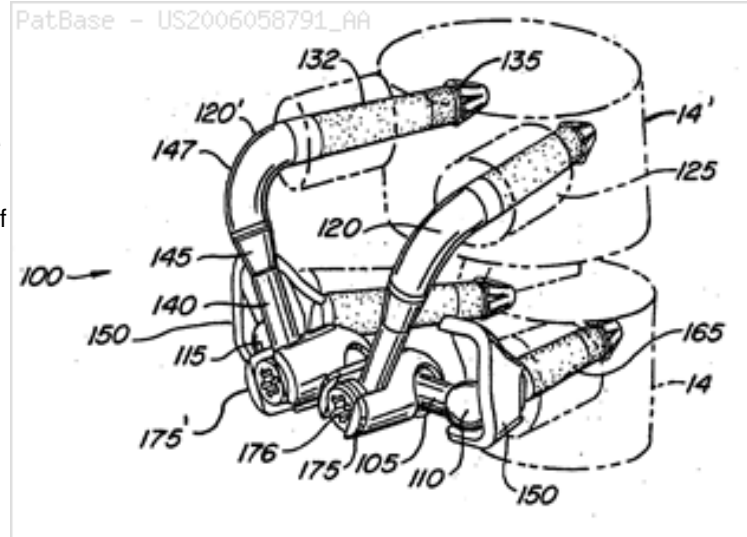
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Forward Citations:

US9642658, US9629663, US9510865, US9486247, US9468471, US9468469, US9468468, US9451997, US9451990, US9408638, US9387014, US9358044, US9333009, US9301787, US9247973, US9204905, US9198766, US9173681, US9168071, US9113959, US9101410, US9056016, US9050144, US9011491, US8961572, US8920472, US8920470, US8920469, US8906063, US8900247, US8870921, US8828058, US8808379, US8777994, US8702759, US8702755, US8675930, US8591550, US8556937, US8551142, US8523907, US8523865, US8496687, US8496686, US8491635, US8425557, US8409254, US8398681, US8372119, US8361117, US8317791, US8267969, US8252027, US8231655, US8226690, US8221461, US8211147, US8206418, US8187303, US8163017, US8162985, US8114158, US8109976, US8105236, US8096996, US8092532, US8075595, US8070811, US8066771, US8066740, US8025680, US8021366, US8021365, US7998178, US7998177, US7998175, US7967847, US7935134, US7914560, US7914556, US7828830, US7815648, US7699203, US7695499, US7691145, US7674293, US7608106, US7608104, US7406775, US7290347, US2015230826, US2014088647, US2013304075, US2012239090, US2012232594, US2012078303, US2011178465, US2011172772, US2010198265, US2010130959, US2010087880, US2009248078, US2009088809, US2009066845, US2009036928, US2009024219, US2009018585, US2008292161, US2008275505, US2008255624, US2008243249, US2008200953, US2008177332, US2008177310, US2008177309, US2008167655, US2008140121, US2008125814, US2008110957, US2008109039, US2008103501, US2008097613, US2008097612, US2008097609, US2008097446, US2008097441, US2008097440, US2008097439, US2008097438, US2008097437, US2008091268, US2008091210, US2008091205, US2008091204, US2008091202, US2008091200, US2008086213, US2008086142, US2008082171, US2008021461, US2008015696, US2008015583, US2007282445, US2007276374, US2007270835, US2007260257, US2007260227, US2007256527, US2007255411, US2007239159, US2007233256, US2007168029, US2007167949, US2007161997, US2007100341, US2007093833, US2007088358, US2007043359, US2007010845, US2007010844, US2007010824, US2007010716, US2007006692, US2006265070, US2006247625, US2006184180, US2006149375, US2006100709, US2006085075, US2006085072, US2006084987, US2006084984, US2006084982, US2006079895, US2006009848, US2006009847, US2005283238, US2005267579, US2005251256, US2005240266, US2005240264, US2005234552, US2005149190, US2005143818, US2005137705, US2005131406, US2005119748, US2005043799, US2004049281, US2004049278, US2004049277, US2004049276, US2004049273, US2004006391, JP5866327, JP2014061410, JP2010503445, EP2190371, EP2190371,

Abstract:

Source: US2006058791A The invention discloses devices, methods and systems for an implantable revision device useful for altering the biomechanics of an implanted spinal arthroplasty device. The revision device has a first surface adapted to communicate with a natural anatomical surface; and a second surface adapted to engage a portion of the arthroplasty device. The device alters the biomechanics of the implanted spinal arthroplasty device permanently semi-permanently and/or temporarily.



141) Family number: 51416234 (US2012167879A)

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Title: POSITIVE AIRWAY PRESSURE THERAPY APPARATUS AND METHODS
Priority: US20110339870 20111229 US20110429181P 20110103 US20110430463P 20110106
Family:

Publication number	Publication date	Application number	Application date
<u>US2012167879 AA</u>	20120705	US20110339870	20111229
<u>WO12094230 A2</u>	20120712	WO2011US67863	20111229
<u>WO12094230 A3</u>	20121011	WO2011US67863	20111229

Probable Assignee: SOMNETICS GLOBAL PTE LTD**Assignee(s):**^(std) BECKER ERIC ALLAN ; BOWMAN BRUCE R ; SOMNETICS GLOBAL PTE LTD**Inventor(s):**^(std) BECKER ERIC ALLAN ; BOWMAN BRUCE R**Agent(s):** ADAMS MATTHEW W

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61M16/00 A61M16/06 A61M16/08 A61M16/10 A61M16/16 A61M39/26 (Advanced/Invention)
 (IPC 8-9):

CPC: A61M16/0066 A61M16/06 A61M16/0683 A61M16/0875 A61M16/1045 A61M16/16 A61M2016/0021 A61M2016/0027 A61M2016/0036 A61M2205/0216 A61M2205/0222 A61M2205/0238 A61M2205/13 A61M2205/3365 A61M2205/3569 A61M2205/3592 A61M2205/3606 A61M2205/362 A61M2205/42 A61M2205/502 A61M2205/7509 A61M2205/7518 A61M2205/8206 A61M2209/088 A61M16/0069 A61M16/0633 A61M16/065 A61M16/0655 A61M16/0858 A61M16/161 A61M16/1055 A61M16/107

European class: A61M16/00M6 A61M16/06 A61M16/06S A61M16/08T K61M16/00A10 K61M16/00A14B2 K61M16/00A8B2 K61M16/00M6P K61M16/06A7 K61M16/06A7C2 K61M16/06A7C4 K61M16/08D6P K61M16/10E K61M16/16 K61M16/16B K61M205/02E K61M205/02F K61M205/02L K61M205/13 K61M205/33R K61M205/35R3 K61M205/35T2 K61M205/36A K61M205/36C K61M205/42 K61M205/50A K61M205/75A K61M205/75B K61M205/82B K61M209/08P

US class: 128/201.22 128/201.220P 128/205.12 128/205.120S 128/205.25 128/205.250S

[Classification Explorer](#)

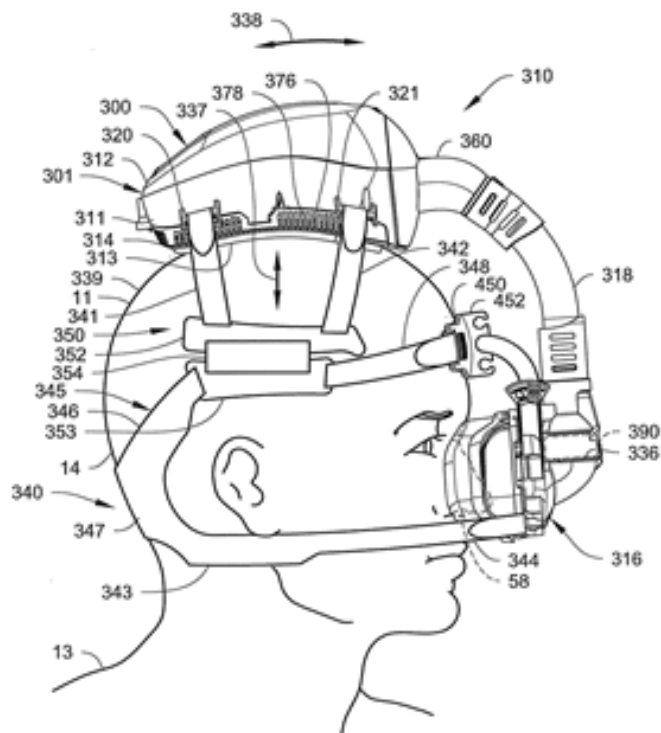
Cited documents: WO11022779 A1, WO10096467 A1, WO10080709 A1, US8667962 BB, US8631791 BB, US8336546 BB, US8327846 BB, US8020557 BB, US5878742 A, US5533500 A, US5054480 A, US3822698 A, US3649964 A, US2014166007 AA, US2011126828 AA, US2010170513 AA, US2009205647 AA, US2009194101 AA, US2007277827 AA, US2007277825 AA, US2007131228 AA, EP2085106 A1, EP1655052 A2,

DE202009017541 U1

Forward Citations: WO15020536, WO14145912, WO14145812, WO13020167, US9616190, US9597477, US9472992, US9351869, US8631791, US2015306324, US2014299132, US2014158131, US2014083428, US2013152918, US2012259394, US2009320842, EP3030300, EP2739857, EP2739857, AU2012292950,

Source: US2012167879A Embodiments of the invention are directed to positive airway pressure therapy apparatus and methods for using same. In some embodiments, the apparatus includes a body— (e.g., head—) mounted housing enclosing a blower, wherein the housing includes air inlets on multiple sides so that the blower may draw adequate air even when inlets on one side are obstructed. In another embodiment, the apparatus includes a mask or mask system securable to an airway of the user. The mask system may include a mask shell and two or more adapters configured to permit the attachment of two or more different mask seals to the same mask shell. Other embodiments of the invention describe strapping systems configured to removably attach the housing and the mask to the body. The apparatus may further include a drying mode that activates upon removal of the apparatus from the user.

Fig. 3



0) DE102008018694A1 – DEVICE FOR DIAGNOSTIC EXAMINATION OF THROAT AND...

142) Family number: 43535931 (DE102008018694A1)

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Title: DEVICE FOR DIAGNOSTIC EXAMINATION OF THROAT AND LARYNX AREA IN ANIMALS DURING STRESS, IS ENDOSCOPIC SYSTEM, WHERE CONTROL AND OPERATIONAL ELEMENTS ARE ATTACHED DIRECTLY ON EACH POINT ON ANIMAL BODY

Priority: DE200810005302 20080121 DE200810018694 20080410

Publication number	Publication date	Application number	Application date
<u>DE102008018694 A1</u>	20090723	DE200810018694	20080410

Probable Assignee: GLUCH DAGOBERT W H

Assignee(s):^(std): GLUCH DAGOBERT W H

Assignee(s): GLUCH DAGOBERT WH

Inventor(s):^(std): GLUCH DAGOBERT W H

Inventor(s): GLUCH DAGOBERT WH

International class A61B1/00 A61B1/04 A61B1/267 A61B5/0402 A61D7/00 (Advanced/Invention)
(IPC 8-9).

CPC: A61B2503/40 A61B1/005 A61B1/00082 A61B1/00147 A61B1/233 A61B5/042 A61B5/4884 A61B5/6831

European class: A61B1/005 A61B1/00E4H1 A61B1/00P A61B1/233 A61B5/48X A61B5/68B3B K61B5/042

[Classification Explorer](#)

Abstract:

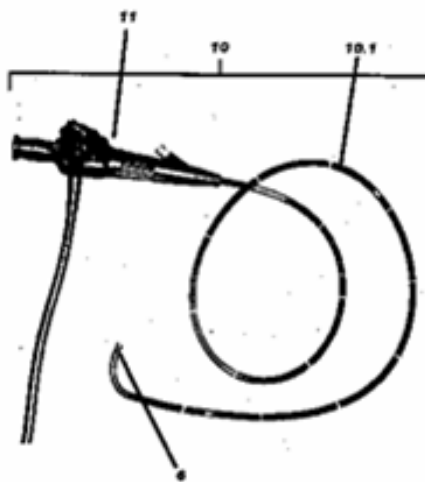
The device is an endoscopic system, where control and operational elements are attached directly on each point on an animal body. The endoscopic device is operated independently from a stationary system. The control and operational elements are attached at the animal by carrier bags that are applied on carrier bag covers.

PatBase - DE102008018694_A1

DE 10 2008 018 694 A1 2009.07.23

Anhängende Zeichnungen

Figur 1:



1005

143) Family number: 51472815 (BE1019467A)

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Title: CHIRURGISCH APPLICATIESYSTEEM OM HET DRAAGOPPERVLAK VAN HET GLENOID TE VERGROTEN. SURGICAL SYSTEM APPLICATION TO THE SURFACE WEAR TO ENLARGE of the glenoid. (Machine translation)

Priority: BE20100000519 20100902

Publication number	Publication date	Application number	Application date
BE1019467 AE	20120703	BE20100000519	20100902

Probable Assignee: CEUSTER MARCEL DE

Assignee(s):^(std): CEUSTER MARCEL DE ; DEN BOGAERT GERT VAN ; VERBORGT OLIVIER

Assignee(s): VAN DEN BOGAERT GERT ; DE CEUSTER MARCEL

International class A61B17/16 A61B17/17 A61F2/40
(IPC 1-7).

CPC: A61B17/1684 A61F2/30734 A61F2/4081 A61F2002/30736 A61F2002/30878 A61B17/1778

European class: A61B17/16S14 A61B17/17S A61F2/30B6 A61F2/40G K61B17/17S14 K61F2/30B6A K61F2/30L2S

[Classification Explorer](#)

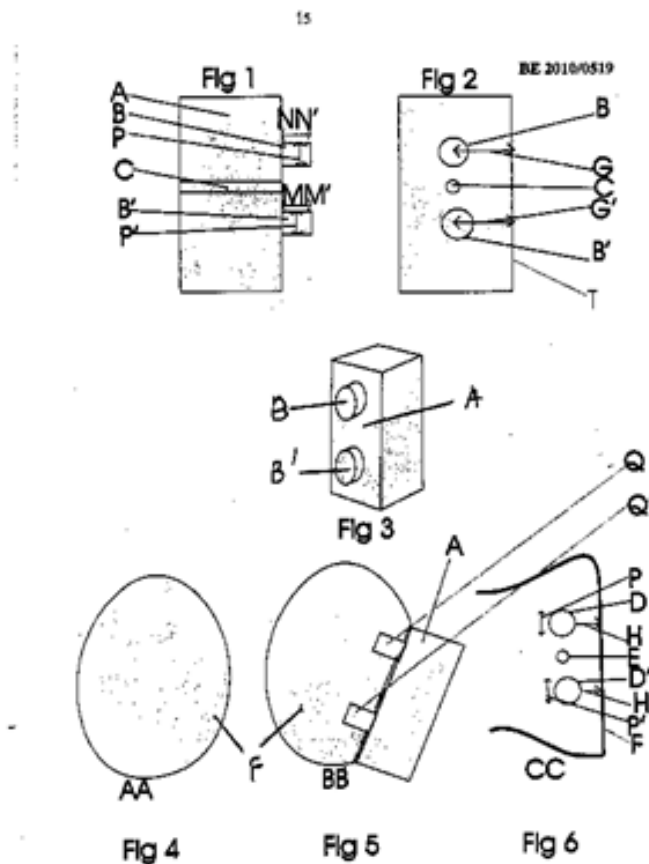
Cited documents: US2010069974 AA, FR2541890 A1, EP2135566 A1, EP2135562 A1, EP1034744 A1, DE10164328 A1,

Abstract:

Source: BE1019467A Chirurgisch applicatiesysteem, bestaande uit een specifieke boorgeleider en een speciaal gevormd blokje, dat kan aangebracht worden via arthroskopische weg en een eenvoudige en stabiele fixatie verzekert van het blokje aan het al of niet intacte glenoid, om het draagoppervlak van het glenoid voor de humeruskop te vergroten om also de stabiliteit van het schoudergewicht te verbeteren en schouderontwrichtingen te voorkomen.

Machine translation: Surgical application system, consisting of a specific drill guide, and a specially shaped piece, which can be applied over the arthroscopic route, and in a simple and stable fixation ensures of the block of whether or not the intact glenoid, to the support surface of the glenoid of the humeral head in order thus to increase the stability of the shoulder weight, to improve and the shoulder to prevent dislocations.

PatBase - BE1019467_AE



144) Family number: 10896422 (EP0904809A1)

© PatBase

Title: PIVOTAL CONNECTING DEVICE BETWEEN A SPORT APPARATUS AND A FOOT SUPPORT, AND BINDING FOR FASTENING THE FOOT OF A USER TO A SPORT APPARATUS

Priority: AT19970001649 19970929

Family:

Publication number	Publication date	Application number	Application date
AT164997 A	19990715	AT19970001649	19970929
AT265879 E	20040515	AT19980118352T	19980928
AT406123 B	20000225	AT19970001649	19970929
DE59811314 D1	20040609	DE19985011314	19980928
EP0904809 A1	19990331	EP19980118352	19980928
EP0904809 B1	20040506	EP19980118352	19980928

Probable Assignee: ATOMIC AUSTRIA GMBH

Assignee(s):^(std): ATOMIC AUSTRIA GMBH ; ATOMIC AUSTRIA GMBH ALTENMARKT

Assignee(s): ATOMIC AUSTRIA GMBH ALTENMARKT IM PONGAU

Inventor(s):^(std): SCHWARZENBACHER RUDOLF

Designated states: AT CH DE FR IT LI

International class
(IPC 8-9): [A63C1/28](#) [A63C17/00](#) [A63C9/00](#) [A63C9/02](#) [A63C9/20](#) (Advanced/Invention);
[A63C1/00](#) [A63C17/00](#) [A63C9/00](#) (Core/Invention)

International class
(IPC 1-7): [A63C1/28](#) [A63C17/00](#) [A63C3/04](#) [A63C9/00](#)

CPC: [A63C1/28](#) [A63C9/006](#) [A63C9/02](#) [A63C17/065](#)

European class: [A63C1/28](#) [A63C17/06](#) [A63C17/06D](#) [A63C9/00F](#) [A63C9/02](#)

[Classification Explorer](#)

Cited documents: WO9712650 A1, WO9637269 A1, WO8701296 A1, US4602801 A, FR2573317 A1, EP0768103 A1, EP0230989 A2, DE3932438 A1, AT290354 B,

Forward Citations: WO14083406, US7556280, ITVI20120324, EP2241355, AT501967,

Abstract:

A pivot binding between a sports appliance and a standing surface which slides with the foot movements, has at least two transfer arms (11,12) at a linkage system (14,15) at the sports appliance (2). The arms are spaced from the linkage (14,15) swing axes (18,20) in one or more directions in relation to each other and to the vertical planes (9) on the end zones away from the appliance (2) along the longitudinal directions (66) of the foot, together with the linkages (13,16) fitted to the standing surface (7). When assembled, the linkages (14,15) for the transfer arms (11,12) are angled in relation to the standing surface (7) in opposite directions along the longitudinal line (66).

