

Search query (4): fn=(8854416 or 6668480 or 8854416 or 8854416 or 42243588 or 41750464 or 2260097 or 8854416 or 11710336 or 11325476 or 11325472 or 11426910 or 42243588 or 42243588 or 42243588 or 42243588 or 42243588 or 41750464 or 62469244 or 22494897 or 22403340 or 22084529 or 21442450 or 23003128 or 7171415)

Results: 16

Search history

Search PN=(WO/2016/079664) (Results 1)

1:

Search fn=(6668480 or 22084529 or 1123165) (Results 3)

2:

Search fn=(41798956 or 41798956 or 8348176 or 8854416 or 8854416 or 28439512 or 28439512 or 41798956 or 41798956 or 43704463 or 43704463 or 41798956 or 41798956 or 11325476 or 11426910 or 42243588 or 42243588 or 42243588 or 42243588 or 26834401 or 42243588 or 43704463 or 43704463 or 28439512 or 28439512 or 41798956 or 41798956 or 42409327 or 62469244 or 2792241 or 1123165) (Results 13)

Search fn=(8854416 or 6668480 or 8854416 or 8854416 or 42243588 or 41750464 or 2260097 or 8854416 or 11710336 or 11325476 or 11325472 or 11426910 or 42243588 or 42243588 or 42243588 or 42243588 or 42243588 or 41750464 or 62469244 or 22494897 or 22403340 or 22084529 or 21442450 or 23003128 or 7171415) (Results 16)

1) Family number: 22494897 (US2737247A)

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Title: WELL PACKER APPARATUS

Abstract: (Claim 1) In a)paratus of the character described: a well tool having a body; meais adadted to form part of a runningiii strin- to be lowered in a well bore containiii- said well tool; a gu;-de; a latch on said gu;-ide movabl_ over the upper portioq of said body and irto coupling engagement tlerewith to secure said guidd to said body; a_d m,-ans detachably secur-ing said gtiide to said means and enabling said running-_n stri-_ig means to be released froin said gu;-de after couplilig of sa:ld guide to s-,iid body.

Classifications:

International (IPC 8-9): E21B23/06 E21B27/02 E21B33/12

E21B33/134 (Advanced/Invention);

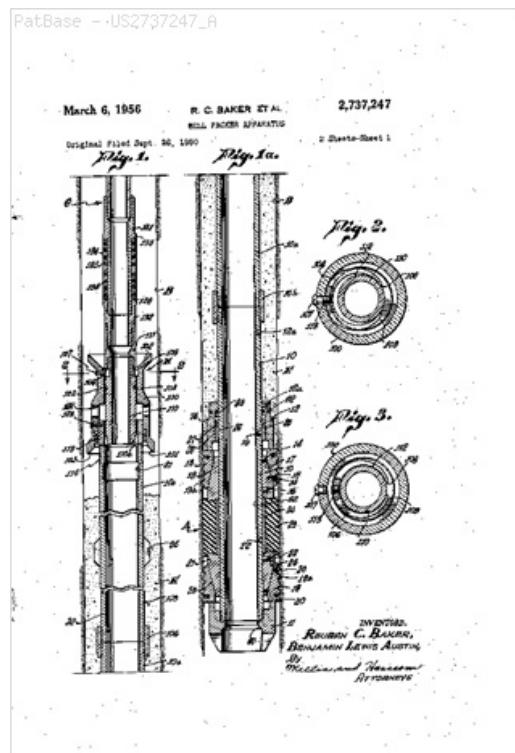
E21B23/00 E21B27/00 E21B33/12 E21B33/13 (Core/Invention)

International (IPC 1-7): E21B33/12

CPC: E21B23/065 E21B27/02 E21B33/134 Y10S285/922 E21B33/12

European: E21B23/06D E21B27/02 E21B33/12 E21B33/134

US: 166/117 166/123 166/125 166/162 166/203 166/243 166/63 285/18 285/922



Family:

Publication number	Publication date	Application number	Application date
US2707998 A	19550510	US19500186856	19500926
US2737247 A	19560306	US19530368638	19530717

Priority:

US19500186856 19500926 US19530368638 19530717

Probable Assignee: BAKER OIL TOOLS INC

Assignee(s): (std): BAKER OIL TOOLS INC

Inventor(s): (std): LEWIS AUSTIN BENJAMIN ; BAKER REUBEN C

Inventor(s): AUSTIN BENJAMIN LEWIS

Title: HANGING APPARATUS

Abstract: (Claim 1) An assembly for hanging and sealing a pipe within a wellhead fitting or the like, comprising a bowl seatable in the fitting, a seal ring of deformable material above the bowl, a compression ring above the seal ring, slip means having teeth thereon for gripping the pipe, a support ring carrying the slip means between the bowl and pipe and movable downwardly relative to the bowl, said bowl including a plurality of circumferentially separated segments adapted, upon seating of the bowl, to move inwardly and downwardly in engagement with the slip means, each of the slip means and compression and support rings comprising segments having diametrically disposed separations therebetween in substantial alignment with separations between the bowl segments, and the seal ring being split circumferentially to permit opening of the assembly into at least two parts for wrapping around the pipe, openings through the seal ring as well as each of the segments of the bowl, compression ring and slip means, a bolt suspended from each of the compression ring segments and received through said openings for connection with each support ring segment, and means for securing the parts of said assembly together when wrapped about the pipe, said securing means comprising latches for spanning the separations between adjacent parts and removably disposable within recesses of the support ring segments in position to be retained by the lower end of the bolts connected thereto.

Classifications:

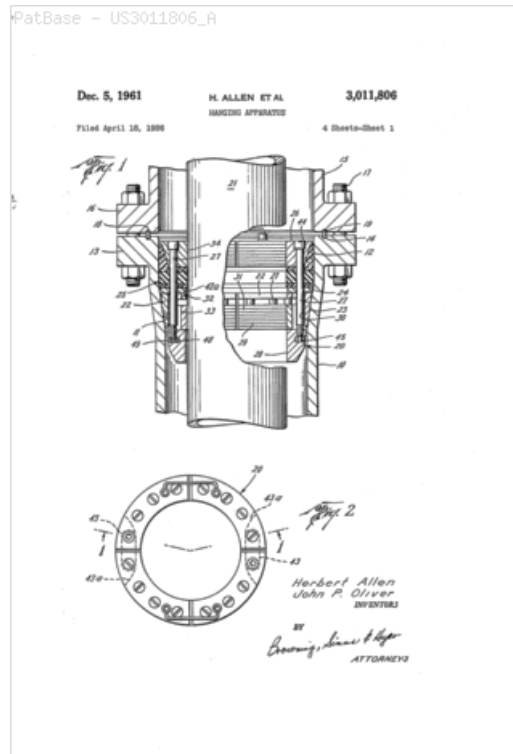
International (IPC 8-9): E21B33/04 F16L39/00 (Advanced/Invention);
E21B33/03 F16L39/00 (Core/Invention)

International (IPC 1-7): F16L3/00

CPC: E21B33/0422 F16L39/005 Y10T403/4958

European: E21B33/04M F16L39/00B

US: 285/123.8 403/281

**Family:**

Publication number	Publication date	Application number	Application date
US3011806 A	19611205	US19560579017	19560418

Priority:

US19560579017 19560418

Probable Assignee:

CAMERON IRON WORKS INC

Assignee(s): (std):

CAMERON IRON WORKS INC

Inventor(s): (std):

OLIVER JOHN P ; HERBERT ALLEN

Inventor(s):

ALLEN HERBERT

3) Family number: 21442450 (US3334923A)

Title: PIPE HANDLING MECHANISM

Abstract: 999,873. Wells c. FMC CORPORATION. June 24, 1964 [July 9, 1963], No. 26030/64. Heading E1F. A well pipe hanging mechanism comprises a body 14 having a passage 38 therethrough, a hanger 10 contractable to engage a pipe 210 in the passageway, and a sleeve 16 movable from a hanger protecting position (Fig. 2) to a position displaced from the hanger (Fig. 3). The body is a sub-aqueous wellhead, the hanger comprises segments 12 each having a seal 142 and a slip 160, and the sleeve and hanger are moved by fluid pressure. Fluid supplied by a duct 78 raises the sleeve to the position shown in Fig. 3, the fluid then passing through a groove 82 to move an annular piston 115 to the position shown in Fig. 3 to press the segments into engagement with the pipe. The pipe is finally hung by its weight shearing pins 166 and moving the slips downwardly. The segments are retracted by supplying fluid to a duct 76 to raise the piston which is connected by bolts 182 to the segments.

Classifications:

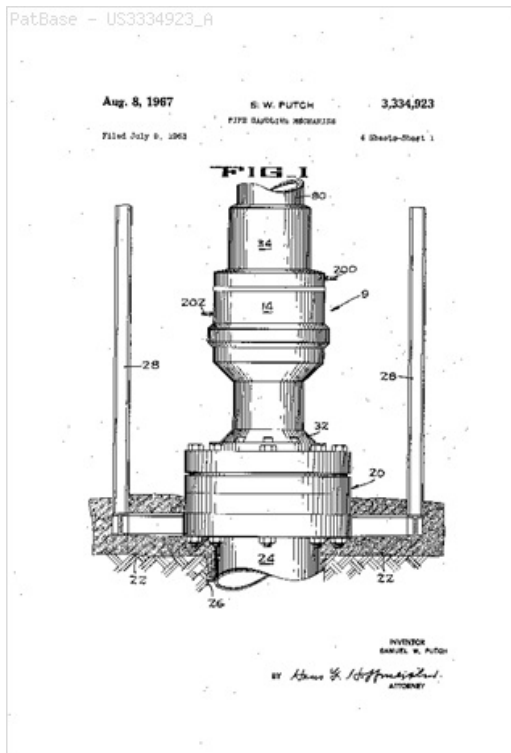
International (IPC 8-9): E21B33/04 E21B33/043 (Advanced/Invention);
E21B33/03 (Core/Invention)

International (IPC 1-7): E21B33/04

CPC: E21B33/0422 E21B33/043

European: E21B33/043 E21B33/04M

US: 166/348 285/123.8 285/18 285/3 285/45

**Family:**

Publication number	Publication date	Application number	Application date
FR1404011 A	19650625	FR19640980886	19640706
GB999873 A	19650728	GB19640026030	19640624
US3334923 A	19670808	US19630293708	19630709

Priority:

US19630293708 19630709 FR19640980886 19640706

Probable Assignee:

FMC CORP

Assignee(s): (std):

FMC CORP

Inventor(s): (std):

PUTCH SAMUEL W

4) Family number: 22084529 (US3278219A)

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Title: WELL TOOLS

Abstract: (Claim 1) 1. A well tool including: a tubular mandrel; a barrel disposed about said tubular mandrel and providing with said tubular mandrel an annular upper piston chamber; an annular pump piston longitudinally movable in said chamber and having means providing with said barrel a lower annular chamber whose upper end is in communication with the lower end of said upper chamber by a bypass flow passage; an annular operator piston longitudinally movable in said lower chamber, said operator piston being movable downwardly in said lower chamber relative to said barrel upon downward movement of said mandrel and said barrel relative to said pump piston by liquid displaced from the upper end portion of said upper chamber by such downward movement of said mandrel and said barrel relative to said pump piston, said piston having means engageable with an object extending upwardly in said barrel for preventing downward movement of said pump piston relative to the said object; gripping means disposed in said barrel and operable by said operator piston for engaging an object extending upwardly into said mandrel, said gripping means and said barrel having co-engageable means for moving said gripping means inwardly to engage an object in said barrel upon downward movement of said operator piston relative to said barrel, said barrel and said mandrel having co-engageable means for controlling movement of said mandrel relative to said barrel, said barrel and said mandrel having means closing the upper end of said upper chamber, said last mentioned means opening the upper end of said upper chamber to the exterior of the well tool upon predetermined rotational movement of said mandrel relative to said barrel to permit downward movement of said mandrel relative to said barrel and said pump piston to free said gripping means for movement out of engagement with an object held thereby whereby said retrieving tool is releasable from an object previously engaged thereby.

Classifications:

International (IPC 8-9): E21B31/18 (Advanced/Invention);

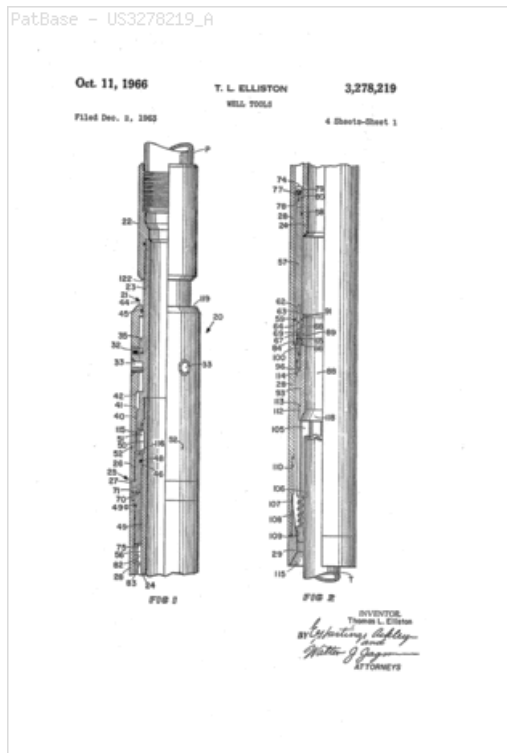
E21B31/00 (Core/Invention)

International (IPC 1-7): E21B31/00

CPC: E21B31/18

European: E21B31/18

US: 294/102.1 294/86.15 294/86.3

**Family:**

Publication number	Publication date	Application number	Application date
US3278219 A	19661011	US19630327272	19631202

Priority:

US19630327272 19631202

Probable Assignee:

OTIS ENG CO

Assignee(s): (std):

OTIS ENG CO

Assignee(s):

OTIS ENGINEERING CORP

Inventor(s): (std):

ELLISTON THOMAS L

5) Family number: 23003128 (US3334924A)

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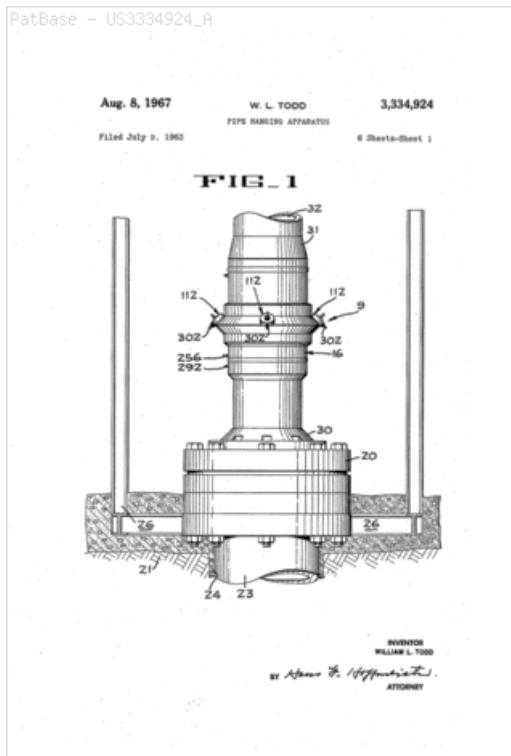
Title: PIPE HANGING APPARATUS

Abstract: (Claim 1) 1. In a well apparatus, a head providing a passageway therethrough, pipe hanging means supported by the head in said passageway for movement inwardly thereof from a retracted position to a pipe hanging position where said hanging means is closer to the axis of the passageway than in said retracted position, sleeve means mounted in said head in said passageway for movement from a protecting position wherein said sleeve means confronts said hanging means in its retracted position to an exposing position wherein said sleeve means is displaced from said hanging means, said sleeve means being movable in said head means, expansible chamber means defined by said sleeve and said head, and means for introducing fluid pressure into said chamber means to move said sleeve means from its protecting position to its retracted position to permit said hanging means to move from its retracted position to its pipe hanging position.

Classifications:**International (IPC 8-9):** E21B33/043 (Advanced/Invention);

E21B33/03 (Core/Invention)

CPC: E21B33/043**European:** E21B33/043**US:** 166/348 285/123.7 285/18 285/3 285/45

**Family:**

Publication number	Publication date	Application number	Application date
US3334924 A	19670808	US19630293818	19630709

Priority:

US19630293818 19630709

Probable Assignee:

FMC CORP

Assignee(s): (std):

FMC CORP

Inventor(s): (std):

TODD WILLIAM L

6) Family number: 7171415 (US3711123A)

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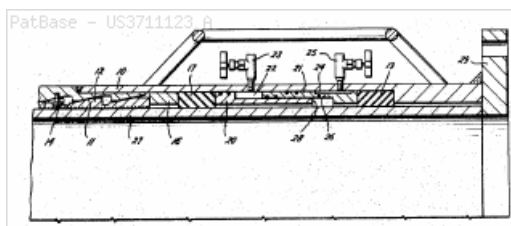
Title: APPARATUS FOR PRESSURE TESTING ANNULAR SEALS IN AN OVERSLIDING CONNECTOR

Abstract: A connector housing having axially spaced apart radially deformable annular seals is slidably positioned over the end of a pipe and the seals are actuated by an hydraulically generated force into sealing engagement between the housing and the pipe. A pressurized fluid is then introduced into the housing between the seals to test the sealing engagement thereof.

Classifications:**International (IPC 8-9):** E21B43/013 F16L21/00 F16L37/00

F16L7/02 (Advanced/Invention);

E21B43/00 F16L21/00 F16L37/00 F16L7/00 (Core/Invention)

International (IPC 1-7): F16L19/06 F16L35/00 F16L37/00**CPC:** E21B43/013 E21B47/1025 F16L7/02 F16L21/007 F16L37/002**European:** E21B43/013 E21B47/10R F16L21/00C F16L37/00B F16L7/02**US:** 285/1.8 285/123.6 285/18 285/342 285/93 285/96**Family:**

Publication number	Publication date	Application number	Application date
US3711123 A	19730116	US19710106856	19710115

Priority:

US19710106856 19710115

Probable Assignee: HYDROTECH HUGHES INC**Assignee(s):** (std): HYDRO TECH SERVICES INC**Assignee(s):**

HUGHES UNDERSEA COUPLINGS INC ; HYDROTECH INT ; HUGHES TOOL CO ; HYDROTECH HUGHES INC ; HYDROTECH SYSTEMS INC ; HSI ACQUISITIONS INC ; HYDRO TECH SERVICES INC US ; HYDROTECH INT INC ; HUGHES UNDERSEA COUPLINGS INC A CORP OF DE ; HYDROTECH INT INC 11800 CHARLES ST HOUSTON TX A CO ; HYDROTECH SYSTEMS INC A MN CORP ; BAKER HUGHES INC ; BAKER HUGHES INC A CORP OF DE ; CAL DRIVE INT ; CAL DRIVE INT INC 115 INDUSTRIAL PARKWAY LAFAYETTE ; CENTURY NATIONAL BANK OF AUSTIN ; CENTURY NATIONAL BANK OF AUSTIN PO BOX

Inventor(s): (std): ARNOLD J**Inventor(s):** ARNOLD J US

Title: Apparatus and method for rotating coil tubing in a well

Abstract: Improved coil tubing injection apparatus for servicing wells by running coil tubing thereinto for circulating fluids through the well and having the ability to rotate the coil tubing for performing drilling operations. The apparatus can readily provide concurrent longitudinal and rotational movement of the coil tubing. Methods of servicing wells involving such movement of coil tubing are disclosed.

Classifications:

International (IPC 8-9): B65H51/14 E21B19/22 E21B23/00 E21B33/068 E21B37/00 (Advanced/Invention); E21B23/00 (Advanced/Non-invention); B65H51/00 E21B19/00 E21B23/00 E21B33/03 (Core/Invention)

International (IPC 1-7): E21B17/20 E21B19/00 E21B19/08 E21B19/22 E21B23/00 E21B37/00 E21B43/00

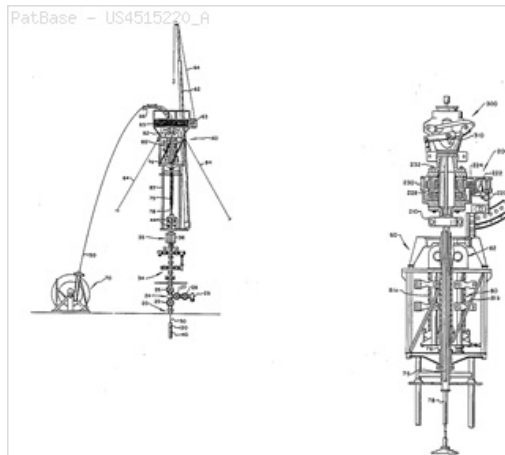
CPC: B65H51/14 E21B19/22 E21B33/068

European: B65H51/14 E21B19/22 E21B33/068

US: 166/384 166/78 166/78.1 166/85 254/29R

JP F-Term: 2D029 2D030 2D129

JP F-Index: E21B23/00



Family:

Publication number	Publication date	Application number	Application date
AU198436520 A1	19850620	AU19840036520	19841211
AU585490 B2	19890622	AU19840036520	19841211
CA1220418 A1	19870414	CA19840464291	19840928
FR2556405 A1	19850614	FR19840018908	19841211
FR2556405 B1	19881014	FR19840018908	19841211
FR2562146 A1	19851004	FR19850008140	19850530
FR2562146 B1	19881014	FR19850008140	19850530
FR2562148 A1	19851004	FR19850008139	19850530
FR2562148 B1	19881014	FR19850008139	19850530
GB2151278 A1	19850717	GB19840028776	19841114
GB2151278 B2	19880210	GB19840028776	19841114
GB2186609 A1	19870819	GB19860030871	19861224
GB2186609 B2	19880210	GB19860030871	19861224
GB2187489 A1	19870909	GB19860030872	19861224
GB2187489 B2	19880210	GB19860030872	19861224
GB8428776 A0	19841227	GB19840028776	19841114
GB8630871 A0	19870204	GB19860030871	19861224
GB8630872 A0	19870204	GB19860030872	19861224
JP60133190 A2	19850716	JP19840251484	19841128
NO844211 A	19850613	NO19840004211	19841022
US4515220 A	19850507	US19830560866	19831212

Priority:

US19830560866 19831212	CA19840464291 19840928	GB19840028776 19841114
FR19840018908 19841211	FR19850008140 19850530	FR19850008139 19850530

Probable Assignee: OTIS ENG CO

Assignee(s): (std): OTIS ENG CORP ; OTIS ENG CO

Assignee(s): OTIS ENGINEERING CORP ; SIZER PHILLIP S ; COUNCIL MALCOLM N ; COX DON C

Inventor(s): (std): COUNCIL MALCOLM N ; COX DON C ; FUJITSUPU ESU SAIZAA ; DON SHII KOTSUKUSU ; SIZER PHILLIP S ; SIZER PHILIP S ; MARUKOMU ENU KAUNSHIRU

Inventor(s): PHILLIP S SIZER DON C COX ET MALCOLM N COUNCIL ; PHILLIP S SIZER ; PHILIP S SIZER ; MALCOLM N COUNCIL ; DON C COX

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; RICHES MCKENZIE AND HERBERT LLP

Title: METAL SEAL CASING PATCH.

Abstract: A patch for oil-well casing has a metal-to-metal seal formed by a seal ring (20) forced against a casing stub (10) by a tapered face (42) on a seal body (12). The seal ring (20) has internal annular ribs (52) which are plastically deformed when the seal is set. The material of the seal ring (20) is chosen to give suitable strength and ductility for such deformation, a suitable material being a low alloy Cr-Ni-Mo steel with a carbon content about 0.2 percent.

Classifications:

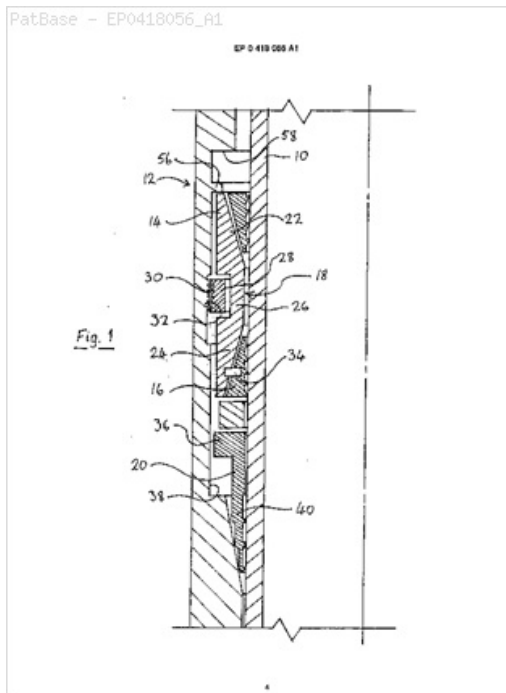
International (IPC 8-9): E21B17/08 E21B23/01 E21B29/10 E21B33/10 (Advanced/Invention);

E21B17/02 E21B23/00 E21B29/00 E21B33/10 (Core/Invention)

International (IPC 1-7): E21B17/02 E21B29/10 E21B33/10

CPC: E21B17/08 E21B23/01 E21B29/10 E21B33/10

European: E21B17/08 E21B23/01 E21B29/10 E21B33/10

**Family:**

Publication number	Publication date	Application number	Application date
DE69023443 D1	19951214	DE19906023443	19900912
EP0418056 A1	19910320	EP19900309981	19900912
EP0418056 B1	19951108	EP19900309981	19900912
GB8920607 A0	19891025	GB19890020607	19890912
NO301657 B1	19971124	NO19900003984	19900912
NO903984 A	19910313	NO19900003984	19900912
NO903984 A0	19900912	NO19900003984	19900912

Priority:

GB19890020607 19890912

Probable Assignee: TRI STATE OIL TOOL UK**Assignee(s):** (std): FMC CORP ; TRI STATE OIL TOOL UK ; TRI STATE OIL TOOLS INC**Assignee(s):** TRI STATE OIL TOOL UK A DIVISION OF BAKER HUGHES LTD DYCE ABERDEEN GB ; TRI STATE OIL TOOL UK A DIVISION OF BAKER HUGHES LTD ; TRI STATE OIL TOOL UK A DIVISION OF BAKER HUGHES ; FMC CORP CHICAGO ILL US**Inventor(s):** (std): DOIG THOMAS ; DOIG THOMAS C O TRI STATE OIL ; MURRAY KENNETH ALEXANDER**Inventor(s):** MURRAY KENNETH ALEXANDER ABERDEEN SCOTLAND GB ; DOIG THOMAS C O TRI STATE OIL TOOL BAKER HUGHES NL ; DOIG THOMAS C O TRI STATE OIL TOOL BAKER HUGHES ; DOIG THOMAS C O TRI STATE OIL TOOL BAKER HUGHES NL 1700 AA HEERHUGOWAARD NL**Designated states:** AT BE CH DE DK ES FR GB GR IT LI LU NL SE**9) Family number: 11710336 (US5992516A)**

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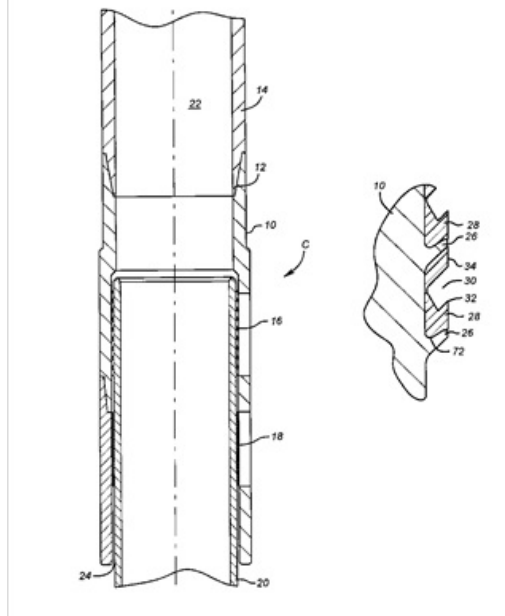
Title: WELL STRING INJECTOR

Abstract: A well string injector has a frame, with a guide at one end for guiding well string along the frame and a support at the other end for directing the well string towards a target. At least one of a pair of longitudinally spaced clamps is movable with respect to the other and at least one clamp is oriented on the frame to provide clamping forces on well string by relative movement between clamping members, each carrying a well string gripping die, predominantly in a transverse direction perpendicular to the frame longitudinal direction. A third well string gripping die may be carried by the clamp for location between parallel spaced well string clamped by the clamp. A well string gripping die is provided that includes a gripping surface that induces an optimized stress distribution in well string clamped by the gripping die when the well string is in tension. A well string gripping die is provided that includes one and preferably a pair of barrier walls for preventing walk out of well string.

Classifications:**International (IPC 8-9):** E21B19/22 (Advanced/Invention); E21B19/00 (Core/Invention)**International (IPC 1-7):** E21B19/08 E21B19/22**CPC:** E21B19/22**European:** E21B19/22**US:** 166/77.2 166/77.4 166/772 166/774



US: 166/242.7 166/277 285/351 285/917

**Family:**

Publication number	Publication date	Application number	Application date
AU199714854 A1	19971113	AU19970014854	19970224
AU729476 B2	20010201	AU19970014854	19970224
CA2198163 AA	19971107	CA19972198163	19970221
CA2198163 C	20031202	CA19972198163	19970221
GB2312906 A1	19971112	GB19970004996	19970311
GB2312906 B2	20000531	GB19970004996	19970311
GB9704996 A0	19970430	GB19970004996	19970311
NO311048 B1	20011001	NO19970002089	19970506
NO972089 A	19971110	NO19970002089	19970506
NO972089 A0	19970506	NO19970002089	19970506
US5829524 A	19981103	US19960624921	19960507

Priority:

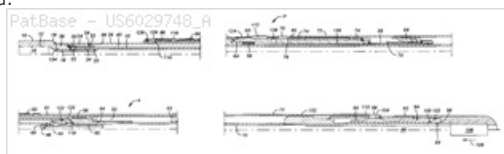
US19960624921 19960507 CA19972198163 19970221

Probable Assignee: BAKER HUGHES INC**Assignee(s):** (std): BAKER HUGHES INC**Assignee(s):** FLANDERS BRUCE A ; LYNDE GERALD D ; MACRAE JONATHAN**Inventor(s):** (std): MACRAE JONATHAN ; MACRAE JOHN ; LYNDE GERALD D ; FLANDERS BRUCE ; LYNDE GERALD DAVID ; FLANDERS BRUCE A**Inventor(s):** BRUCE A FLANDERS ; BRUCE FLANDERS ; GERALD D LYNDE ; GERALD DAVID LYNDE ; JONATHAN MACRAE**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; SIM AND MCBURNEY**11) Family number: 11325472 (US6029748A)**

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Title: Method and apparatus for top to bottom expansion of tubulars

Abstract: An apparatus and method are disclosed that allow for downhole expansion of long strings of rounded tubulars, using a technique that expands the tubular from the top to the bottom. The apparatus supports the tubular to be expanded by a set of protruding dogs which can be retracted if an emergency release is required. A conically shaped wedge is driven into the top of the tubing to be expanded. After some initial expansion, a seal behind the wedge contacts the expanded portion of the tube. Further driving of the wedge into the tube ultimately brings in a series of back-up seals which enter the expanded portion of the tube and are disengaged from the driving mandrel at that point. Further applied pressure now makes use of a piston of enlarged cross-sectional area to continue the further expansion of the tubular. When the wedge has fully stroked through the tubular, it has by then expanded the tubular to an inside diameter larger than the protruding dogs which formerly supported it. At that point, the assembly can be removed from the wellbore. An emergency release, involving dropping a ball and shifting a sleeve, allows, through the use of applied pressure, the shifting of a sleeve which supports the dog which in turn supports the tubing to be expanded. Once the support sleeve for the dog has shifted, the dog can retract to allow removal of the tool, even if the tube to be expanded has not been fully expanded.

Classifications:**International (IPC 8-9):** E21B29/10 E21B43/10 (Advanced/Invention); E21B29/00 E21B43/02 (Core/Invention)**International (IPC 1-7):** E21B E21B17/00 E21B23/00 E21B29/00 E21B29/10 E21B43/10**CPC:** E21B43/105**European:** E21B43/10F1**US:** 166/277 166/380**Family:**

Publication number	Publication date	Application number	Application date
AU199887077 A1	19990422	AU19980087077	19980928
AU759686 B2	20030417	AU19980087077	19980928

CA2249139 AA	1990403	CA19982249139	19981001
CA2249139 C	20070102	CA19982249139	19981001
GB2329916 A1	19990407	GB19980020913	19980928
GB2329916 B2	20020327	GB19980020913	19980928
GB9820913 A0	19981118	GB19980020913	19980928
NO313466 B1	20021007	NO19980004629	19981002
NO984629 A	19990406	NO19980004629	19981002
NO984629 A0	19981002	NO19980004629	19981002
US6029748 A	20000229	US19970943954	19971003

Priority:

US19970943954 19971003 CA19982249139 19981001

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC

Assignee(s): FORSYTH DAVID G ; ROSS ROBERT C

Inventor(s): (std): FORSYTH DAVID G ; ROSS ROBERT C

Inventor(s): DAVID G FORSYTH ; ROBERT C ROSS

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; SIM AND MCBURNEY

12) Family number: 11325476 (US6021850A)

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Title: Downhole pipe expansion apparatus and method

Abstract: A method and apparatus of expanding tubulars is disclosed. In the preferred embodiment, a rounded tubular is inserted through a larger tubular while suspended on a mandrel. A stop device, such as a liner hanger, is attached to the larger tubular after delivery downhole on the mandrel. Upon engagement of the liner hanger or other stop device to the larger tubular, the mandrel is freely movable with respect to the stop device. The mandrel contains a deforming device such as a conically shaped wedge located below the tubular to be expanded. A force is applied from the surface to the mandrel, pulling the wedge into the tubular to be expanded. When the wedge clears through the tubular to be expanded, it releases the stop device so that the stop device can be retrieved with the mandrel to the surface. Thus, the stop device is supported by the larger tubing while the smaller tubing is expanded when the wedge is pulled through it. Should the tubular being expanded contract longitudinally while it is being expanded radially, it is free to move away from the stop device.

Classifications:

International (IPC 8-9): E21B29/10 E21B43/10 (Advanced/Invention); E21B29/00 E21B43/02 (Core/Invention)

International (IPC 1-7): E21B E21B23/00 E21B29/00 E21B29/10 E21B43/10

CPC: E21B29/10 E21B43/105

European: E21B29/10 E21B43/10F1

US: 166/207 166/380



Family:

Publication number	Publication date	Application number	Application date
AU199887078 A1	19990422	AU19980087078	19980928
AU759049 B2	20030403	AU19980087078	19980928
CA2249168 AA	19990403	CA19982249168	19981001
CA2249168 C	20041214	CA19982249168	19981001
GB2329918 A1	19990407	GB19980021675	19981005
GB2329918 B2	20000329	GB19980021675	19981005
GB9821675 A0	19981202	GB19980021675	19981005
NO328292 B1	20100125	NO19980004630	19981002
NO984630 A	19990406	NO19980004630	19981002
NO984630 A0	19981002	NO19980004630	19981002
US6021850 A	20000208	US19970943632	19971003

Priority:

US19970943632 19971003 CA19982249168 19981001

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Assignee(s): (std): BAKER HUGHES INC

Assignee(s): DOBSON ANDREW ; WOOD EDWARD T

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Inventor(s): ANDREW DOBSON ; EDWARD T WOOD ; EDWARD WOOD

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; SIM AND MCBURNEY

13) Family number: 11426910 (US6073692A)

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Title: Expanding mandrel inflatable packer

Abstract: An inflatable packer is disclosed involving an expandable mandrel. The mandrel is initially corrugated, creating spaces for a material which can be pushed against an inflatable element when the corrugated mandrel is expanded. The mandrel can be expanded by use of fluid or mechanical forces. The mandrel can be configured to facilitate progressive expansion. Different fluids can be used to facilitate a permanent set using a hardenable material in the annular space between the mandrel and the element. Different materials can be used so that when subjected under pressure as the mandrel is expanded, they contact each other to form a hardenable filler material. A relief mechanism is provided to allow

escape of excess inflation medium in certain circumstances. The yield strength of the mandrel material can vary along its length to facilitate progressive inflation. In certain applications, the inflatable described can also expand the casing in which it is mounted. Those and other features are better understood by a review of the detailed description of the preferred embodiment below.

Classifications:

International (IPC 8-9): E21B33/12 E21B33/127

E21B43/10 (Advanced/Invention);

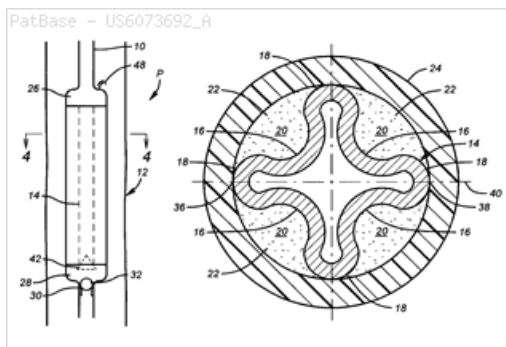
E21B33/12 E21B43/02 (Core/Invention)

International (IPC 1-7): E21B E21B23/06 E21B33/12 E21B33/127 E21B33/128

CPC: E21B33/12 E21B33/127 E21B43/105

European: E21B33/12 E21B33/127 E21B43/10F1

US: 166/187



Family:

Publication number	Publication date	Application number	Application date
AU199917367 A1	19991007	AU19990017367	19990217
AU756057 B2	20030102	AU19990017367	19990217
CA2264336 AA	19990927	CA19992264336	19990303
CA2264336 C	20040525	CA19992264336	19990303
GB2335683 A1	19990929	GB19990004370	19990225
GB2335683 B2	20000531	GB19990004370	19990225
GB9904370 A0	19990421	GB19990004370	19990225
NO315056 B1	20030630	NO19990001480	19990326
NO991480 A	19990928	NO19990001480	19990326
NO991480 A0	19990326	NO19990001480	19990326
US6073692 A	20000613	US19980049303	19980327

Priority:

US19980049303 19980327 CA19992264336 19990303

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14) Family number: 42243588 (US2001020532A)

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Title: Hanging liners by pipe expansion

Abstract: A method for securing and sealing one tubular to another downhole facilitates cementing prior to sealing and allows for suspension of one tubular in the other by virtue of pipe expansion techniques.

Classifications:

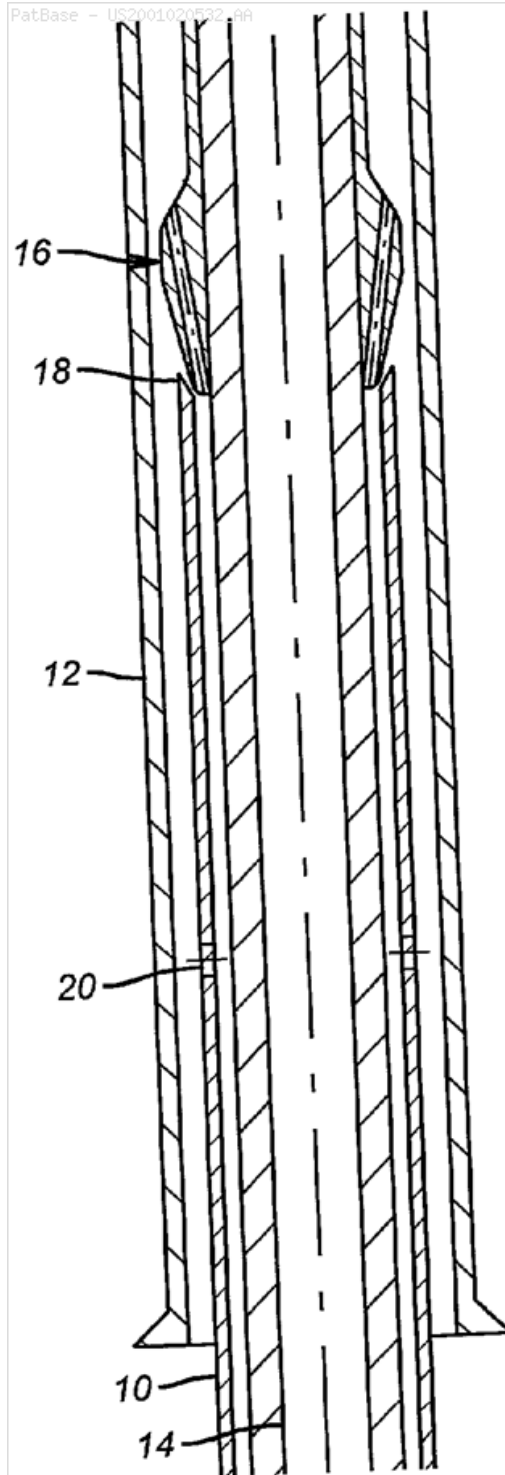
International (IPC 8-9): E21B17/00 E21B33/04 E21B33/14 E21B43/10 (Advanced/Invention)

International (IPC 1-7): E21B17/00 E21B17/08 E21B23/00 E21B23/01 E21B23/02 E21B29/00 E21B33/00 E21B33/04 E21B33/128 E21B33/13 E21B33/14 E21B43/10

CPC: E21B33/14 E21B43/103 E21B43/106

European: E21B33/14 E21B43/10F E21B43/10F2

US: 166/177.4 166/177.400S 166/207 166/207S 166/285 166/380 166/380S 166/382 166/382S 166/384 166/384S 166/386 166/386S 166/387

**Family:**

Publication number	Publication date	Application number	Application date
AU200030230 A1	20001123	AU20000030230	20000502
AU200030230 A5	20001123	AU20000030230	20000502
AU2004203574 AA	20040902	AU20040203574	20040803
AU2004203574 BB	20070426	AU20040203574	20040803
AU774605 B2	20040701	AU20000030230	20000502
CA2307538 AA	20001120	CA20002307538	20000504
CA2307538 C	20051115	CA20002307538	20000504
GB200010798 A0	20000628	GB20000010798	20000504
GB200112502 A0	20010711	GB20010012502	20000504
GB2350137 A1	20001122	GB20000010798	20000504
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GB2359837 A1	20010905	GB20010012502	20000504
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NO20002585 A	20001121	NO20000002585	20000519
NO20002585 A0	20000519	NO20000002585	20000519
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US2001020532 AA	20010913	US20010847973	20010503
US2002079101 AA	20020627	US20020087138	20020301
US2003070810 AA	20030417	US20020294939	20021114
US2004016545 AA	20040129	US20030626874	20030724

US6446724 BB	20020910	US20010847973	20010503
US6561271 BB	20030513	US20020087138	20020301
US6598677 BA	20030729	US19990315411	19990520
US6631765 BB	20031014	US20020294939	20021114
US6915852 BB	20050712	US20030626874	20030724

Priority:

US19990315411 19990520	AU20000030230 20000502	AU20000030230 20000502
GB20000010798 20000504	CA20002307538 20000504	US20010847973 20010503
US20020087138 20020301	US20020294939 20021114	US20030626874 20030724

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Inventor(s): JOHN L BAUGH ; RODNEY J BENNETT ; GEORGE E GIVENS ; GEORGE GIVENS

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15) Family number: 41750464 (US2009211770A)

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Title: ELONGATED SEALING MEMBER FOR DOWNHOLE TOOL

Abstract: A downhole apparatus is described comprising a body and a sealing arrangement located on the body. The body has a longitudinal axis and the sealing arrangement comprises at least one elongated sealing member with an axis of elongation extending around the longitudinal axis. The sealing member comprises a material selected to expand on exposure to at least one predetermined fluid, such as a hydrocarbon or aqueous fluid encountered in a wellbore. A method of forming the apparatus and methods of use are described. Embodiments of the invention relate to wellbore packers.

Classifications:

International (IPC 8-9): E21B19/22 E21B23/00 E21B31/12

E21B31/18 E21B33/00 E21B33/10 E21B33/12

E21B43/10 (Advanced/Invention);

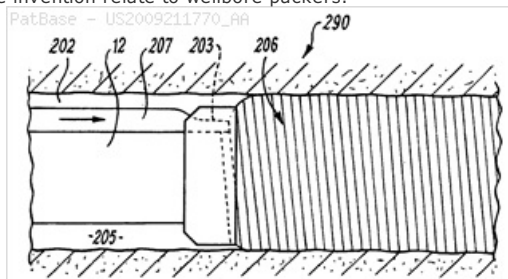
E21B23/00 E21B31/00 E21B33/00 E21B33/10 E21B33/12

E21B43/02 (Core/Invention)

CPC: E21B2033/005 E21B33/12 E21B33/1208 Y10T29/49826

European: E21B19/22 E21B33/00 E21B33/12 E21B33/12F

US: 166/118 166/118S 166/180 166/180 166/208 166/208S 166/335 166/387 277/336 277/336S 29/428 29/428S 294/86.26 294/86.260S



Family:

Publication number	Publication date	Application number	Application date
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BRPI0901312 A2	20091201	BR2009PI01312	20090227
CA2654489 AA	20090827	CA20092654489	20090217
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DE602009023391 D1	20140528	DE200960023391T	20090227
DE602009023392 D1	20140528	DE200960023392T	20090227
DE602009023393 D1	20140528	DE200960023393T	20090227
DE602009023607 D1	20140605	DE200960023607T	20090227
EP2096255 A1	20090902	EP20090153898	20090227
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EP2472051 A1	20120704	EP20120161276	20090227
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EP2472054 A1	20120704	EP20120161363	20090227
EP2472054 B1	20140416	EP20120161363	20090227
GB200803517 A0	20080402	GB20080003517	20080227
GB2457894 A1	20090902	GB20080003517	20080227
GB2457894 A8	20090916	GB20080003517	20080227
GB2457894 B2	20111214	GB20080003517	20080227
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US2009211770 AA	20090827	US20090393984	20090226
US2014224497 AA	20140814	US20130135008	20131219
US8636074 BB	20140128	US20090393984	20090226
US9512691 BB	20161206	US20130135008	20131219

Priority:

GB20080003517 20080227	US20090393984 20090226	EP20090153898 20090227
EP20120161276 20090227	EP20120161281 20090227	EP20120161359 20090227
EP20120161363 20090227	US20130135008 20131219	

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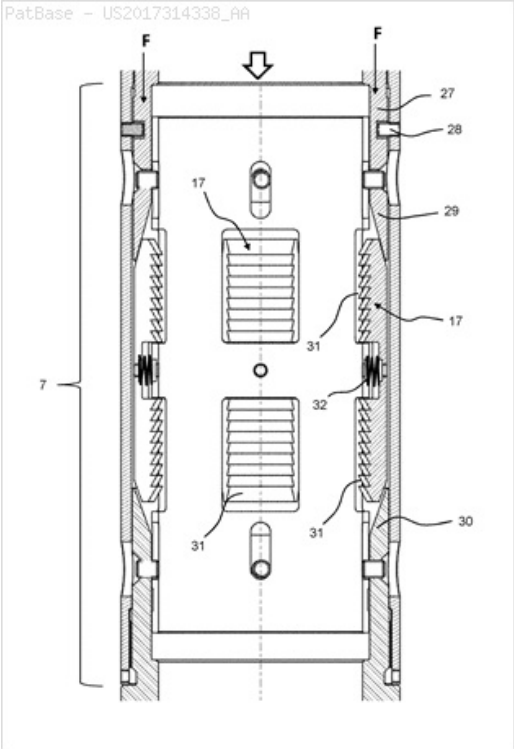
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR

16) Family number: 62469244 (US2017314338A) © PatBase

Title: RETRIEVABLE RE-CONNECTING DEVICE WITH INTERNAL SEAL AND SLIPS FOR CONNECTING TO THE TOP OF AN EXISTING TUBING IN A WELL BORE

Abstract: The present invention relates to a re-connecting device (1) for connecting and sealing against a damaged existing/remaining tubing (5) in a well bore, a casing string (2) or a pipe, the tubing (5) having smaller diameter than the casing string (2), and for repairing of the tubing (5), comprising an outer body (3) and at least one sealing element (18) arranged therein, the outer body (3) is arranged to enable the entrance of, and surrounding, the end part of the tubing (5) in the well bore, casing string (2) or pipe, and a sealing assembly (8) is arranged in the outer body (3), of the re-connecting device (1), for sealing it against the tubing (5). The invention is achieved by that an internal and axially movable assembly (6) is arranged inside the outer body (3) and comprising at least one of an anchoring assembly (7), the sealing assembly (8) and/or a releaseable locking assembly (9), where the movable assembly (6) and at least one of its anchoring assembly (7), sealing assembly (8) and/or releaseable locking assembly (9) is/are arranged to be activated by applying an axial mechanical/physical stroke to the top of the moveable assembly (6).

Classifications:
International (IPC 8-9): E21B17/02 E21B17/06 E21B23/01
E21B29/10 E21B31/00 E21B31/18 E21B33/12 (Advanced/Invention);
E21B29/00 (Advanced/Non-invention)
CPC: E21B29/10 E21B31/00 E21B17/06 E21B33/12 E21B29/00
E21B31/18 E21B17/02 E21B23/01



Family:

Publication number	Publication date	Application number	Application date
CA2967740 AA	20170512	CA20152967740	20151117
CN107208460 A	20170926	CN201580060146	20151117
CO20170004367 A2	20170920	CO20170004367	20170428
EA201790943 A1	20170929	EA20170090943	20151117
EP3221551 A1	20170927	EP20150801258	20151117
ID201803394 A	20180406	ID2017P0003665	20151117
SE201451380 A1	20160518	SE20140051380	20141117
US2017314338 AA	20171102	US20150525423	20151117
WO16079664 A1	20160526	WO20151B58870	20151117

Priority:

SE20140051380 20141117 WO20151B58870 20151117

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Inventor(s): MATS JOHANSSON ; LEN BARTON ; BORRE LOVIKNES

Agent(s): BORDEN LADNER GERVAIS LLP; JOSE ANDRES RINCON USCATEGUI; ZACCO SWEDEN AB; HERU LUKITO SH

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