

Search history

Search 1: FT=(pipe and couple and screw and seal and axis) (Results 7211)
Search 2: FT=(pipe and couple and screw and seal and axis) and CPC=(f16l) (Results 794)
Search 3: 1 and 2 (Results 794)
Search 4: FT=(pipe and couple and screw and seal and axis) and CPC=(f16l21/06 and f16l21/00 and f16l21/02 and f16l21/03 and f16l23/00 and f16l23/18) (Results 0)
Search 5: 2 and ring (Results 638)
Search 6: 5 and nut (Results 345)
Search 7: segment and 5 (Results 138)

1) Family number: 22953009 (US3720977A)

© PatBase

Title: SUCTION CLEANING APPARATUS

Abstract: This invention relates to suction washing apparatus and has for its object to wash by suction the pile of carpets, surface of floor coverings, upholstery and other fabrics, and floor, windows and wall and even ceiling which in use is arranged to supply cleaning liquid to the surface to be cleaned and to remove same by suction means.

Classifications:

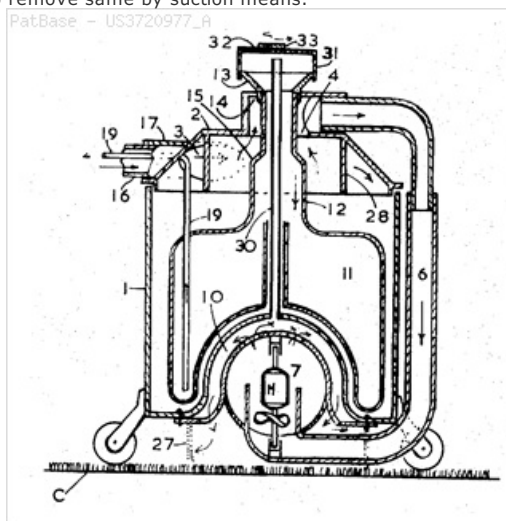
International (IPC 8-9): A47L11/30 A47L11/34 A47L9/08 B64D39/00 B64D39/06 F16L37/113 F16L37/252 F16L37/44 G01B5/30 G01L1/00 G01L1/06 G01N3/06 G01N3/32 G01N3/34 H03D1/22 H04B1/30 H04N5/455 (Advanced/Invention); G01N3/32 (Advanced/Non-invention); A47L11/00 A47L11/29 A47L9/02 B64D39/00 F16L37/00 F16L37/28 G01B5/30 G01L1/00 G01N3/00 G01N3/32 H03D1/00 H04B1/30 H04N5/455 (Core/Invention); G01N (Subclass/Invention)

International (IPC 1-7): A47L11/20 A47L11/30 A47L11/34 A47L7/00 F16L29/00 G01B5/30 G01L1/00 G01L1/06 G01M19/00 G01M5/00 G01N19/08 G01N3/06 G01N3/32

CPC: A47L9/08 A47L11/30 A47L11/34 A47L11/4019 A47L11/4036 A47L11/4044 A47L11/4083 A47L11/4094 F16L37/44 B64D39/06 F16L37/113 F16L37/252 Y10T137/87973 H03D1/2245 H04B1/30 H04N5/455 A47L11/4016 G01N2203/0066 G01N3/062 G01B5/30 G01L1/06 G01N3/06

European: A47L11/30 A47L11/34 A47L11/40D2 A47L11/40D2B A47L11/40F A47L11/40F6 A47L11/40N2 A47L11/40R A47L9/08 B64D39/00 B64D39/06 F16L37/113 F16L37/252 F16L37/44 G01B5/30 G01L1/06 G01N3/06 G01N3/06B H03D1/22E H04B1/30 H04N5/455 S01N203/00P1C2 S01N3/00P1C2

US: 116/212 137/614.06 141/346 141/384 15/32.1 15/321 15/353 73/760 73/762 73/787 73/799 73/810



Family:

Publication number	Publication date	Application number	Application date
AT10397 E	19841215	AT19800401885T	19801230
AT299486 B	19720626	AT19670010571	19671122
AT31820 E	19880115	AT19840402187T	19841031
AU198065906 A1	19810709	AU19800065906	19801231
AU198434960 A1	19850509	AU19840034960	19841102
AU198434960 A1	19850509	AU19840034960	19831102
AU3496084 A1	19850509	AU19840034960D	19831104
AU540878 B2	19841206	AU19800065906	19801231
AU567773 B2	19871203	AU19840034960	19831102
AU567773 B2	19871203	AU19840034960	19841102
BE705398 A	19680301		19671020
BR8008623 A	19810728	BR19800008623	19801230
BRPI8405573 A	19850910	BR1984PI05573	19841031
CA1148763 A1	19830628	CA19800367794	19801231
CA1232471 A1	19880209	CA19840466130	19841023
CA924061 A1	19730403	CA19710108294	19710322
CH480831 A	19691115	CH19670015268	19671031
CH537180 A	19730531	CH19710007350	19710518
DE1475664 A1	19690206	DE19651475664	19650922
DE1475664 B2	19710128	DE19651475664	19650922
DE1628527 B1	19710616	DE1967B095267	19671104
DE1628527 C2	19740711	DE1967B095267	19671104

DE1728423 A1	19720427	DE19671728423	19671104
DE1728423 B2	19731115	DE19671728423	19671104
DE1728423 C3	19740606	DE19671728423	19671104
DE1775920 A1	19720413	DE19651775920	19650922
DE1775920 B2	19730322	DE19651775920	19650922
DE1775920 C3	19731004	DE19651775920	19650922
DE2166158 A1	19730705	DE19712166158	19710310
DE3069685 D1	19850103	DE19803069685	19801230
DE3468531 D1	19880211	DE19843468531	19841031
EP0032101 A2	19810715	EP19800401885	19801230
EP0032101 A3	19810923	EP19800401885	19801230
EP0032101 B1	19841121	EP19800401885	19801230
EP0147254 A1	19850703	EP19840402187	19841031
EP0147254 B1	19880107	EP19840402187	19841031
FR1454790 A	19661007	FR19650039393	19651123
FR1554790 A	19690124		19671122
FR2473178 A1	19810710	FR19800000342	19800103
FR2473178 B1	19830708	FR19800000342	19800103
FR2487979 A2	19820205	FR19800017225	19800731
FR2487979 B2	19830902	FR19800017225	19800731
FR2488093 A1	19820205	FR19800017227	19800731
FR2488093 B1	19850308	FR19800017227	19800731
FR2496264 A2	19820618	FR19800026727	19801212
FR2496264 B2	19830909	FR19800026727	19801212
FR2554591 A2	19850510	FR19830018059	19831104
FR2554591 B2	19860404	FR19830018059	19831104
FR2559905 A2	19850823	FR19840002911	19840216
FR2559905 B2	19871120	FR19840002911	19840216
FR2574547 A2	19860613	FR19840019232	19841211
FR2574547 B2	19870123	FR19840019232	19841211
GB1121225 A	19680724	GB19660052755	19661125
GB1291138 A	19720927	GB19700014367	19700325
JP1378710 C3	19870528	JP19800189324	19801227
JP56142439 A2	19811106	JP19800189324	19801227
JP60209138 A2	19851021	JP19840228825	19841030
JP61045174 B4	19861007	JP19800189324	19801227
NO160552 B	19890116	NO19840004338	19841101
NO160552 C	19890426	NO19840004338	19841101
NO160880 B	19890227	NO19850000586	19850215
NO160880 C	19890607	NO19850000586	19850215
NO844338 A	19850506	NO19840004338	19841101
NO844338 L	19850506	NO19840004338	19841101
NO850586 A	19850819	NO19850000586	19850215
NO850586 L	19850819	NO19850000586	19850215
SE340511 B	19711122	SE19670015118	19671103
US3330313 A	19670711	US19650435145	19650225
US3720977 A	19730320		19710216
US4409841 A	19831018	US19800221212	19801230
US4580520 A	19860408	US19840667262	19841101
ZA7101772 A	19711229	ZA19710001772	19710318

Priority:

US19650435145	19650225	GB19660052755	19661125	GB19670052755	19670222
GB19700014367	19700325	DE19712166158	19710310	CH19710007350	19710518
FR19800000342	19800103	FR19800000343	19800104	FR19800017227	19800731
FR19800017225	19800731	FR19800026727	19801212	CA19800367794	19801231
FR19830018059	19831104	FR19840002011	19840216	FR19840002911	19840216
CA19840466130	19841023	EP19840402187	19841031	FR19840019232	19841211

Probable Assignee: STAS SOC TECH ACCESS SPEC

Assignee(s): (std): ACCESSOIRES SPECIALISES STE TE ; ACCESSOIRES SPECIALISES STE TECH ; EMCO WHEATON ; ESU TEE AA ESU SOC TECH DASETS ; BRYCKI W ; BRYCKI WLADYSLAW ; S T A S SOC TECHNIQUE D ACCESSOIRES SPECIALISE ; ESU TEE AA ESU SOC TEKUNIUKU DASETSUSOWAARU SUPESH ; STAS D ACCESSOIRES SPECIALISES SA ; STAS STE TECH ACCESSOIRES SPECIA ; TECHNIQUE D ACCESSOIRES SPECIALISES S T A SOC ; TECHNIQUE D ACCESSOIRES SPECIALISES S T A S SOC ; VANDEPUTTE FILS CIE SA ; TECHNIQUE D ACCESSOIRES SPECIALISES STAS SOC ; VANDEPUTTE FILS AND CIE ; TECH DASESOWAARU SUPESHIARIZE ; TECH D ACCESSOIRES SPECIALISES ; STAS SOC TECH D ACCESSORIE ; STAS SOC TECH ACCESS SPEC ; WLADYSLAW BRYCKI ; TEKUNIUKU DASESOWAARU SUPESHIARIZE

Assignee(s): STAS SOC TECHNIQUE D ACCESSOIRES SPECIALISES S ; TECHNIQUE D ACCESSOIRES SPECIALISES STAS 77 ; TECHNIQUE D ACCESSOIRES SPECIALISES STAS 77 RUE HE ; TECHNIQUE D'ACCESSOIRES SPECIALISES STAS 77 RUE H ; TECHNIQUE D'ACCESSOIRES SPECIALISES STAS 77 RUE HE ; TECHNIQUE D'ACCESSOIRES SPECIALISES STAS SOC ; STAS SOCIETE TECHNIQUE D ACCESSOIRES SPECIALISES ; STAS SOC TECHNIQUE D ACCESSOIRES SPECIALISES ; STAS SOC TECHNIQUE ; STAS SA D ACCESSOIRES SPECIALISES ; SOCIETE TECHNIQUE D ACCESSOIRES SPECIALISES STAS ; STAS SOCIETE TECHNIQUE D ACCESSOIRES SPECIALISES SOCIETE ANONYME DITE ; SOCIETE TECHNIQUE D'ACCESSOIRES SPECIALISES S T A S ; SOCIETE ANONYME STAS SOCIETE TECHNIQUE D ACCESSOIRES SPECIALISES ; STAS SOC TECHNIQUE D ACCESSOIRES SPECIALISES SOC ANONYME ; S T A S SOCIETE TECHNIQUE D ACCESSOIRES SPECIALISE ; SOC TECHNIQUE D ACCESSOIRES SPECIALISES S T A S ; S T A S SOCIETE TECHNIQUE D'ACCESSOIRES SPECIALISES SOCIETE ANONYME ; S T A S SOCIETE TECHNIQUE D ACCESSOIRES SPECIALISES ; S T A S SOCIETE TECHNIQUE D ACCESSOIRES SPECIALISES SOCIETE ANONYME ; BRYCKI W GB ; BRYCKI WLADYSLAW LIVERPOOL GROSSBRITANNIEN ; EMCO WHEATON INC DAYTON OHIO V ST A ; EMCO WHEATON INC ; ANONYME STAS TECHNIQUE D'ACCESSOIRES SPECIALISES A ; ARCHER MICHEL ; ANONYME STAS SOC ; ANONYME STAS TECHNIQUE D ACCESSOIRES ; ANONYME STAS TECHNIQUE D ACCESSORI SOC

Inventor(s): (std): ARCHER M ; ARCHER MICHAEL ; M ARCHER ; MICHAEL ARCHER ; MICHEL ARCHER ; MITSUSHERU AACHAA ; MITSUSHIERU AACHIYAA ; MITSUSHIERU ARUSHIEERU ; WLADYSLAW BRYCKI ; BRYCKI

WLADYSLAW ; BRYCKI W ; ARCHERN MICHEL ; ARCHER MICHEL ; P LESTER ROSELL ; P ROSELL
LESTER ; GREBERT JEAN LOUIS ; ROSELL LESTER P

Inventor(s): JEAN LOUIS GREBERT ; ROSELL LESTER P DAYTON OHIO V ST A ; WIRD SPAETER GENANNT WERDEN ;
BRYCKI W GB ; BRYCKI WLADYSLAW LIVERPOOL GROSSBRITANNIEN

Agent(s): GRIFFITH HACK; ROBIC ROBIC AND ASSOCIES ASSOCIATES

Designated states: AT BE CH DE GB IT LI LU NL SE

2) Family number: 47809019 (US2010307624A)

© PatBase

Title: EXISTING PIPE REHABILITATION METHOD

Abstract: Segments are linked in the circumferential and pipe length directions to assemble a rehabilitating pipe inside an existing pipe in order to rehabilitate the existing pipe. A plurality of nuts are secured to the segments along the circumferential direction thereof. A fastening member having a screw part is provided which is screwed into the nut to fasten a first segment to a second segment to which the nut is secured, thereby linking the first and second segments in the pipe length direction thereof. The position of the nut in the first segment is offset as viewed in the circumferential direction from the nut position of the second segment. The arrangement of the fastening members and the nuts is staggered as viewed in its entirety. This allows the connection strength of the segments in the pipe length direction to be made uniform.

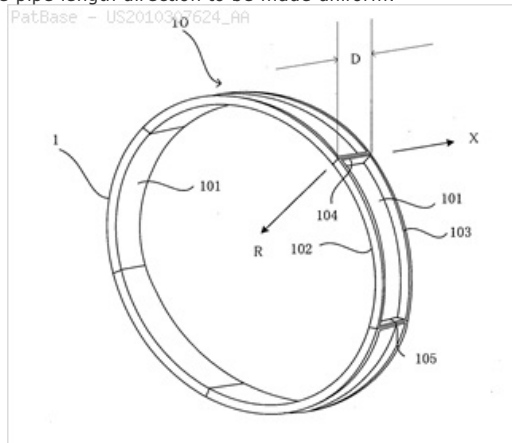
Classifications:

International (IPC 8-9): E03F3/04 E03F3/06 E03F7/00 F16B19/00
F16B5/02 F16L1/00 F16L19/00 F16L41/06 F16L55/00 F16L55/16
F16L55/162 F16L55/163 F16L55/165 F16L55/168 F16L55/18
F16L58/00 F16L58/18 (Advanced/Invention);
F16L1/00 (Core/Invention);
F16L1/00 F16L19/00 (Core/Non-invention)

International (IPC 1-7): E03F3/06 F16L 1/00 F16L55/163 F16L55/165
CPC: F16L1/00 F16L41/06 F16L55/00 F16L55/16 F16L55/1604
F16L55/1651 F16L55/1683 F16L58/00 F16L58/187 E03F3/06
E03F2003/065 F16L55/163 F16L55/1657

European: E03F3/06 F16L55/163 F16L55/165J P03F3/06B

US: 138/97 138/98 138/98P 405/150.1 405/151 405/184.2



Family:

Publication number	Publication date	Application number	Application date
AT542084 E	20120215	AT20090178559T	20091209
AU2009251047 AA	20101223	AU20090251047	20091218
AU2009251047 BB	20130919	AU20090251047	20091218
BRPI1001492 A2	20140211	BR2010PI01492	20100528
BRPI1001492 B8	20190820	BR2010PI01492	20100528
BRPI1001492 B8	20190806	BR2010PI01492	20100528
BRPI1001492 B8	20190820	BR2010PI01492	20100528
CA2688369 AA	20101203	CA20092688369	20091214
CA2688369 C	20160802	CA20092688369	20091214
CN101907200 A	20101208	CN200910265710	20091224
CN101907200 B	20140625	CN200910265710	20091224
DE602009004728 D1	20120322	DE200960004728T	20091209
DK2261545 T3	20120410	DK20090178559T	20091209
EP2261545 A1	20101215	EP20090178559	20091209
EP2261545 B1	20120118	EP20090178559	20091209
IN01434KO2009 A	20120504	IN2009KO01434	20091211
JP2011012803 A2	20110120	JP20090233178	20091007
JP5457130 B2	20140402	JP20090233178	20091007
KR101691037 B1	20161229	KR20090126626	20091218
KR20100130542 A	20101213	KR20090126626	20091218
MY151358 A	20140515	MY20100002387	20100521
RU2010122595 A	20111210	RU20100122595	20100602
RU2012143411 A	20131227	RU20120143411	20100602
RU2012143411 A	20131227	RU20120143411	20121010
RU2012143412 A	20131227	RU20120143412	20121010
RU2012143412 A	20131227	RU20120143412	20100602
RU2507435 C2	20140220	RU20100122595	20100602
RU2508495 C1	20140227	RU20120143411	20100602
RU2509253 C1	20140310	RU20120143412	20100602
SG166748 A1	20101229	SG20100034684	20100518
TH109735 A	20110729	TH20101000814	20100601
TH56092 B	20170720	TH20101000814	20100601
TW201043820 A	20101216	TW20090143131	20091216
TWI491825 B	20150711	TW20090143131	20091216
US2010307624 AA	20101209	US20090655094	20091223
US8240339 BB	20120814	US20090655094	20091223
VN12975 A1	20140825	VN20100001410	20100602

Priority:

JP20090133588 20090603 JP20090233178 20091007 EP20090178559 20091209
RU20100122595 20100602

Probable Assignee: SHONAN GOSEI JUSHI SEISAKUSHO KK

Assignee(s): (std): FUJII KENJI ; KAMIYAMA TAKAO ; KANETA KOJI ; MIURA KATSUYORI ; SHONAN GOSEI JUSHI SEISAKUSHO K K ; SHONAN GOSEI JUSHI SEISAKUSHO ; SHONAN PLASTIC MFG CO LTD ; SHOMAN GOSEI JUSHI SEISAKUSHO K K ; SONAN GOSEI DZUSI SEISAKUSO K K

Assignee(s): SHONAN GOSEI JUSHI SEISAKUSHO HIRATSUKA KK ; SONAN GOSEI DZUSI SEISAKUSO KK ; SHOMAN GOSEI JUSHI SEISAKUSHO KK ; SHONAN GOSEI JUSHI SEISAKUSHO KK

Inventor(s): (std): MIURA KATSUYORI ; FUJII KENJI ; KANETA KOJI ; KAMIYAMA TAKAO ; MIURA MASAKAZU ; KANEDA KOJI ; KENJI FUJII ; KOJI KANETA ; TAKAO KAMIYAMA ; KATSUYORI MIURA ; FUJII KENJI ; MAKIYAMA TAKAO ; KENJI FUJII ; TAKAO MAKIYAMA ; KAMIJAMA TAKAO ; FUDZII KENDZI ; KANETA KODZI ; MIURA KATSUYORI

Agent(s): IP GATEWAY PATENT AND TRADEMARK ATTORNEYS; IP GATEWAY PATENT AND TRADEMARK ATTORNEYS PTY LTD; IP GATEWAY PATENT AND TRADE MARK ATTORNEYS PTY LTD; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; KRONTHALER SCHMIDT AND COLL PATENTANWALTSKANZLEI; KRONTHALER WOLFGANG N K; BRUCE L ADAMS ESQ ADAMS AND WILKS; ADAMS AND WILKS

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 SM TR

3) Family number: 6267037 (FR2656694A)

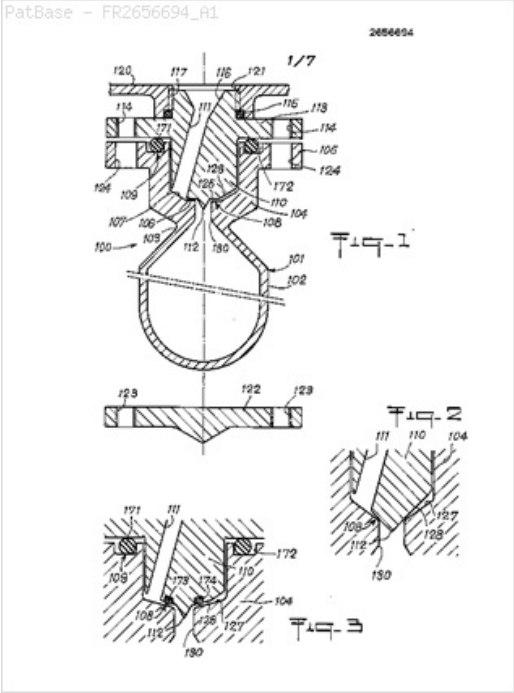
© PatBase

Title: Device for sampling a liquid

Abstract: The device for sampling a liquid contained in a main chamber, comprises a connector (110) mounted in a leaktight manner in a sampling orifice (121) and provided with a transfer channel (111) which is essentially straight but offset with respect to the principal axis of the device, a container (101) for recovering the liquid, having a head (104) in which an opening (130) is made, and coupling means (105, 113) for selectively connecting the head (104) to the connector (110). An internal sealing system (108) is provided in the vicinity of the opening (130) between the head (104) of the container and the connector (110), and an outer sealing system (109) is provided between the head (104) and the connector (110), this outer sealing system (109) being placed, with respect to the inner sealing system (108), on the other side of the region in which the transfer channel (111) opens out. The sealing systems (108, 109) are designed so that the opening/closure travel of the inner sealing system (108) is substantially shorter than that of the outer sealing system (109), and so that the opening of the inner sealing system (108) causes connection of the transfer channel (111) with the opening (130) of the head (104). The means (105, 113) of coupling between the head (104) and the connector (110) are intended to define the opening/closure travels of the inner and outer sealing systems (108, 109) and can be actuated from the outside of the connector (110) and the head (104) of the container.

Classifications:

International (IPC 8-9): F01M11/04 F16L41/16
G01N1/20 (Advanced/Invention);
F01M11/04 F16L41/08 G01N1/20 (Core/Invention)
International (IPC 1-7): B67D3/02 F16L23/16 F16N29/00 G01N1/10
CPC: F01M11/0408 F16L41/16 G01N1/2035 G01N2001/205
G01N2001/2071
European: F01M11/04B F16L41/16 G01N1/20B S01N1/20B3
S01N1/20B7



Family:

Publication number	Publication date	Application number	Application date
FR2656694 A1	19910705	FR19890017470	19891229
FR2656694 B1	19920507	FR19890017470	19891229

Priority:

FR19890017470 19891229

Probable Assignee: EUROP PROPULSION
Assignee(s): (std): EUROP PROPULSION
Assignee(s): PROPULSION STE EUROPEENNE
Inventor(s): (std): JEAN LOUIS GOSSET
Inventor(s): GOSSET JEAN LOUIS

4) Family number: 42380056 (US2010065108A)

© PatBase

Title: METHOD AND APPARATUS FOR FORMING AND MOUNTING A PHOTOVOLTAIC ARRAY

Abstract: A photovoltaic (PV) module framing and coupling system enables the attachment of PV modules to a roof or other

mounting surface without requiring the use of separate structural support members which attach directly to and span between multiple PV modules in a formed PV array. The inventive apparatus provides a one-piece coupling for interlocking the sides of PV modules together to form an array, resulting in a parallel beam support system. The inventive coupling member attaches to the frame at substantially any position along the length of the frame, and interlocks the photovoltaic module with adjacent photovoltaic modules. The inventive apparatus further includes a novel bracket member which attaches to a surface of the frame member and secures the frame member directly to a roof or other mounting surface.

Classifications:

International (IPC 8-9): E04B1/00 E04D1/12 E04D13/18 E04G21/00 E04H14/00 F16B1/00 F16B17/00 F16B5/00 F16B5/02 F16B5/10 F16B5/12 F16D1/12 F16L3/04 F16L3/10 F16M13/00 F16M13/02 F24J2/46 F24J2/52 F24S25/33 F24S25/613 F24S25/632 F24S25/636 F24S25/65 F24S25/70 H01L H01L23/12 H01L31/02 H01L31/0203 H01L31/04 H01L31/042 H01L31/046 H01L31/048 H01L31/05 H01L31/18 H01M10/44 H01R13/73 H02G3/32 H02S20/00 H02S20/10 H02S20/23 H02S20/24 H02S20/30 H02S30/10 H02S40/30 (Advanced/Invention); F24J2/46 F24S25/00 (Advanced/Non-invention); E04G21/00 F24J2/00 H01L31/042 H01L31/048 H01M10/42 (Core/Invention); H01L (Subclass/Invention)

International (IPC 1-7): H01M10/44

CPC: F16B7/0433 F16B5/10 H01L31/0482 H01L31/0484 F16B5/12 Y10T403/44 E04D1/12 F16M13/022 Y10T403/553 F16B5/0004 H02G3/32 H01R9/2416 H01L31/0508 H01L31/046 H02S30/00 Y10T403/70 H01L31/042 F16L3/04 F16L3/1058 H02S20/20 Y10T29/49876 Y10T403/32975 Y10T403/38 F24S2025/6004 F24S2025/6008 F24S2025/804 F16B5/0084 F16B21/02 Y02B10/14 F24S25/10 F24S25/632 F24S25/636 F24S25/65 F24S2025/6006 F24S2025/807 F24S25/33 F24S25/634 F24S2025/801 F24S25/617 F16B1/00 H01L31/18 Y02B10/20 H02S20/00 H01L31/0488 F24S25/16 F24S25/20 F24S25/61 F24S25/613 F24S25/67 F24S25/70 F24S2025/02 H01L31/048 H02S20/23 H02S20/24 Y02B10/12 Y02E10/47 Y02E10/50 Y10T29/49826 Y10T403/32606 F16B5/0216 H02S20/30 H02S30/10

European: F24J2/52A20B F24J2/52A20B4 F24J2/52A20C2 F24J2/52A20C4B F24J2/52A20D F24J2/52A20E F24J2/52A30 F24J2/52A4E F24J2/52A8 F24J2/52A8F H01L31/042B H01L31/048B H01L31/048B3 R16B7/04C R24J2/46P12 R24J2/46P16 Y02B10/12 Y02B10/20 Y02E10/47 Y02E10/50

US: 1/1 126/623 136/244 136/251 136/252 136/259 211/41.1 24/531 248/188.4 248/201 248/205.1 248/222.11 248/222.41 248/231.81 248/309.1 248/316.7 248/346.04 248/346.05 248/617 248/74.2 29/428 29/453 29/825 361/679.01 403/119 403/164 403/164S 403/186 403/186S 403/217 403/294 403/345 52/173.3 52/555 52/582.2 52/586.2 52/745.21 52/745.210S 52/747.1 D8/349 D8/382

Locarno class: 08/08

PatBase - US2010065108_AA

Patent Application Publication Mar. 18, 2010 Sheet 1 of 30 US 2010/0065108 A1

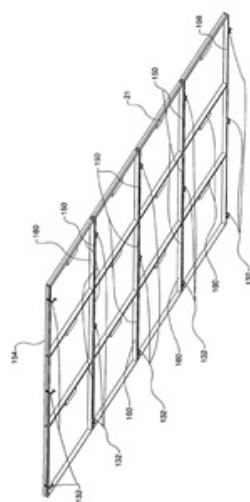


FIG. 10

Family:

Publication number	Publication date	Application number	Application date
AU2010286953 AA	20110303	AU20100286953	20100702
AU2010286953 AA	20120209	AU20100286953	20100702
AU2010286953 BB	20150507	AU20100286953	20100702
CA2820935 AA	20130607	CA20112820935	20111209
CN103081119 A	20130501	CN201080036846	20100702
CN103081119 B	20160615	CN201080036846	20100702
CN104247039 A	20141224	CN201080037446	20100702
CN104247039 B	20170405	CN201080037446	20100702
CN205666580 U	20161026	CN201490000566U	20140228
DE602010050923 D1	20180628	DE201060050923T	20100702
DE602010050928 D1	20180621	DE201060050928T	20100702
EP2135321 A1	20091223	EP20080742673	20080408
EP2135321 A4	20101013	EP20080742673	20080408
EP2135321 B1	20170802	EP20080742673	20080408
EP2449596 A2	20120509	EP20100730338	20100702
EP2449596 B1	20180530	EP20100730338	20100702
EP2449598 A2	20120509	EP20100735370	20100702
EP2449598 B1	20180530	EP20100735370	20100702
EP2449599 A2	20120509	EP20100747093	20100702
EP2449599 B1	20180815	EP20100747093	20100702
IL226835 A0	20130829	IL20110226835	20111209
IN00884CN2012 A	20130405	IN2012CN00884	20120127
IN06542CN2009 A	20100305	IN2009CN06542	20091106
JP2011512016 T2	20110414	JP20100502161T	20080408
JP2014055506 A2	20140327	JP20130241924	20131122
JP2014057099 A2	20140327	JP20130241925	20131122
JP2016026275 A2	20160212	JP20150215833	20151102
JP5421898 B2	20140219	JP20100502161T	20080408
JP5722982 B2	20150527	JP20130241925	20131122
JP5845521 B2	20160120	JP20130241924	20131122
JP6159377 B2	20170705	JP20150215833	20151102
KR101467600 B1	20141205	KR20097023015	20080408
KR101743160 B1	20170602	KR20127002984	20100702
KR20100103340 A	20100927	KR20097023015	20080408
KR20120098589 A	20120905	KR20127002984	20100702
US2010065108 AA	20100318	US20080594935	20080408
US2011000519 AA	20110106	US20100830250	20100702
US2011000520 AA	20110106	US20100830252	20100702
US2011000526 AA	20110106	US20100830249	20100702
US2011000544 AA	20110106	US20100830257	20100702
US2012125410 AA	20120524	US20120351397	20120117
US2012152326 AA	20120621	US20110325054	20111213

US2012234378 AA	20120920	US20110316453	20111209
US2012255598 AA	20121011	US20120415669	20120308
US2012260972 AA	20121018	US20120421797	20120315
US2012266946 AA	20121025	US20120402860	20120222
US2012279558 AA	20121108	US20120410149	20120301
US2012298186 AA	20121129	US20120405118	20120224
US2012298188 AA	20121129	US20120434426	20120329
US2013140416 AA	20130606	US20120491436	20120607
US2013180572 AA	20130718	US20120407607	20120228
US2013180573 AA	20130718	US20120413329	20120306
US2013180574 AA	20130718	US20120434420	20120329
US2013183084 AA	20130718	US20120489680	20120606
US2014026946 AA	20140130	US20130911955	20130606
US2014053891 AA	20140227	US20130961662	20130807
US2014102997 AA	20140417	US20130106189	20131213
US2014175244 AA	20140626	US20130106153	20131213
US2014182662 AA	20140703	US20130961723	20130807
US2014251431 AA	20140911	US20140278615	20140515
US2014326838 AA	20141106	US20140194607	20140228
US2014339179 AA	20141120	US20140451781	20140805
US2015033658 AA	20150205	US20140519407	20141021
US2015040967 AA	20150212	US20140454471	20140807
US2015068590 AA	20150312	US20140541469	20141114
US2015075590 AA	20150319	US20140531155	20141103
US2015155820 AA	20150604	US20150617239	20150209
US2015155821 AA	20150604	US20150618302	20150210
US2015155823 AA	20150604	US20150615320	20150205
US2015222221 AA	20150806	US20150617143	20150209
US2015222222 AA	20150806	US20150625216	20150218
US2015316292 AA	20151105	US20150704701	20150505
US2016043690 AA	20160211	US20150886184	20151019
US2016043691 AA	20160211	US20150880789	20151012
US2017104118 A9	20170413	US20130961662	20130807
US2017222599 AA	20170803	US20170431620	20170213
US2018224159 AA	20180809	US20180866116	20180109
US8109048 BB	20120207	US20080594935	20080408
US8375654 BA	20130219	US20120370612	20120210
US8919052 BB	20141230	US20100830249	20100702
US8919053 BB	20141230	US20100830252	20100702
US8991114 BB	20150331	US20100830250	20100702
US9154074 BB	20151006	US20140519407	20141021
US9166524 BB	20151020	US20150615320	20150205
US9243817 BB	20160126	US20120489680	20120606
US9300244 BB	20160329	US20140541469	20141114
US9447801 BB	20160920	US20120405118	20120224
US9461579 BB	20161004	US20150880789	20151012
US9496821 BB	20161115	US20140278615	20140515
US9518596 BB	20161213	US20140454471	20140807
US9574588 BB	20170221	US20120410149	20120301
US9647157 BB	20170509	US20130911955	20130606
US9698724 BB	20170704	US20130106153	20131213
US9816731 BB	20171114	US20110316453	20111209
US9831818 BB	20171128	US20150704701	20150505
US9853597 BB	20171226	US20150618302	20150210
US9863665 BB	20180109	US20120402860	20120222
US9911880 BB	20180306	US20130961662	20130807
US9998066 BB	20180612	US20170431620	20170213
USD779308 S1	20170221	US20150525417F	20150429
USD803664 S1	20171128	US20170592828F	20170202
USD859967 S1	20190917	US20160574949F	20160819
US10309690 BB	20190604	US20180866116	20180109
WO08124158 A1	20081016	WO2008US04569	20080408
WO11019460 A2	20110217	WO2010US40984	20100702
WO11019460 A3	20110818	WO2010US40984	20100702
WO11022125 A2	20110224	WO2010US40986	20100702
WO11022125 A3	20110901	WO2010US40986	20100702
WO11025585 A2	20110303	WO2010US40981	20100702
WO11025585 A3	20110901	WO2010US40981	20100702
WO12079060 A2	20120614	WO2011US64291	20111209
WO12079060 A3	20140410	WO2011US64291	20111209
WO12082806 A2	20120621	WO2011US64749	20111213
WO12082806 A3	20140410	WO2011US64749	20111213
WO14134580 A1	20140904	WO2014US19697	20140228
ZA201305062 A	20140730	ZA20130005062	20130705

Priority:

US20070922180P	20070406	US20080065417P	20080211	US20080065417	20080211
US20080066001P	20080215	US20080066001	20080215	JP20100502161	20080408
JP20100502161T	20080408	JP20130241924	20080408	US20080594935	20080408
WO2008US04569	20080408	US20090270122P	20090702	US20090594935	20091006
US20090255004P	20091026	US20100351586P	20100604	EP20100730338	20100702
EP20100735370	20100702	US20100830249	20100702	US20100830250	20100702
US20100830252	20100702	US20100830257	20100702	WO2010US40986	20100702

US20100454999P 20100702

US20100454999P 20100702

US20100454999P 20100702

US20110511295P 20110725
US20110325054 20111213
US20120402860 20120222
US20120410149 20120301
US20120421797 20120315
US20120656240P 20120606
US20120737066P 20121213
US20130827219P 20130524
US20130961662 20130807
US20130106153 20131213
WO2014US19697 20140228
US20140454471 20140807
US20140541469 20141114
US20150617239 20150209
US20150525417F 20150429
US20150886184 20151019
US20170592828F 20170202

US20110316453 20111209
US20120351397 20120117
US20120405118 20120224
US20120413329 20120306
US20120434426 20120329
US20120489680 20120606
US20120737076P 20121213
US20130911955 20130606
US20130864637P 20130812
US20130106189 20131213
US20140278615 20140515
US20140519407 20141021
US20150615320 20150205
US20150618302 20150210
US20150704701 20150505
JP20150215833 20151102
US20170431620 20170213

WO2011US64291 20111209
US20120370612 20120210
US20120407607 20120228
US20120415669 20120308
US20120434420 20120329
US20120491436 20120607
US20130771050P 20130228
US20130961723 20130807
US20130866152P 20130815
US20140194607 20140228
US20140451781 20140805
US20140531155 20141103
US20150617143 20150209
US20150625216 20150218
US20150880789 20151012
US20160574949F 20160819
US20180866116 20180109

Probable Assignee: SOLARCITY CORP

Assignee(s): (std): ALCHLEY BRIAN ; APPLE INC ; ATCHLEY BRIAN ; CHRISTINA C MANANSALA ; COLEMAN NATHANIEL TAYLOR ; GRUBER PETER EDWARD ; HAENLEIN HANS CHRISTOPH ; HAENLEIN HANS CHRISTOPHER ; HAENLEIN HANS CRISTOPH ; HANS CHRISTOPH HAENLEIN ; WEST BRIAN ; WEST JACK RAYMOND ; WEST JOHN R ; WEST JOHN RAYMOND ; YOUNG DAVID ; ZAP SOLAR INC ; ZEP SOAR INC ; ZEP SOLAR INC ; ZEP SOLAR LLC ; HUDSON TYRUS ; HUDSON TYRUS HAWKES ; JOHANSEN EMIL ; JOHN R WEST ; MANANSALA CHRISTINA C ; MANSALA CHRISTAIN C ; SOLARCITY CORP

Assignee(s): SOLARCITY CORP SAN MATEO ; MANANSALA CHRISTINA C ; HAENLEIN HANS CHRISTOPH ; HIGH SUN TECHNOLOGY INC

Inventor(s): (std): ALCHLEY BRIAN ; ATCHLEY BRIAN ; BRIAN WEST ; CHRISTINA C MANANSALA ; COLEMAN NATHANIEL ; COLEMAN NATHANIEL TAYLOR ; GRUBER PETER EDWARD ; HAENLEIN HANS CHRISTOPH ; HAENLEIN HANS CHRISTOPHER ; HAENLEIN HANS CRISTOPH ; HANS CHRISTOPH HAENLEIN ; HUDSON TYRUS ; HUDSON TYRUS HAWKES ; JOHANSEN EMIL ; JOHN R WEST ; MANANSALA CHRISTINA C ; MANSALA CHRISTAIN C ; WEST BRIAN ; WEST JACK RAYMOND ; WEST JOHN R ; WEST JOHN RAYMOND ; YOUNG DAVID

Inventor(s): WEST JOHN R SAN RAFAEL ; WEST JOHN ; JOHN RWEST ; MANANSALA CHRISTINA

Agent(s): CHRISTIANSEN JOHN; JOHN CHRISTIANSEN; FPA PATENT ATTORNEYS PTY LTD; FREEHILLS PATENT ATTORNEYS; MARKS AND CLERK; GOWLING WLG CANADA LLP; CHAILLOT GENEVIEVE; HOWSON RICHARD GB; HOWSON RICHARD GILES BENTHAM; INABA YOSHIYUKI; LARRY D JOHNSON; VIERRA MAGEN MARCUS AND DENIRO LLP; LARRY D; KILPATRICK TOWNSEND AND STOCKTON LLP; KILPATRICK TOWNSEND AND STOCKTON LLP; KILPATRICK TOSENSEND AND STOCKTON LLP; STERNE KESSLER GOLDSTEIN AND FOX PLLC; JOHNSON LARRY D; MARCUS BRIAN I

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

5) Family number: 48462060 (US2012169045A)

© PatBase

Title: SCREWED PIPE JOINT AND METHOD FOR THE PRODUCTION THEREOF

Abstract: A screwed pipe connection for connecting a pipeline including a connection end having a formed wall region. The screwed pipe connection includes a connection part and a union joint part. Proceeding from the end face of the connection end of the pipeline, an outside cross-section of the pipeline increases and is larger than the nominal outside cross-section, then decreases again. Proceeding from the end face, a clear inside cross-section of the connection end is larger than the nominal inside cross-section and decreases to the nominal inside cross-section. The wall thickness on the end face is smaller than the nominal wall thickness, and wherein an inner material difference, resulting from the deviation of the inside cross-section from the nominal inside cross-section, and an outer material difference, resulting from the deviation of the outside cross-section from the nominal outside cross-section, deviate from one another by a maximum of 30 percent.

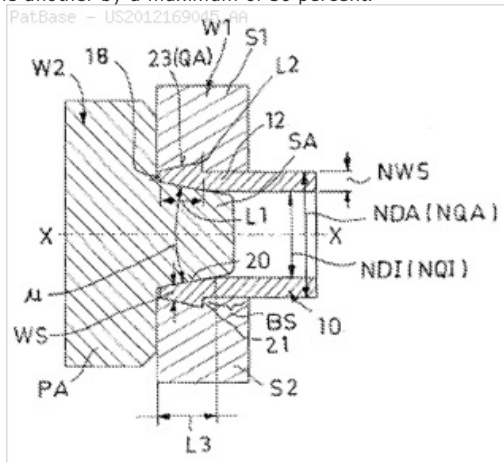
Classifications:

International (IPC 8-9): B21D39/04 B21D41/02 B21D51/16 B21K21/12 B21K25/00 F16L19/00 F16L19/02 F16L19/028 F16L19/04 F16L19/08 F16L19/10 F16L25/04 (Advanced/Invention)

CPC: B21K21/12 B21K25/00 F16L19/0286 B21D39/04 F16L19/0212 F16L19/0283 F16L19/046 F16L19/106 Y10T29/49428 Y10T29/49863 Y10T29/49906 Y10T29/49911 Y10T29/49918 Y10T29/4992 Y10T29/4994 Y10T29/53987 F16L19/10

European: B21D39/04 F16L19/028B F16L19/028C F16L19/02D F16L19/04C3 F16L19/10G

US: 285/332 285/332P 29/282 29/446 29/469.5 29/507 29/511 29/512 29/523 29/890.14 72/370.06 72/370.060S 72/370.13 72/370.130S



Family:

Publication number	Publication date	Application number	Application date
BR112012005548 A2	20160426	BR20121105548	20100812
CN102483186 A	20120530	CN201080040483	20100812
CN102483186 B	20141224	CN201080040483	20100812
DE102009041056 A1	20110324	DE200910041056	20090910
DE502010009890 D1	20150903	DE201050009890T	20100812
EP2475922 A1	20120718	EP20100741973	20100812

EP2475922 B1	20150722	EP20100741973	20100812
KR20120093836 A	20120823	KR20127006292	20100812
US2012169045 AA	20120705	US20100395314	20100812
US8745869 BB	20140610	US20100395314	20100812
WO11029687 A1	20110317	WO2010EP61734	20100812

Priority:

DE200910041056 20090910 EP20100741973 20100812 WO2010EP61734 20100812

Probable Assignee: VOSS FLUID GMBH

Assignee(s): (std): BERGHAUS GERD ; POTT HARALD ; VOSS FLUID GMBH

Inventor(s): (std): BERGHAUS GERD ; POTT HARALD ; GERD BERGHAUS ; HARALD POTT

Agent(s): PATENT U RECHTSANWAELTE DR SOLF AND ZAPF; PATENTANWAELTE DR SOLF AND ZAPF; BRINKS GILSON AND LIONE; ZAPF CHRISTOPH

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

6) Family number: 42246061 (US2002043403A)

© PatBase

Title: LOAD COMPENSATOR FOR A PIPE RUNNING TOOL

Abstract: A load compensator is disclosed for use in connection with a pipe running tool. The load compensator includes an outer housing connected to the portion of the pipe running tool that holds the pipe segment. A piston is disposed within the housing, and is connected to a top drive system of the pipe running tool. The housing is formed with a first port through which pressurized air is delivered inside the housing to drive the piston within the housing. A second port is disposed at a selected location on the housing, such that when the piston is advanced past the second port, pressurized air passes through the port, and causes the control circuit to stop delivering air through the first port. Once pressurized air no longer flows through the second port, the control circuit causes air to be delivered to the first port.

Classifications:

International (IPC 8-9): B66D1/00 E21B19/00 E21B19/02 E21B19/06 E21B19/07 E21B19/08 E21B19/086 E21B19/10 E21B19/14

E21B19/16 E21B19/18 E21B19/22 E21B3/02 E21B31/20 E21B33/00 E21B33/05 E21B33/13 E21B44/00 E21B47/00 E21B7/20 F15B11/05 F15B13/04 F16L27/12 (Advanced/Invention);

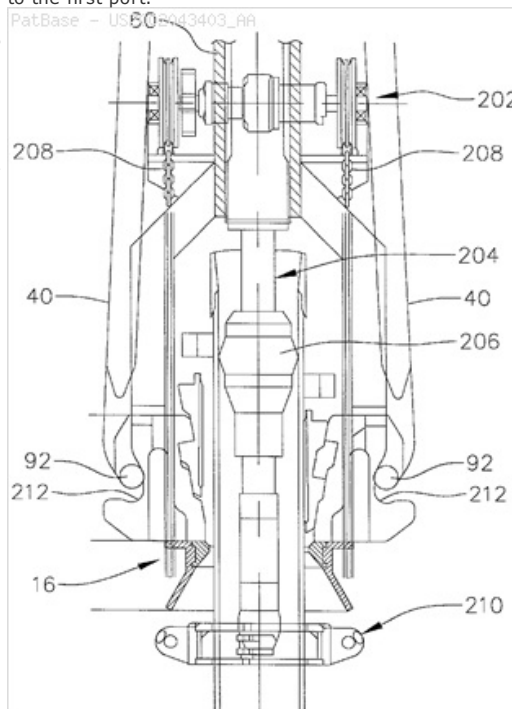
E21B19/00 E21B33/00 E21B33/13 E21B47/00 (Core/Invention)

International (IPC 1-7): B66D1/00 E21B1/906 E21B19/00 E21B19/02 E21B19/06 E21B19/07 E21B19/08 E21B19/086 E21B19/10 E21B19/14 E21B19/16 E21B3/02 E21B44/00 F15B11/05 F15B13/04 F16F9/18 F16L27/12

CPC: E21B19/00 E21B19/02 E21B19/086 E21B19/10 E21B19/14 E21B19/164 E21B19/165 F16L27/12 E21B3/02 E21B7/20 E21B33/14 E21B19/08 E21B19/22 E21B19/07 E21B19/16 E21B31/20 E21B44/00

European: E21B19/00 E21B19/02 E21B19/07 E21B19/086 E21B19/10 E21B19/14 E21B19/16 E21B19/16B4 E21B19/16C E21B31/20 E21B33/05 E21B44/00 F16L27/12

US: 156/177.4 156/70 166/177.4 166/285 166/291 166/379 166/379S 166/38 166/380 166/380S 166/53 166/77.1 166/77.100 166/77.100P 166/77.51 166/77.510P 166/77.510S 166/77.52 166/77.520S 166/77.53 166/85.1 166/85.100 166/85.100S 166/90.1 166/90.100 166/90.100S 175/162 175/162S 175/27 175/40 175/40P 175/52 175/52S 175/85 175/85P 175/85S 254/277 267/125



Family:

Publication number	Publication date	Application number	Application date
AT328185 E	20060615	AT20000103894T	20000303
AT373160 E	20070915	AT20000913746T	20000303
AT394341 E	20080515	AT20020780313T	20020916
CA2363178 AA	20010829	CA20002363178	20000303
CA2363178 C	20080603	CA20002363178	20000303
CA2613256 AA	20071220	CA20062613256	20060607
CA2613256 C	20111004	CA20062613256	20060607
CA2613259 AA	20071220	CA20062613259	20060607
CA2613259 C	20111129	CA20062613259	20060607
CA2613262 AA	20071220	CA20062613262	20060612
CA2613262 C	20110802	CA20062613262	20060612
CA2613274 AA	20070104	CA20062613274	20060616
CA2613274 C	20101214	CA20062613274	20060616
CN101243237 A	20080813	CN200680029956	20060607
CN101243237 B	20110824	CN200680029956	20060607
CN101243239 A	20080813	CN200680029938	20060616
CN101243239 B	20130717	CN200680029938	20060616
CN101253305 A	20080827	CN200680029927	20060612
CN101253305 B	20121219	CN200680029927	20060612
CN101287887 A	20081015	CN200680029928	20060607

CN101287887 B	20121128	CN200680029928	20060607
DE60028425 D1	20060706	DE20006028425	20000303
DE60028425 D1	20060706	DE20006028425T	20000303
DE60028425 T2	20061019	DE20006028425T	20000303
DE60036373 D1	20071025	DE20006036373	20000303
DE60036373 D1	20071025	DE20006036373T	20000303
DE60036373 T2	20080703	DE20006036373T	20000303
DE60226459 D1	20080619	DE20026026459	20020916
DK1475512 T3	20061002	DK20000103894T	20000303
EP1171683 A2	20020116	EP20000913746	20000303
EP1171683 B1	20070912	EP20000913746	20000303
EP1171683 B2	20170503	EP20000913746	20000303
EP1427663 A2	20040616	EP20020780313	20020916
EP1427663 A4	20050817	EP20020780313	20020916
EP1427663 B1	20080507	EP20020780313	20020916
EP1466067 A2	20041013	EP20020786570	20021028
EP1466067 A4	20050601	EP20020786570	20021028
EP1475512 A1	20041110	EP20040103894	20000303
EP1475512 B1	20060531	EP20040103894	20000303
EP1896685 A1	20080312	EP20060772666	20060607
EP1896685 A4	20150325	EP20060772666	20060607
EP1896685 B1	20170329	EP20060772666	20060607
EP1896687 A1	20080312	EP20060773003	20060612
EP1896687 A1	20080312	EP20060773003	20060613
EP1896687 A4	20140723	EP20060773003	20060612
EP1896687 B1	20180321	EP20060773003	20060612
EP1896688 A2	20080312	EP20060772665	20060607
EP1896688 A4	20140924	EP20060772665	20060607
EP1896688 B1	20161221	EP20060772665	20060607
EP1896689 A2	20080312	EP20060784952	20060616
EP1896689 A4	20130403	EP20060784952	20060616
NO20014329 A	20010905	NO20010004329	20010905
NO20014329 A0	20010905	NO20010004329	20010905
NO20014329 L	20010905	NO20010004329	20010905
NO20041033 A	20040414	NO20040001033	20040311
NO20041033 L	20040414	NO20040001033	20040311
NO20080429 A	20080325	NO20080000429	20080123
NO20080429 L	20080325	NO20080000429	20080123
NO20080430 A	20080325	NO20080000430	20080123
NO20080430 L	20080325	NO20080000430	20080123
NO20080431 A	20080325	NO20080000431	20080123
NO20080431 L	20080325	NO20080000431	20080123
NO20080432 A	20080325	NO20080000432	20080123
NO20080432 L	20080325	NO20080000432	20080123
NO20110760 A	20010905	NO20110000760	20110519
NO20110760 L	20010905	NO20110000760	20110519
NO331167 B1	20111024	NO20040001033	20040311
NO331171 B1	20111024	NO20010004329	20010905
NO336391 B1	20150810	NO20110000760	20110519
NO341823 B1	20180129	NO20080000431	20080123
NO342564 B1	20180618	NO20080000432	20080123
NO342712 B1	20180723	NO20080000430	20080123
US2002043403 AA	20020418	US20010952868	20010914
US2002074132 AA	20020620	US20000518122	20000303
US2003000742 AA	20030102	US20010029585	20011220
US2003066654 AA	20030410	US20020189355	20020703
US2006005962 AA	20060112	US20050040453	20050120
US2006118293 AA	20060608	US20050165690	20050624
US2006124293 AA	20060615	US20050165661	20050624
US2006124305 AA	20060615	US20050165692	20050624
US2006124353 AA	20060615	US20050165691	20050624
US2010155140 AA	20100624	US20100715284	20100301
US2010200215 AA	20100812	US20100762198	20100416
US6443241 BA	20020903	US20000518122	20000303
US6637526 BB	20031028	US20010029585	20011220
US6691801 BB	20040217	US20010952868	20010914
US6938709 BB	20050906	US20020189355	20020703
US6938709 C1	20140804	US20020189355	20020703
US7096977 BB	20060829	US20050040453	20050120
US7096977 C1	20120619	US20050040453	20050120
US7422056 BB	20080909	US20050165691	20050624
US7510006 BB	20090331	US20050165692	20050624
US7591304 BB	20090922	US20050165691	20050624
US7699121 BB	20100420	US20050165661	20050624
US7753138 BB	20100713	US20050165690	20050624
US8037949 BB	20111018	US20100762198	20100416
WO0052297 A2	20000908	WO2000US05752	20000303
WO0052297 A3	20001221	WO2000US05752	20000303
WO03025444 A2	20030327	WO2002US29446	20020916
WO03025444 A3	20030530	WO2002US29446	20020916

WO03054338 A2	20030703	WO2002US34632	20021028
WO03054338 A3	20040805	WO2002US34632	20021028
WO07001793 A2	20070104	WO2006US22438	20060607
WO07001793 A3	20071206	WO2006US22438	20060607
WO07001794 A1	20070104	WO2006US22439	20060607
WO07001794 C1	20080403	WO2006US22439	20060607
WO07001827 A1	20070104	WO2006US22937	20060612
WO07001827 C1	20080529	WO2006US22937	20060612
WO07001887 A2	20070104	WO2006US23378	20060616
WO07001887 A3	20071213	WO2006US23378	20060616

Priority:

US19990122915P	19990305	EP20000913746	20000303	US20000518122	20000303
WO2000US05752	20000303	US20010952868	20010914	US20010029585	20011220
US20020189355	20020703	WO2002US29446	20020916	WO2002US34632	20021028
US20050040453	20050120	US20050165692	20050624	US20050165691	20050624
US20050165690	20050624	US20050165661	20050624	WO2006US22439	20060607
WO2006US22438	20060607	WO2006US22937	20060612	WO2006US23378	20060616
US20100715284	20100301	US20100762198	20100416		

Probable Assignee: VARCO I P INC

Assignee(s): (std): BOETTGER HANS JOACHIM D ; BOTTGER ANS JOACHIM DIETRICH ; BOTTGER HANS J D ; BOTTGER HANS JOACHIM D ; BOTTGER HANS JOACHIM DIETRICH ; BOYADJIEFF GEORGE ; EIDEM BRIAN L ; JUHASZ DANIEL ; KAMPHORST HERMAN ; KAMPHORST HERMAN M ; KRIJNEN ANTON ; MASON DAVID ; RIJZINGEN HANS V ; ROLING RONALDUS R ; ROLING RONALDUS R M ; VAN RIJZINGEN HANS ; VAN WECHER GUSTAAF LOUIS ; VAN WECHER GUSTAAF LOUIS ; VARCO I P INC ; VARCO INT ; VARCO INT INC ; WECHER GUSTAAF L V ; WECHER GUSTAAF LOUIS V

Assignee(s): WECHER GUUS VAN ; BOETTGER DIETER ; VARCO INT INC (A DELAWARE CORPORATION) ; VARCO INT INC A DELAWARE CORP ; VARCO INT INC A DELAWARE CORPORATION ; VARCO I AND P INC ; ROLING RONALDUS RM ; RIJZINGEN HANS VAN ; NATIONAL OILWELL VARCO LP ; RIJZINGEN HAN VAN ; EIDEM BRIAN L DECEASED

Inventor(s): (std): BOETTGER HANS JOACHIM DIETER ; BOETTGER HANS JOACHIM DIETRICH ; VAN RIJZINGEN HANS ; VAN WECHER GUSTAAF LOUIS ; VAN WECHER GUSTAAF LOUIS ; VAN WECHER GUUS ; VANRIJZINGEN HANS ; ROLING RONALDUS R ; ROLING RONALDUS R M ; WECHER GUSTAAF L V ; WECHER GUSTAAF LOUIS V ; WECHER GUUS VAN ; RIJZINGEN HAN VAN ; MASON DAVID ; KRIJNEN ANTON ; KAMPHORST HERMAN M ; KAMPHORST HERMAN ; JUHASZ DANIEL ; RIJZINGEN HANS V ; EIDEM L ; EIDEM BRIAN L ; EIDEM BRIAN ; BOYADJIEFF GEORGE ; BOTTGER HANS JOACHIM DIETRICH ; BOTTGER HANS JOACHIM D ; BOTTGER HANS J D ; BOTTGER ANS JOACHIM DIETRICH ; BOETTGER HANS JOACHIM D ; ROLING RONALDUS RICHARDUS MARI ; RIJZINGEN HANS VAN ; LOUIS WECHER GUSTAAF VAN ; LOUIS WECHER GUSTAAF VAN ; HANS RIJZINGEN VAN ; GEORGE BOYADJIEFF ; DIETRICH BOTTGER HANS JOACHIM ; DAVID MASON ; DANIEL JUHASZ ; ANTON KRIJNEN ; BOETTGER DIETER ; WECHER GUSTAAF LOUIS VAN

Inventor(s): ROLING RONALDUS RICHARDUS MARIA ; BOETTGER HANS JOACHIM ; BOTTGER HANS ; BOTTGER HANS JOACHIM ; EIDEM BRIAN L DECEASED ; RIJZINGEN HANS ; EIDEM LEGAL REPRESENTATIVE PAMELA ; ROLING RONALDUS ; WECHER GUSTAAF LV ; WECHER GUSTAAF LOUIS ; ROLING RONALDUS RM ; WECHER GUSTAAF ; BOTTGER HANS JD ; BRIAN L EIDEM ; HAN VAN RIJZINGEN ; HANS VAN RIJZINGEN

Agent(s): FETHERSTONHAUGH AND CO; PAGE HARGRAVE; NEWSTEAD MICHAEL JOHN ET AL; CHRISTIE PARKER AND HALE 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 LA LC LI LK LR LS LT LU LV LY MA MC MD ME 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

7) Family number: 11459066 (US5287730A)

© PatBase

Title: Plumbing leakage test apparatus and method of use

Abstract: An apparatus for testing a network of plumbing pipes for leaks comprises a pair of housings and a slidable test plate. The test plate is interposed between the housings to block fluid flow through the housings when inspecting the pipe network for leaks. After testing is complete, the test plate is removed from the housings and the housings remain fixed as a permanent part of the pipe network.

Classifications:

International (IPC 8-9): F16L23/22 G01M3/02 (Advanced/Invention);

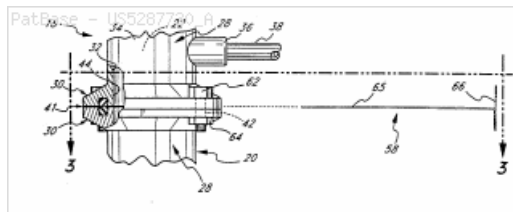
F16L23/00 G01M3/02 (Core/Invention)

International (IPC 1-7): G01M3/04

CPC: F16L23/22 G01M3/022

European: F16L23/22 G01M3/02B

US: 138/94.3 138/943 285/336 73/49.8 73/498



Family:

Publication number	Publication date	Application number	Application date
US5287730 A	19940222	US19920900648	19920618

Priority:

US19920900648 19920618

Probable Assignee: SECURUS INC

Assignee(s): (std): SECURUS INC

Inventor(s): (std): CONDON DUANE R

Title: MAGNETO-CRYOGENIC VALVES, SYSTEMS AND METHODS FOR MODULATING FLOW IN A CONDUIT

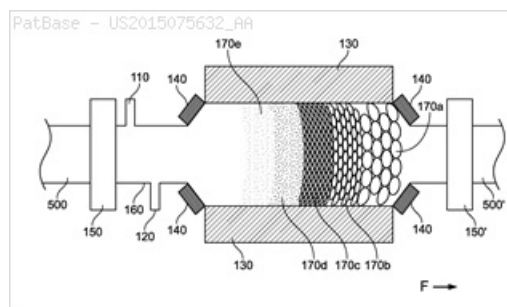
Abstract: Provided are magneto-cryogenic valves, methods and systems that extract thermal energy from a fluid within a conduit such that the temperature of at least a portion of the fluid is reduced to a temperature below which at least a portion of the fluid becomes a solid thereby forming a frozen plug of fluid and magnetically susceptible particles that reversibly plugs the conduit, preventing flow of fluid past the plug. Also provided are methods and systems for temporarily preventing the flow of fluid in a conduit.

Classifications:

International (IPC 8-9): E21B33/064 E21B34/08 F15B21/06
F16K31/06 F16L55/10 F16L55/103 F28C3/12
F28F27/00 (Advanced/Invention)

CPC: F16L55/103 F16L55/1003 E21B34/08 Y10T137/0391
Y10T137/2191

US: 137/13 137/827 138/89 251/65



Family:

Publication number	Publication date	Application number	Application date
CA2924079 AA	20160310	CA20142924079	20140912
CN105874258 A	20160817	CN201480061854	20140912
CN105874258 B	20180102	CN201480061854	20140912
EA201600243 A1	20161031	EA20160000243	20140912
EP3044494 A1	20160720	EP20140784134	20140912
GC8096 A	20180618	GC2014P027932	20140914
MX2016003270 A1	20161026	MX20160003270	20140912
TW201522824 A	20150616	TW20140131552	20140912
TWI583880 B	20170521	TW20140131552	20140912
US2015075632 AA	20150319	US20140485227	20140912
US9605789 BB	20170328	US20140485227	20140912
WO15038961 A1	20150319	WO2014US55495	20140912

Priority:

US20130877888P 20130913

US20140485227 20140912

WO2014US55495 20140912

Probable Assignee: BIOFILM IP LLC

Assignee(s): (std): BIOFILM IP LLC

Assignee(s): BIOFILM MANAGEMENT INC ; CENICEROS ERICSON C ; LIU REED NICHOLAS ; WRAY DANIEL X

Inventor(s): (std): WRAY DANIEL X ; LIU REED NICHOLAS ; CENICEROS ERICSON C ; ERICSON C CENICEROS ; REED NICHOLAS LIU ; DANIEL X WRAY

Agent(s): SMART AND BIGGAR; BOULT WADE TENNANT; ABU GAZALEH INTELLECTUAL PROPERTY LLC; FRANK J; DENTONS US LLP; STEPHANIE; SEIDMAN STEPHANIE 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 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

Title: CONNECTOR OF FLEXIBLE PIPE

Abstract: A connector of flexible pipe according to the present invention includes a flexible pipe; a fastening nut in which the flexible pipe is inserted; a latching ring having an inner portion received in a valley section of the flexible pipe and an outer portion extruded outward from a thread section of the flexible pipe for preventing the fastening nut from separating from the flexible pipe; and a socket tube secured with the fastening nut for pressurizing and transforming an end portion of the flexible pipe toward the latching ring. Accordingly, the coupler structure of the flexible pipe is conveniently achieved as well as the flexible pipe can be coupled easily by cutting in a desired length, and since there is no need to perform the process for machining the coupling portion, a cost for coupling the members is saved.

Classifications:

International (IPC 8-9): F16L19/00 F16L19/02 F16L19/03 F16L19/06
F16L19/065 F16L19/07 F16L25/00 F16L33/00 (Advanced/Invention);
F16L19/00 F16L19/02 F16L19/03 F16L19/06 F16L19/065 F16L19/07
F16L33/00 (Advanced/Non-invention);

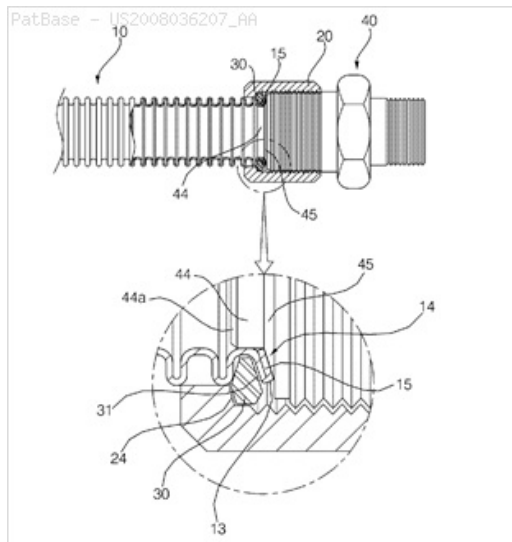
F16L19/00 F16L19/02 F16L25/00 F16L33/00 (Core/Invention)

International (IPC 1-7): F16L19/00 F16L19/02 F16L19/03 F16L19/06
F16L19/065 F16L33/00

CPC: F16L25/0036 F16L19/07 F16L19/065 F16L19/06 F16L27/047
F16L27/06

European: F16L19/00 F16L25/00K

US: 285/323 285/382.7



Family:

Publication number	Publication date	Application number	Application date
KR100764946 B1	20071008	KR20050025551	20050328
KR20050120245 A	20051222	KR20040045527	20040618
KR20060002216 A	20060109	KR20040051161	20040701
KR20060103698 A	20061004	KR20050025551	20050328
US2008036207 AA	20080214	US20050629817	20050616
WO05124217 A1	20051229	WO2005KR01842	20050616

Priority:

KR20040045527 20040618 KR20040051161 20040701 KR22040051161 20040701
KR20050025551 20050328 WO2005KR01842 20050616

Probable Assignee: DONG A FLEXIBLE METAL TUBES CO LTD

Assignee(s): (std): CHOI JIN L ; CHOI JIN LIM ; DONG A FLEXIBLE METAL TUBES CO

Assignee(s): DONG A FLEXIBLE METAL TUBES CO LTD

Inventor(s): (std): CHOI JIN LIM ; CHOI JIN L

Inventor(s): CHOI JIN

Agent(s): BIRCH STEWART KOLASCH AND BIRCH

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 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

10) Family number: 17934088 (EP0931970A1)

© PatBase

Title: TAPPING AND CUT-OFF APPARATUS FOR PIPES UNDER PRESSURE

Abstract: The adaptor has a drill (30) with a cylindrical section (33) between the cutter (31) and its shaft (35). In the adjustment range between the extended and retracted positions of the drill, the cylindrical face of the drill is sealed with a seal ring (25) in the casing (25). The sealing ring is positioned between the casing opening and the ball slide.

Classifications:

International (IPC 8-9): F16L41/06 F16L47/00

F16L47/30 (Advanced/Invention)

International (IPC 1-7): F16K5/06 F16L41/04 F16L41/06 F16L47/00

CPC: F16L41/06 F16L47/345

European: F16L41/06 F16L47/34B

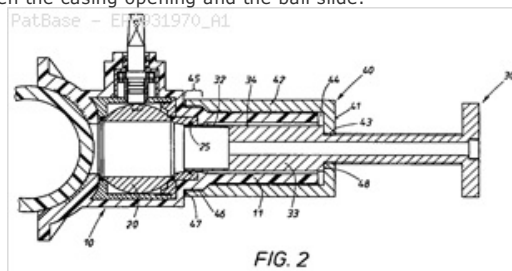


FIG. 2

Family:

Publication number	Publication date	Application number	Application date
AT201495 E	20010615	AT19980121739T	19981114
DE19802884 C1	19990422	DE19981002884	19980127
DE59802107 D1	20011206	DE19985002107	19981114
EP0931970 A1	19990728	EP19980121739	19981114
EP0931970 B1	20010523	EP19980121739	19981114

Priority:

DE19981002884 19980127 DE19985002107 19981114

Probable Assignee: MANIBS SPEZIALARMATUREN

Assignee(s): (std): MANIBS SPEZIALARMATUREN

Assignee(s): MANIBS SPEZIALARMATUREN GMBH AND CO KG ; MANIBS SPEZIALARMATUREN GMBH AND CO KG 42859 REMSC ; MANIBS SPEZIALARMATUREN GMBH AND CO KG 42859 REMSCHEID DE

Inventor(s): (std): HINTZEN WERNER DIPL ING
Inventor(s): HINTZEN WERNER DIPL ING 50765 KOELN DE
Designated states: AT CH DE GB LI

11) Family number: 30320096 (US2005077725A)

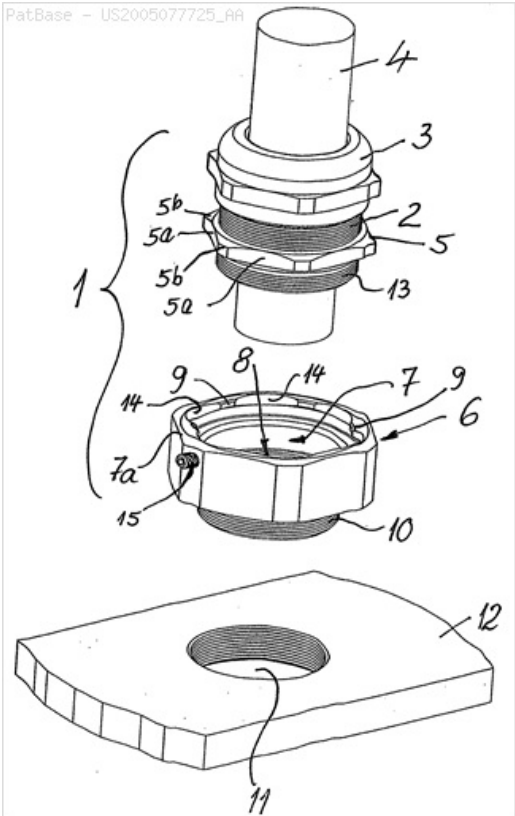
© PatBase

Title: TERMINAL CONNECTION COMPRISING A THREADED SLEEVE, A COUNTER-SLEEVE AND A TERMINAL INSERT

Abstract: A terminal connection (1) is provided that includes a threaded sleeve (2) and a counter sleeve (3) that can be connected to it, and a terminal insert that can be pressed against an elongated body (4). The connection has a coupling element (6) that can be detachably connected to the connection and includes a depression (7) and a passage (8) for the elongated body (4), and a radially protruding collar located on the threaded sleeve (2) fits and can be inserted into the depression (7). The coupling element (6) has radially inwardly directed projections (9) for engaging over the collar of the threaded sleeve (2) in the coupling position that are located on a front edge of the depression in the insertion direction of the threaded sleeve (2). The coupling element (6) has a fixing area (10) adjacent to the depression (7) for connecting to a counterpart or a retaining nut and/or through opening (11) of a housing (12), to which the terminal connection (1) is to be attached. This enables the elongated body to be connected in a fixed manner to a counterpart or housing prior to its fixation and to be subsequently mounted

Classifications:

International (IPC 8-9): F16L27/00 F16L5/02 H02G15/04
H02G3/06 (Advanced/Invention);
F16L5/02 H02G15/02 H02G3/02 (Core/Invention)
International (IPC 1-7): F16L15/08 F16L5/02 F16L55/00 H02G15/007
H02G15/04 H02G3/06 H02G3/18
CPC: F16L5/027 H02G3/0675 H02G3/0683 H02G15/04
European: F16L5/02J H02G15/04 H02G3/06C1S T02G3/06C1T
US: 285/137.11 285/143.1 285/222 285/81 285/90



Family:

Publication number	Publication date	Application number	Application date
AT302374 E	20050915	AT20030738003T	20030606
AU2003245921 AA	20040225	AU20030245921	20030606
BRPI0306881 A	20041221	BR2003PI06881	20030606
CN1293336 C	20070103	CN20038003354	20030606
CN1628225 A	20050615	CN20038003354	20030606
DE20211333 U1	20021024	DE20022011333U	20020726
DE50300993 D1	20050922	DE20035000993	20030606
EA005798 B1	20050630	EA20040000931	20030606
EA200400931 A1	20041230	EA20040000931	20030606
EP1430245 A1	20040623	EP20030738003	20030606
EP1430245 B1	20050817	EP20030738003	20030606
ES2247547 T3	20060301	ES20030738003T	20030606
US2005077725 AA	20050414	US20040502215	20040720
US7128345 BB	20061031	US20040502215	20040720
WO04015318 A1	20040219	WO2003EP05970	20030606

Priority:

DE20022011333U 20020726 DE20035000993 20030606 WO2003EP05970 20030606

Probable Assignee: ANTON HUMMEL VERWALTUNGS GMBH

Assignee(s): (std): ANTON HUMMEL VERWALTUNGS GMBH ; BARTHOLOMAE MARIO ; GERBER PHILIPP ; GOETZ VOLKER ; HUMMEL ANTON VERWALTUNG ; ZUEGEL FRITZ ; ANTON HUMAER MAN AG

Assignee(s): ANTON HUMAER MANAGEMENT AG

Inventor(s): (std): BARTHOLOMA MARIO ; GEL FRITZ Z ; TZ VOLKER G ; ZUGEL FRITZ ; GOTZ VOLKER ; XUGEL FRITZ ; GAZE MARIO BATROMEE FRIZE ZIGG ; FRITZ ZUGEL ; PHILIPP GERBER ; MARIO BATROMEE FRIZE ZIGGER FORKER GAZE ; VOLKER GOTZ ; MARIO BARTHOLOMA ; BARTHOLOMAE MARIO ; ZUEGEL FRITZ ; GOETZ VOLKER ; GERBER PHILIPP

Inventor(s): FRITZ Z GEL ; VOLKER G TZ ; VOLKER G 247 TZ ; FRITZ Z³GEL

Agent(s): VOLPE AND KOENIG PC

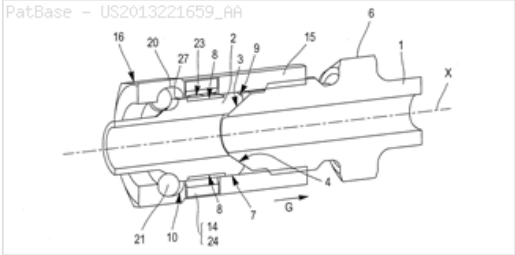
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE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

12) Family number: 51106108 (US2013221659A) © PatBase

Title: DEVICE FOR THE SECURED CONNECTION OF TWO END FITTINGS, PARTICULARLY OF A PIPE

Abstract: The device connects a first end fitting to a second end fitting, particularly of a pipe. A nut is provided with a threaded bore into which the first end fitting is screwed along a longitudinal axis. In the tightened position, the first end fitting is axially stressed relative to the second end fitting housed in the nut. Rotation-proofing means are provided between the nut and at least one of the first and second end fittings hereafter referred to as the locking end fitting. The rotation-proofing means consist of at least one strip arranged around the locking end fitting. The strip comprises at least one protrusion radially penetrating into at least one concavity.

Classifications:
International (IPC 8-9): F16L F16L15/08 F16L19/00 F16L27/00 F16L39/00 (Advanced/Invention); F16L (Subclass/Invention)
CPC: F16L19/005
European: F16L19/00B
US: 1/1 285/81



Family:

Publication number	Publication date	Application number	Application date
CA2816267 AA	20130426	CA20112816267	20111109
CA2816267 C	20181211	CA20112816267	20111109
DE602011014669 D1	20150423	DE201160014669T	20111109
EP2638317 A1	20130918	EP20110794540	20111109
EP2638317 B1	20150311	EP20110794540	20111109
FR2967229 A1	20120511	FR20100059238	20101109
FR2967229 B1	20121214	FR20100059238	20101109
HK1185399 A1	20151002	HK20130112742	20131114
HK1185399 A1	20140214	HK20130112742	20131114
HK1185399 B	20151002	HK20130112742	20131114
PL2638317 T3	20151030	PL20110794540T	20111109
SG190055 A1	20130628	SG20130032842	20111109
US2013221659 AA	20130829	US20110884535	20111109
US9163758 BB	20151020	US20110884535	20111109
WO12063000 A1	20120518	WO2011FR52612	20111109

Priority:
FR20100059238 20101109 EP20110794540 20111109 WO2011FR52612 20111109

Probable Assignee: JPB SYSTEME

Assignee(s): (std): JPB SYSTEME ; MARC DAMIEN

Inventor(s): (std): MARC DAMIEN

Inventor(s): DAMIEN MARC

Agent(s): FETHERSTONHAUGH AND CO; GRAMM LINS AND PARTNER PATENT U RECHTSANWAELTE PARTGMBB; PONTET ALLANO AND ASSOCIES; CABINET PONTET ALLANO AND ASSOCIES SELARL; IPAZ; WOOD HERRON AND EVANS LLP

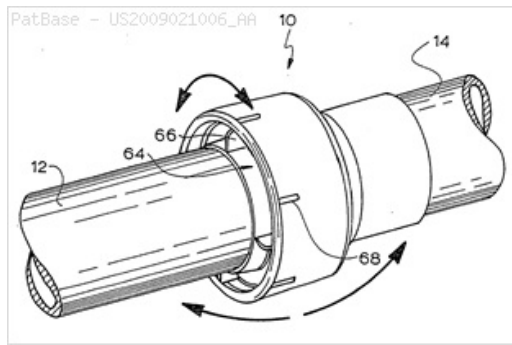
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT 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

13) Family number: 42810116 (US2009021006A) © PatBase

Title: COUPLER FOR COUPLING CONDUITS IN FLOW COMMUNICATION

Abstract: A coupler 10 for coupling two conduits 12, 14 is disclosed. The coupler 10 includes a female open ended tubular member 16 and a male open ended tubular member 18. Each tubular member 16, 18 has a joint end 20 and a conduit connection end 22, 24 between which an axial flow path extends. The conduit connection end 22, 24 is for connecting the tubular member to an end of a conduit such as a drain pipe. The coupler 10 further includes a jointing arrangement 34 for connecting the joint ends 20 of the tubular members 16, 18 to each other. The arrangement 34 includes a coaxial spigot formation 26 at the joint end of the male tubular member 18, and a coaxial socket formation 28 at the joint end of the female tubular member 16. The spigot formation 26 is received in spigot-socket fashion within the socket formation 28. The jointing arrangement 34 permits angular and rotational movement of the two tubular members 16, 18 relative to each other. The coupler 10 also includes a securing arrangement that is a collar member extending over the socket member for mechanically holding the two tubular members 16, 18 to each other so that they cannot be separated.

Classifications:
International (IPC 8-9): B21K1/16 F16L27/04 F16L27/047 F16L27/073 F16L27/10 F16L47/18 (Advanced/Invention); B21K1/00 F16L27/00 F16L27/02 F16L47/00 (Core/Invention)
CPC: Y10T29/49428 F16L27/023
European: F16L27/02B
US: 285/276 29/890.14



Family:

Publication number	Publication date	Application number	Application date
AU2008202426 AA	20081218	AU20080202426	20080602
AU2008202426 BB	20121011	AU20080202426	20080602
NZ568782 A	20091127	NZ20080568782	20080603
US2009021006 AA	20090122	US20080156522	20080602

Priority:

AU20070902964 20070601 AU20077902964 20070601 AU20080202426 20080602

Probable Assignee: PLASTEC AUSTRALIA PTY LTD

Assignee(s): (std): PLASTEC AUSTRALIA PTY LTD

Inventor(s): (std): HOBBS ANDREW

Inventor(s): ANDREW HOBBS

Agent(s): IP GATEWAY PATENT AND TRADEMARK ATTORNEYS; IP GATEWAY PATENT AND TRADE MARK ATTORNEYS PTY LTD; IP GATEWAY PATENT AND TRADEMARK ATTORNEYS PTY LTD; LOCKE LORD BISSELL AND LIDDELL LLP ATTN MICHAEL RITCHIE DOCKETING

14) Family number: 30588119 (US2004100097A)

© PatBase

Title: TUBE JOINT

Abstract: A tube joint comprises a nut member which connects a tube to a joint body, collet sections which fasten the tube by fastening pawls for being pressed radially inwardly by a pressing section of the nut member to bite into an outer circumferential surface of a diametrically expanded section of the tube, and an annular projection which abuts against an annular step of the joint body and which regulates a screwing amount of the nut member on the joint body.

Classifications:

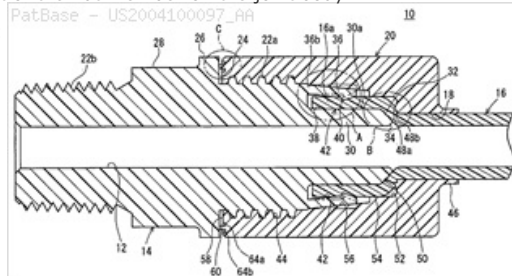
International (IPC 8-9): F16L19/02 F16L19/04 F16L19/06 F16L19/065 F16L19/08 F16L19/12 F16L19/14 F16L33/00 F16L47/04 (Advanced/Invention); F16L19/06 (Advanced/Non-invention); F16L19/00 F16L19/02 F16L33/00 F16L47/00 (Core/Invention)

International (IPC 1-7): F16L19/02 F16L19/04 F16L19/06 F16L19/14 F16L35/00 F16L47/04

CPC: F16L47/041 F16L19/0283 F16L2201/10

European: F16L19/065D F16L47/04

US: 285/243 285/247 285/322 285/322P 285/334.5 285/334.500S



Family:

Publication number	Publication date	Application number	Application date
CN1257360 C	20060524	CN200310118356	20031125
CN1502841 A	20040609	CN200310118356	20031125
DE10354360 A1	20040617	DE20031054360	20031120
DE10354360 B4	20070405	DE20031054360	20031120
FR2847646 A1	20040528	FR20030013633	20031121
FR2847646 B1	20070803	FR20030013633	20031121
JP2004176760 A2	20040624	JP20020341197	20021125
JP3947971 B2	20070725	JP20020341197	20021125
KR100597190 B1	20060705	KR20030082286	20031119
KR20040045315 A	20040601	KR20030082286	20031119
TW200413662 A	20040801	TW20030130887	20031105
TWI230771 B	20050411	TW20030130887	20031105
US2004100097 AA	20040527	US20030706945	20031114
US7240925 BB	20070710	US20030706945	20031114

Priority:

JP20020341197 20021125

Probable Assignee: SMC KK

Assignee(s): (std): SMC CO LTD ; SMC KK ; SMC CORP

Assignee(s): SMC K K ; SMC K K TOKIO TOKYO

Inventor(s): (std): TADASHI UCHINO ; UCHINO TADASHI ; FUKANO YOSHIHIRO ; YOSHIHIRO FUKANO ; YOSHIHIRO UCHINO TADASHI FUKAN

Inventor(s): UCHINO TADASHI FUKANO YOSHIHIRO

Agent(s): CASALONGA; PAUL A

Title: NON THREADED DRILL PIPE CONNECTION

Abstract: A threadless connection for coupling segments of pipe longitudinally end to end includes a pin end having a groove for receiving therein a locking ring. A box end has a groove for receiving the locking ring therein when the pin end is inserted into the box end. The locking ring has an uncompressed diameter selected to exert lateral force on the groove in the box end when assembled to the pin end.

Classifications:

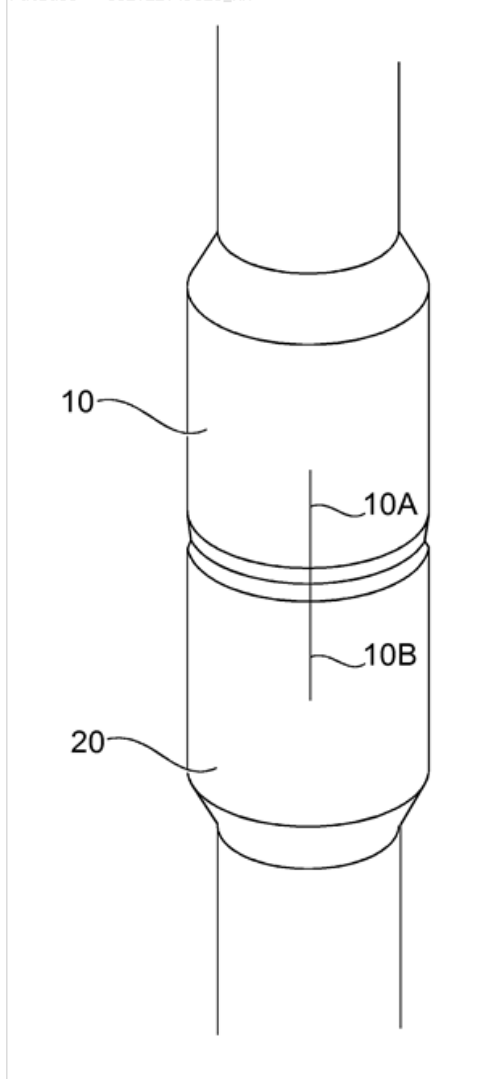
International (IPC 8-9): E21B17/046 F16L25/00 F16L37/088 F16L39/00 (Advanced/Invention)

CPC: E21B17/046 F16L37/088

European: E21B17/046 F16L37/088

US: 285/321 285/330 285/331 285/331P 285/913 285/917

PatBase - US2012049513_AA



Family:

Publication number	Publication date	Application number	Application date
GB201014511 A0	20101013	GB20100014511	20100901
GB201305836 A0	20130515	GB20130005836	20110818
GB2497488 A1	20130612	GB20130005836	20110818
GB2497488 B2	20140730	GB20130005836	20110818
US2012049513 AA	20120301	US20110197217	20110803
US8474879 BB	20130702	US20110197217	20110803
WO12028864 A2	20120308	WO2011GB51557	20110818
WO12028864 A3	20120426	WO2011GB51557	20110818

Priority:

GB20100014511 20100901 WO2011GB51557 20110818

Probable Assignee: HERRERA DEREK

Assignee(s): (std): HERRERA DEREK ; HERRERA DEREK F

Assignee(s): DEREK HERRERA

Inventor(s): (std): HERRERA DEREK ; HERRERA DEREK F

Inventor(s): DEREK HERRERA

Agent(s): RICHARD A; MURGITROYD AND COMPANY

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 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

Title: HOUSING-TYPE PIPE JOINT

Abstract: Provided is a housing type pipe joint to enable the confirmation of an appropriate fastening degree of a joint and reduce a load of a fastening work. The housing-type pipe joint includes a pair of joint segments, an elastic seal ring, and a fastening means fastening the pair of joint segments, in which the joint segments each have an arc portion, flange portions extending from both ends of the arc portion, a concave groove formed in an inner peripheral surface of the arc portion to have the elastic seal ring fit therein, and in which the fastening means makes the flanges of the both joint segments approach each other to make the arc portions bend so that radii of curvature of the arc portions become smaller, and when, as a result of the bending, peripheral edges of the arc portions match outer surfaces of the pipes that are to be coupled, the coupling of the pipes is completed, the housing-type pipe joint including marks on the peripheral edge regions of the arc portions, wherein, when the peripheral edges of the arc portions corresponding to the marks come into contact with the outer surfaces of the pipes, the coupling of the pipes is completed.

Classifications:

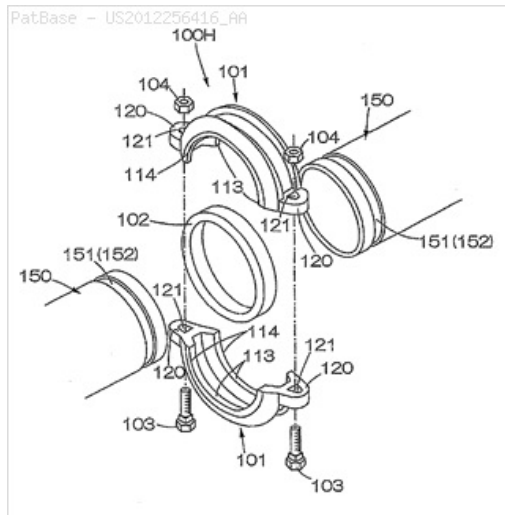
International (IPC 8-9): F16L F16L17/04 F16L17/06 F16L21/00 F16L21/03 F16L21/06 F16L21/08 F16L23/04 F16L23/18 F16L25/12 (Advanced/Invention); F16L21/06 (Core/Invention); F16L21/03 F16L21/06 (Core/Non-invention); F16L (Subclass/Invention)

International (IPC 1-7): F16L21/06

CPC: F16L21/005 F16L17/04 F16L25/12 F16L21/065 F16L17/06

European: F16L17/04 F16L21/00B2

US: 1/1 285/365



Family:

Publication number	Publication date	Application number	Application date
■ CN102597591 A	20120718	CN201080050377	20101210
■ CN102597591 B	20141217	CN201080050377	20101210
■ HK1169477 A1	20150710	HK20120110205	20121016
■ HK1169477 A1	20130125	HK20120110205	20121016
■ HK1169477 B	20150710	HK20120110205	20121016
■ IN04714DN2012 A	20151204	IN2012DN04714	20120528
■ JP2011122698 A2	20110623	JP20090282464	20091214
■ JP2011122716 A2	20110623	JP20100095740	20100419
■ JP2011237011 A2	20111124	JP20100110830	20100513
■ JP4500882 B1	20100714	JP20090282464	20091214
■ JP4637269 B1	20110223	JP20100110830	20100513
■ KR101788341 B1	20171115	KR20127013259	20101210
■ KR20120099237 A	20120907	KR20127013259	20101210
■ TH124894 A	20130628	TH20121002822	20101210
■ TH66953 B	20181217	TH20121002822	20101210
■ TW201139907 A	20111116	TW20100143826	20101214
■ TWI516704 B	20160111	TW20100143826	20101214
■ US2012256416 AA	20121011	US20100515928	20101210
■ US9285061 BB	20160315	US20100515928	20101210
■ VN16376 A1	20170125	VN20120002005	20101210
■ WO11074498 A1	20110623	WO2010JP72259	20101210

Priority:

JP20090282464 20091214 JP20100095740 20100419 JP20100110830 20100513
WO2010JP72259 20101210

Probable Assignee: VICTAULIC CO OF JAPAN LTD

Assignee(s): (std): VICTAULIC CO OF JAPAN ; VICTAULIC CO OF JAPAN LTD ; VICTAULIC COMPANY OF JAPAN LTD ; VICTAULIC JAPAN ; IKEDA SHINTARO ; NODA YUJI

Assignee(s): THE VICTAULIC COMPANY OF JAPAN LIMITED

Inventor(s): (std): IKEDA SHINTARO ; NODA YUJI ; SHINTARO IKEDA ; YUJI NODA

Agent(s): EAGLE IP LTD; RENNER KENNER; ARTHUR M; NAGAI YOSHIHISA 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 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

Title: PIPE T=JUNCTION CLOSING ATTACHMENT - HAS SPRING LOADED PLUNGER MOUNTED ON PLUG WITH OPERATING ROD HOUSING MOUNTED ON STOP COCK HOUSING

Abstract: The pipe has a branch connection (6) and a Tee adaptor (2). The adaptor has a connecting piece (11) which carries a stop cock (9) with an operating lever (10). The plug is mounted on the stop cock by a flange, and is secured using

studs (17). A sleeve (8) of the plug is fitted with a purge connection (12). The plug operating rod (13) passes through the gland (14) and carries the plug (16) at its lower end. An extension to the plug (16) in the form of a spring loaded plunger fits in the hole in the side of the pipe (1).

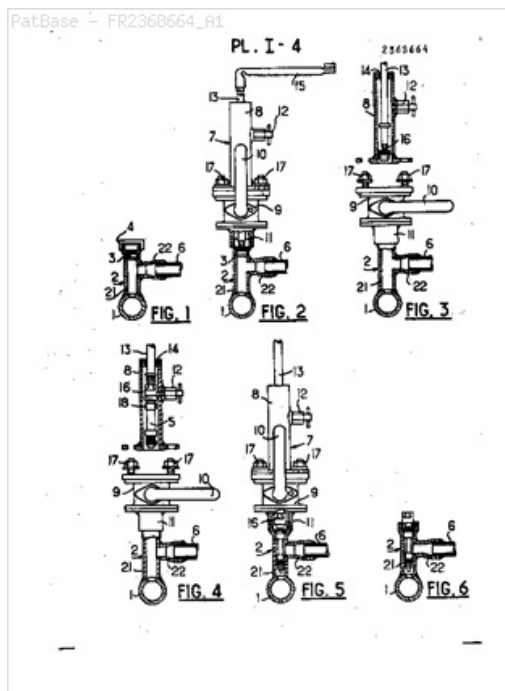
Classifications:

International (IPC 8-9): F16L41/08 F16L41/16 (Advanced/Invention);
F16L41/08 (Core/Invention)

International (IPC 1-7): F16K31/44 F16L41/08

CPC: F16L41/084 F16L41/16

European: F16L41/08A1 F16L41/16



Family:

Publication number	Publication date	Application number	Application date
FR2368664 A1	19780519	FR19760032036	19761019
FR2368664 B1	19800314	FR19760032036	19761019

Priority:

FR19760032036 19761019

Probable Assignee: BIANCHI ET SES FILS G SA

Assignee(s): (std): BIANCHI ET SES FILS G SA ; BIANCHI ET SES FILS SA G

18) Family number: 4606143 (US5018768A)

© PatBase

Title: PIPE COUPLING HINGE

Abstract: A pipe coupling for encircling and coupling aligned pipe ends is formed of aligned arcuate segments that are fastened together. The segments are hingedly connected together at adjacent ends by means of a hook formed on the end of one segment and a hook receiving loop formed on the corresponding end of the other segment. The loop forms an elongated rectangular opening defined by a pair of radially outwardly extending legs, that are joined to the segment and an axle connecting the legs. The hook has a similar cross section, but is loosely fitted within the opening. A depression is formed in the axle, at one leg, and a correspondingly aligned depression is formed in the segment wall adjacent the opposite leg. The hook has a projection which normally prevents the hook from withdrawal from the loop opening when the hook is pivoted relative to the opening. But, the hook is sufficiently loose in the opening so that the segments may be angled relative to each other to move the opposite corners of the hook into the depressions and, thereby, clear the projection relative to the opening for permitting withdrawal of the hook from the loop. A removable ring arranged around the axle, between its adjacent leg and the hook, normally prevents such relative movement, but is removable to permit such relative movement. The opposite ends of the segments are fastened together by a bolt. Thus, the segments may be stored separately and assembled together when desired, by interconnecting the hook and loop, or may be pre-assembled.

Classifications:

International (IPC 8-9): F16L21/06 F16L23/04

F16L23/10 (Advanced/Invention);

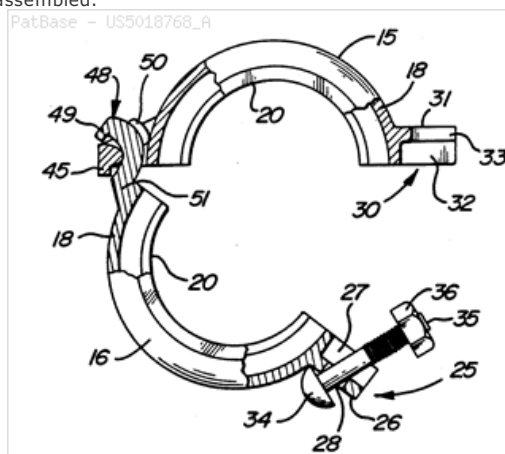
F16L21/06 F16L23/00 (Core/Invention)

International (IPC 1-7): F16L21/02 F16L21/06 F16L23/04 F16L35/00

CPC: Y10T24/1451 F16L17/04 F16L21/06 F16L23/10

European: F16L17/04 F16L21/06 F16L23/10

US: 24/284 285/112 285/24 285/367 285/420



Family:

Publication number	Publication date	Application number	Application date
JP3300385 B2	20020708	JP19910124040	19910528
JP4249692 A2	19920904	JP19910124040	19910528

KR100209981 B1	19990715	KR19910001560	19910130
KR19920002972 A	19920228	KR19910001560	19910130
US5018768 A	19910528	US19900554675	19900719

Priority:

US19900554675 19900719

Probable Assignee: QUIKCOUP INC

Assignee(s): (std): KUIKUKAUPU INC ; QUIKCOUP INC

Assignee(s): QUIKCOUP INC 550 EAST SOUTH BOULEVARD PONTIAC MI 48053 A CORP OF MI

Inventor(s): (std): PALATCHY JOSEF ; JOSEF PALATCHY ; JIYOUZEFU PARACHII

19) Family number: 4897146 (US3680342A)

© PatBase

Title: APPARATUS FOR LAYING PIPELINES

Abstract: An apparatus for laying a pipeline from a barge-mounted reel including compound-bending means, tensioning means and vertical support means. Each means preferably has an endless chain composed of blocks linked together by connecting pins. The pins also support high-load carrying rollers. The rollers ride both on relatively stiff tracks and on relatively flexible tracks which are supported by hydraulically-controlled rods operable to cause the flexible tracks to assume a desired curvature for imparting to the pipe. In the tensioning means, two such moving chains are oppositely positioned to directly engage opposite sides of a generally rectilinear portion of said pipe, thereby exerting a series of longitudinally-spaced, continuously-effective tensioning forces in the pipe. The apparatus further includes hydraulically-operated stanchions for selectively and adjustably supporting said pipeline in a vertical plane to allow the pipe to enter a body of water at a desired vertical inclination.

Classifications:

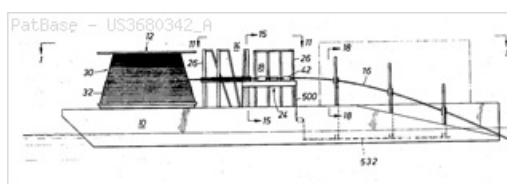
International (IPC 8-9): F16L1/18 F16L1/20 (Advanced/Invention); F16L1/12 (Core/Invention)

International (IPC 1-7): B21C47/18 B21D3/02 B21D3/14 B63B35/00 B63B35/02 B65H75/00 B66F E02D29/00 F16L1/00 F16L1/04 F17D

CPC: F16L1/18 F16L1/203

European: F16L1/18 F16L1/20C2

US: 226/172 242/128 242/54 242/564 242/597.7 254/134.3SC 405/168.1 405/168.3 405/168.4 72/161 72/166 72/199



Family:

Publication number	Publication date	Application number	Application date
AR203528 A1	19750922	AR19710233573	19710121
AR203589 A1	19750922	AR19750257426	19750127
AR203590 A1	19750922	AR19750257427	19750127
AR203591 A1	19750922	AR19750257428	19750127
BR7100151 A0	19730301	BR19710000151	19710111
CA939917 A1	19740115	CA19710102185	19710107
DE2102130 A1	19710805	DE19712102130	19710118
DE2102130 B2	19730301	DE19712102130	19710118
DE2102130 C3	19730913	DE19712102130	19710118
DK139319 B	19790129	DK19710000311	19710126
DK139319 C	19790702	DK19710000311	19710126
FR2076975 A5	19711015	FR19710002406	19710125
GB1312592 A	19730404	GB19710020057	19710419
JP51018715 B4	19760611	JP19710002334	19710126
NL155930 B	19780215	NL19710000444	19710113
NL7100444 A	19710728	NL19710000444	19710113
NO138859 B	19780814	NO19710000151	19710115
NO138859 C	19781122	NO19710000151	19710115
OA3594 A	19710330	OA19710054152	19710125
US3630461 A	19711228	US19700005840	19700126
US3680342 A	19720801		19700126
US3712100 A	19730123	US19700005862	19700126
ZA7100351 A	19711124	ZA19710000351	19710119

Priority:

US19700005840 19700126

US19700005842 19700126

US19700005862 19700126

Probable Assignee: FLOUR OCEAN SERVICES INC

Assignee(s): (std): SANTA FE INT CORP ; FLOUR OCEAN SERVICES INC ; FLUOR OCEAN SERVICES

Assignee(s): FLUOR OCEAN SERVICES INC ; FLOUR OCEAN SERVICES INC US ; FEAZLE RICHARD B ; FLUOR OCEAN SERVICES INC HOUSTON TEX V ST A ; SANTA FE INT ORANGE CALIFORNIE VER ST V AM CORP ; MOTT JAMES D ; KEY JOE W ; SCHAEJBE FREDERICK W ; RUSSELL LARRY R ; SUGASTI DANIEL E

Inventor(s): (std): SUGASTI DANIEL E ; RUSSELL LARRY RAYNER ; SCHAEJBE FRED W ; MOTT JAMES D ; FEAZLE RICHARD B ; RUSSELL LARRY R ; KEY JOE W ; SCHAEJBE FREDERICK W ; SUGASTI DANIEL EVERISTO ; SCHAEJBE FREDRICK WILLIAM ; KEY JOE WAYNE ; MOTT JAMES DENZIL ; FEAZLE RICHARD BENJAMIN ; RUSSELL L ; KEY J ; MOTT J ; SCHAEJBE F ; SUGASTI D ; FEAZLE R ; SCHAEJBE F ; RUSSELL L ; SUGASTI D

Inventor(s): SCHAEJBE FREDRICK WILLIAM SUGAR LAND ; RUSSELL LARRY RAYNER HOUSTON ; SUGASTI DANIEL EVERISTO NEW ORLEANS LA ; JAMES D MOTT ; RICHARD B FEAZLE ; JOE WAYNE KEY ; KEY J W ; DANIEL EVERISTO SUGASTI ; RUSSELL L R ; JAMES DENZIL MOTT ; SCHAEJBE F W ; FREDRICK WILLIAM SCHAEJBE ; MOTT J D ; FEAZLE R B ; RICHARD BENJAMIN FEAZLE ; SUGASTI D E ; DANIEL E SUGASTI ; LARRY RAYNER RUSSELL ; FRED W SCHAEJBE ; RUSSELL L US ; KEY J US

20) Family number: 48790178 (US2011095526A)

© PatBase

Abstract: Systems and methods are provided that may include employing a lockscrew to provide radial and axial force in connecting tubular members in a mineral extraction system. The lockscrew may be angled relative to the tubular members, at an angle that is greater than 0 degrees and less than 90 degrees. Further, the lockscrew may have an end portion which mates with a slot in a locking segment, and the lockscrew and locking segment may be moved from an unlocked to a locked position. In a locked position, the lockscrew exerts force axially downward and radially inward to push the locking segment against a tubular member, locking the member in place. The interconnection between the lockscrew and the locking segment may enable easier installation and may utilize parts which may be easier to manufacture. Furthermore, the angle of the lockscrew may provide improved support for tubular members.

Classifications:

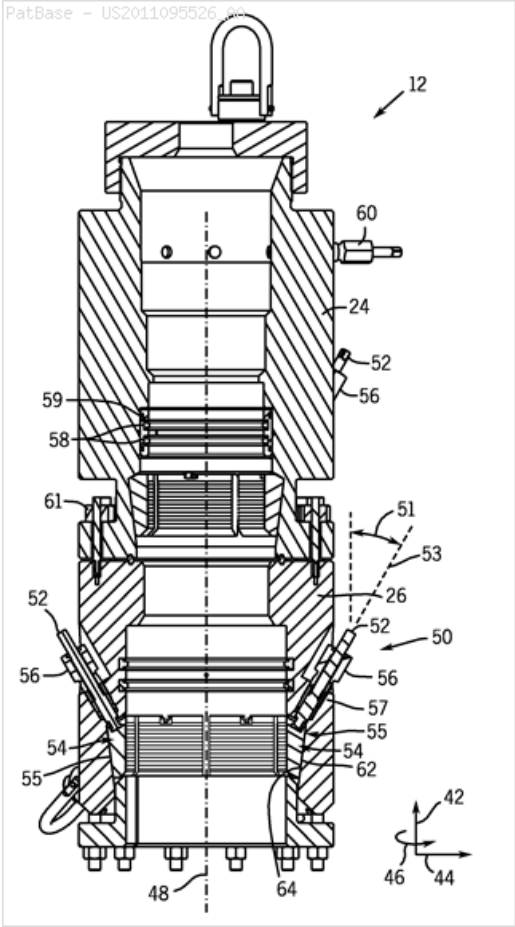
International (IPC 8-9): B23P11/00 E21B17/00 E21B17/02 E21B17/03 E21B19/00 E21B19/02 E21B19/10 E21B19/16 E21B33/03 E21B33/04 F16L25/06 F16L37/04 F16L55/00 (Advanced/Invention)

International (IPC 1-7): E21B17/02 E21B33/03 E21B33/04 F16L55/00

CPC: E21B33/0422 E21B33/03 E21B33/04 F16L25/065 E21B19/10 E21B19/16 E21B17/02 Y10T29/49963

European: E21B17/02 E21B33/03 E21B33/04 F16L25/06B

US: 166/379 166/382 166/75.14 166/77.53 285/313 285/313P 29/525.11 29/525.110S



Family:

Publication number	Publication date	Application number	Application date
BR112012011354 A2	20160419	BR20121111354	20100920
BR112012011354 B1	20190723	BR20121111354	20100920
GB201204428 A0	20120425	GB20120004428	20100920
GB201411993 A0	20140820	GB20140011993	20100920
GB201411994 A0	20140820	GB20140011994	20100920
GB2488448 A1	20120829	GB20120004428	20100920
GB2488448 B2	20141231	GB20120004428	20100920
GB2512530 A1	20141001	GB20140011993	20100920
GB2512530 B2	20141231	GB20140011993	20100920
GB2512531 A1	20141001	GB20140011994	20100920
GB2512531 B2	20141231	GB20140011994	20100920
NO20120364 A	20120430	NO20120000364	20120326
SG179568 A1	20120530	SG20120018792	20100920
US2011095526 AA	20110428	US20090622394	20091119
US2013186614 AA	20130725	US20130736934	20130108
US2015152696 AA	20150604	US20150616699	20150207
US8347970 BB	20130108	US20090622394	20091119
US8960274 BB	20150224	US20130736934	20130108
US9765582 BB	20170919	US20150616699	20150207
WO11056308 A1	20110512	WO2010US49492	20100920

Priority:

US20090255081P 20091026 US20090622394 20091119 GB20120004428 20100920
GB20120004428 20100920 WO2010US49492 20100920 US20130736934 20130108
US20150616699 20150207

Probable Assignee: CAMERON INT CORP

Assignee(s): (std): CAMERON INT CORP ; REED KENNETH MELVIN ; VANDERFORD DELBERT EDWIN

Assignee(s): CAMERON TECHNOLOGIES LTD

Inventor(s): (std): VANDERFORD DELBERT EDWIN ; REED KENNETH MELVIN ; VANDERFORD DELBERT ; VANDERFORD DELBERT E

Inventor(s): DELBERT EDWIN VANDERFORD ; DELBERT E VANDERFORD ; KENNETH MELVIN REED ; DELBERT VANDERFORD

Agent(s): FLETCHER YODER PC; SWANSON TAIT R

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

21) Family number: 71078181 (US2020003354A)

© PatBase

Title: CURING DEVICE FOR CURING A PIPE LINER

Abstract: A device for curing resin in a pipe liner using electromagnetic radiation includes a heat sink and LEDs for generating the radiation mounted on the heat sink. The device conducts heat away from the LEDs through the heat sink. The heat sink is positioned in the flow path of cooling fluid that draws heat away by convection. The heat sink can include elements at the ends of the LEDs that are exposed to the cooling fluid. The device can guide the cooling fluid along a flow path that includes a segment that extends over the LEDs. The device can limit fluid flow through a central cavity of the heat sink.

Classifications:

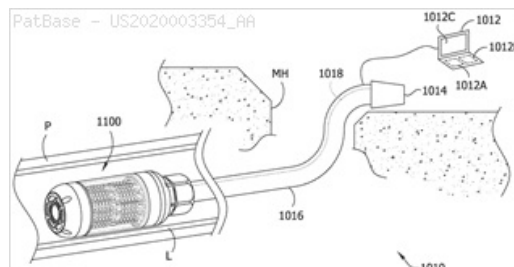
International (IPC 8-9): B29C63/00 F16L55/162 F16L55/1645

F16L55/165 F16L55/175 F16L55/18 F16L55/26

F16L55/28 (Advanced/Invention)

CPC: B29L2023/22 B29C63/0004 F16L55/18 F16L55/165 F16L55/26

F16L55/28



Family:

Publication number	Publication date	Application number	Application date
DK201870118 A1	20181031	DK20180070118	20180222
PL231344 B1	20190228	PL20170420731	20170303
PL420731 A1	20180910	PL20170420731	20170303
US2020003354 AA	20200102	US20180490798	20180302
WO18160974 A1	20180907	WO2018US20675	20180302

Priority:

PL20170420731 20170303

DK20180070118 20180222

WO2018US20675 20180302

US20180490798 20180302

Probable Assignee: INA ACQUISITION CORP

Assignee(s): (std): INA ACQUISITION CORP ; INSITUFORM TECH LLC ; KUZNIAR SLAWOMIR KANRES

Assignee(s): INSITUFORM TECHNOLOGIES LLC

Inventor(s): (std): KANRES SLAWOMIR KUZNIAR ; KUZNIAR SLAWOMIR ; SLAWOMIR KUZNIAR KANRES

Agent(s): POLLMANN JONATHAN G 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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

22) Family number: 32878192 (US2008105320A)

© PatBase

Title: REHABILITATING PIPE AND METHOD FOR REPAIRING A PIPELINE INSTALLATION USING REHABILITATING PIPE

Abstract: Integrally formed plastic segments comprising an inner surface plate constituting an inner peripheral surface and lateral plates vertically arranged on an edge part of the inner surface plate extending in a circumferential direction are coupled in a circumferential direction to assemble pipe units 10, 10'. The pipe units are coupled sequentially in the longitudinal direction of a pipe, and a rehabilitating pipe is laid down in an existing pipeline. When an existing pipe 21 is bent, the pipe units are coupled at a bending part 21 b in the longitudinal direction of the pipe via coupling members so that central axes X 1, X 2 of the pipes are angled toward each other to create a bend. A gap formed between the pipe units at the bent part is covered by a cladding. Such a configuration enables a rehabilitating pipe to be watertight and resistant to external forces.

Classifications:

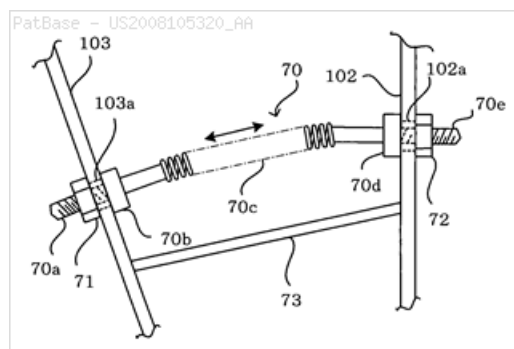
International (IPC 8-9): E03F7/00 F16L55/18 (Advanced/Invention);

F16L55/18 (Core/Invention)

CPC: E03F3/06 E03F2003/065 F16L55/162 F16L55/1657

European: E03F3/06 F16L55/162 F16L55/165J P03F3/06B

US: 138/97 138/97P 138/98 138/98S 285/15 285/15S



Family:

Publication number	Publication date	Application number	Application date
CA2585238 AA	20070424	CA20052585238	20051021
EP1806457 A1	20070711	EP20050795563	20051021

JP2006046477 A1	20080522	JP20060543083T	20051021
US2008105320 AA	20080508	US20050666586	20051021
WO06046477 A1	20060504	WO2005JP19371	20051021

Priority:

JP20040313203 20041028 WO2005JP19371 20051021

Probable Assignee: SHONAN GOSEI JUSHI SEISAKUSHO KK

Assignee(s): (std): FUJII KENJI ; HASEGAWA TAKESHI ; ISHIDA MAKOTO ; KAMIYAMA TAKAO ; KANETA KOJI ; MIURA KATSUYORI ; NAKAMURA YOICHI ; SHONAN GOSEI JUSHI SEISAKUSHO

Assignee(s): SHONAN GOSEI JUSHI SEISAKUSHO K K ; SHONAN GOSEI JUSHI SEISAKUSHO KK

Inventor(s): (std): KAMIYAMA TAKAO ; KANETA KOJI ; FUJII KENJI ; MIURA KATSUYORI ; ISHIDA MAKOTO ; HASEGAWA TAKESHI ; NAKAMURA YOICHI

Agent(s): OGILVY RENAULT LLP SENCRL SRL; BRUCE L ADAMS ADAMS AND WILKS

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

23) Family number: 52592195 (US2014132000A)

© PatBase

Title: TUBULAR ELEMENTS COUPLING

Abstract: Provided is a coupler including two or more shell segments, each pivotally coupled at a pivot end to a rigid link, and being securable to one another at a locking end thereof by a locking mechanism, each shell segment is configured with a complimentary tubular element seat and at least a pair of substantially parallel radial tubular element engagement formations, and an annular gasket seat, where the two or more shell segments are pivotable between a closed position in which they complete a substantially closed shape, and an open position where at least one of the two or more shell segments is pivotally displaced with respect to the link and apart from one another.

Classifications:

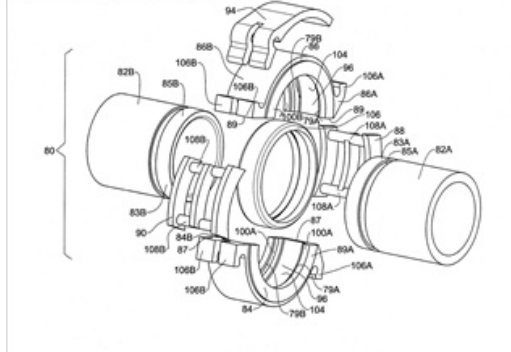
International (IPC 8-9): F16B2/14 F16B7/04 F16J15/06 F16J15/10 F16K27/02 F16L F16L21/02 F16L21/06 (Advanced/Invention); F16L (Subclass/Invention)

CPC: F16L21/06 F16J15/10 F16L21/02 F16K27/0218 F16L21/065 F16L17/04 F16L21/005 F16L23/006 F16L23/04

European: F16L21/06B

US: 277/607 285/373 285/420

PatBase - US2014132000_AA



Family:

Publication number	Publication date	Application number	Application date
AU2012269887 AA	20121220	AU20120269887	20120613
BR112013032007 A2	20161227	BR20131132007	20120613
CL2013003587 A1	20140808	CL20130003587	20131213
CN103930702 A	20140716	CN201280039824	20120613
EP2721336 A2	20140423	EP20120737355	20120613
IL229839 A0	20140227	IL20120229839	20120613
IL229839 A1	20170731	IL20120229839	20120613
IN00151CN2014 A	20160624	IN2014CN00151	20140107
JP2014523999 T2	20140918	JP20140515339T	20120613
SG10201604797Q A1	20160830	SG20161004797	20120613
US2014132000 AA	20140515	US20120125476	20120613
WO12172552 A2	20121220	WO2012IL50204	20120613
WO12172552 A3	20130704	WO2012IL50204	20120613

Priority:

US20110497138P 20110615 US20120125476 20120613 WO2012IL50204 20120613

Probable Assignee: AMIAD WATER SYSTEMS LTD

Assignee(s): (std): ALEXEY SLAVINSKY ; AMIAD WATER SYSTEMS LTD ; AVI LEVI ; BEN HORIN RA ANAN ; SLAVINSKY ALEXEY ; ZUR BOAZ ; LEVI AVI ; BOAZ ZUR ; RAANAN BEN HORIN

Assignee(s): RA ANAN BEN HORIN ; LEVI AVI ; BEN HORIN RA'ANAN ; BEN HORIN RAANAN

Inventor(s): (std): ZUR BOAZ ; LEVI AVI ; BEN HORIN RA ANAN ; AVI LEVI ; ALEXEY SLAVINSKY ; BOAZ ZUR ; RA ANAN BEN HORIN ; SLAVINSKY ALEXEY

Inventor(s): BEN HORIN RA'ANAN ; AVI LEVI ; LEVI AVI ; BEN HORIN RAANAN ; RAANAN BEN HORIN

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; ESTUDIO CAREY LTDA; JAEGER MICHAEL DAVID; REINHOLD COHN AND PARTNERS; GLAZBERG APPLEBAUM AND CO; RAVINDRAN ASSOCIATES; REINHOLD COHN AND PARTNER

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

Title: APPARATUS FOR ATTACHING A HOSE TO A FITTING

Abstract: A hose coupling for use with flexible hose comprises a biconical fitting which is inserted into a hose end and a frusto-conical locking sleeve located about the hose portion which grips the rearward conical section of the fitting. Sealing arrangements for specific embodiments of hose are disclosed. The double included angle of the conical portion of the sleeve and fitting, which engages the hose, is between one degree but less than ten degrees.

Classifications:

International (IPC 8-9): F16L27/08 F16L33/207

F16L33/22 (Advanced/Invention);

F16L27/00 F16L33/20 F16L33/22 (Core/Invention)

International (IPC 1-7): F16L33/12 F16L33/18 F16L33/22 F16L55/00

CPC: Y10S285/903 Y10S285/906 Y10S285/908 Y10S285/909

Y10S285/917 F16L33/2076 F16L27/0816 F16L33/2071 Y10T29/49872

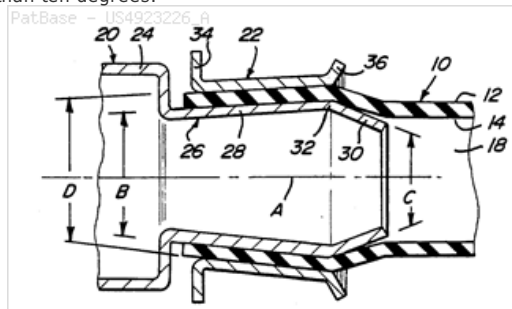
Y10T29/49945 F16L33/225

European: F16L27/08B2B2 F16L33/207B F16L33/207B2D

F16L33/22H

US: 285/114 285/23 285/242 285/255 285/351 285/903 285/906

285/908 285/909 285/917 285/93 29/451 29/525



Family:

Publication number	Publication date	Application number	Application date
AU199056369 A1	19911127	AU19900056369	19900502
AU199473107 A1	19951129	AU19940073107	19940506
AU660603 B2	19950706	AU19900056369	19900502
CA2080359 AA	19921009	CA19902080359	19900502
EP0530179 A1	19930310	EP19900907613	19900502
EP0530179 A4	19930922	EP19900907613	19900502
US4923226 A	19900508	US19880265263	19881031
US5261706 A	19931116	US19900504543	19900404
US5388870 A	19950214	US19910776824	19911015
US5425557 A	19950620	US19930157671	19931124
US5524939 A	19960611	US19950487955	19950607
US5544923 A	19960813	US19940335541	19941107
US5568948 A	19961029	US19950487965	19950607
US5582436 A	19961210	US19950476224	19950607
US5868435 A	19990209	US19960737387	19961106
WO9117381 A1	19911114	WO1990US02540	19900502
WO9530857 A1	19951116	WO1994US05056	19940506

Priority:

US19870066749 19870623	US19880189395 19880502	US19880265263 19881031
US19900504543 19900404	CA19902080359 19900502	WO1990US02540 19900502
US19910776824 19911015	US19930157671 19931124	WO1994US05056 19940506
US19940335541 19941107	US19950476224 19950607	US19950487955 19950607
US19950487965 19950607	US19960737387 19961106	

Probable Assignee: PROPRIETARY TECHNOLOGY INC

Assignee(s): (std): BARTHOLOMEW DONALD DEKLE ; PROPRIETARY TECHNOLOGY INC

Assignee(s): PROPRIETARY TECHNOLOGY INC ; BARTHOLOMEW DONALD D

Inventor(s): (std): BARTHOLOMEW DONALD D ; BARTHOLOMEW DONALD DEKLE

Inventor(s): DONALD DEKLE BARTHOLOMEW

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MACRAE AND CO

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 SU TD TG UA US UZ VN

Title: PIPE JOINT RESTRAINT

Abstract: A joint restraint is provided for a curved pipe joint having a curved pipe section joining two adjacent pipe sections. The pipes are joined using tubular sleeves held by hose clamps to form fluid tight seals, with two clamps on each end of the curved pipe sections and two clamps on each proximal end of the adjacent pipe sections. An inner strap extends between and fastens to one of the clamps on each adjacent pipe section forming a chord of an arc. An outer strap extends along an outer periphery of the joined pipes and fastens to the other clamps on each adjacent pipe section. The straps are in a plane through a center of the flow path of the joined pipes

Classifications:

International (IPC 8-9): E03C1/122 F16L17/00 F16L21/06 F16L21/08

F16L25/00 F16L3/14 F16L35/00 F16L43/02 F16L55/00

F16L55/07 (Advanced/Invention);

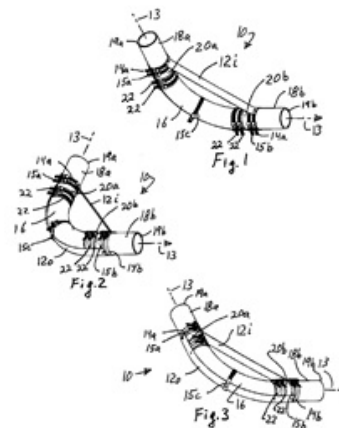
E03C1/122 F16L17/00 F16L21/08 F16L25/00 F16L3/14

F16L55/07 (Core/Invention)

CPC: F16L55/00 F16L43/02 F16L21/065 F16L35/00

European: F16L43/02

US: 1/1 285/104 285/420 285/81 285/95

**Family:**

Publication number	Publication date	Application number	Application date
CA2697763 AA	20100925	CA20102697763	20100325
CA2697763 C	20171219	CA20102697763	20100325
US2010244437 AA	20100930	US20100730719	20100324
US2015176736 AA	20150625	US20150639926	20150305
US2017219140 AA	20170803	US20170402111	20170109
US9534718 BB	20170103	US20100730719	20100324
US9556989 BB	20170131	US20150639926	20150305

Priority:

US20090163398P 20090325 US20100730719 20100324 US20150639926 20150305
 US20170402111 20170109

Probable Assignee: RELIANCE WORLDWIDE CORP

Assignee(s): (std): LESTAGE JAMES F ; O NEIL VIRGIL E ; SECURUS INC

Assignee(s): RELIANCE WORLDWIDE CORP

Inventor(s): (std): LESTAGE JAMES FRANCIS ; O NEIL VIRGIL ; O NEIL VIRGIL E ; LESTAGE JAMES F

Inventor(s): O'NEIL VIRGIL E

Agent(s): GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; STETINA BRUNDA GARRED AND BRUCKER; LOWELL

26) Family number: 1111221 (US3831612A)

© PatBase

Title: APPARATUS FOR TREATING A MATERIAL

Abstract: A device is disclosed that can be mounted within an enclosure relative to one or more surfaces of a material to be treated and to a prescribed path through which the material is to be moved. A liquid with which the material is to be treated is pumped under pressure into a chamber from which it is expelled with a vortex action. This action forms a low pressure area which holds the material in contact with the liquid layer on the facing surface of the plenum member. With such a structure, the material is maintained at a fixed distance relative to the surface of the plenum member and a maximum agitation of the liquid is obtained due to the vortex action.

Classifications:

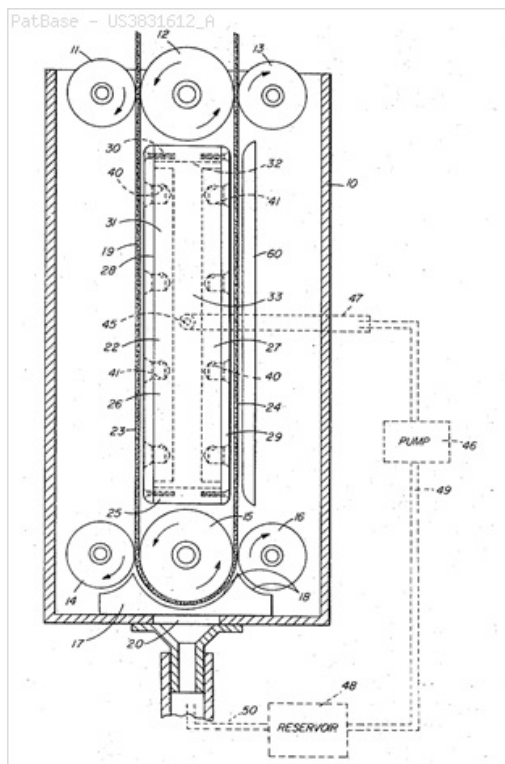
International (IPC 8-9): B65H20/14 F16L21/02 F16L23/04 F16L23/08
 G03D3/00 G03D3/13 G03D5/04 G03G15/10 (Advanced/Invention);
 B65H20/14 F16L21/02 F16L23/00 G03D3/00 G03D3/13 G03D5/00
 G03G15/10 (Core/Invention);
 F16L (Subclass/Invention)

International (IPC 1-7): B04C11/00 B08B11/00 B08B3/00 D21D5/22
 F16J15/00 F16L19/00 F16L19/02 F16L19/06 F16L21/06 F16L23/00
 F16L23/04 G03D13/00 G03D3/00 G03D3/08 G03D3/13

CPC: F16L21/022 F16L23/08 G03D3/132 G03D5/04

European: F16L21/02J F16L23/08 G03D3/13F G03D5/04

US: 134/122 134/122R 134/199 285/334.2 285/334.4 285/351
 285/367 285/371 396/604 396/633



Family:

Publication number	Publication date	Application number	Application date
CA942795 A1	19740226	CA19710111403	19710426
CH538627 A	19730630	CH19710006492	19710503
DE2029727 A1	19711125	DE19702029727	19700616
DE2255141 A1	19730517	DE19722255141	19721110
DE2255141 B2	19740418	DE19722255141	19721110
DE2255141 C3	19741121	DE19722255141	19721110
DE2346381 A1	19740328	DE19732346381	19730914
FI59157 B	19810227	FI19720003135	19721109
FI59157 C	19810610	FI19720003135	19721109
FR2091574 A5	19720114	FR19710017362	19710513
FR2160232 A6	19730622	FR19720040217	19721113
FR2200547 A1	19740419	FR19730032106	19730906
FR2200547 B1	19761001	FR19730032106	19730906
GB1288680 A	19720913		19700615
GB1376255 A	19741204	GB19720051889	19721109
IT1010509 A	19770120	IT19720009479	19721110
JP48062007 A2	19730830	JP19720112199	19721110
JP49066345 A2	19740627	JP19730101742	19730911
JP52040044 B4	19771008	JP19710031668	19710513
JP54021565 B4	19790731	JP19720112199	19721110
JP988723 C3	19800229	JP19720112199	19721110
NL7106610 A	19711116	NL19710006610	19710513
NO132555 B	19750818	NO19710001537	19710426
NO132555 C	19751126	NO19710001537	19710426
SE1447271 A	19741125	SE19710014472D	19711111
SE361727 B	19731112	SE19700006545	19700513
SE371683 B	19741125	SE19710014472	19711111
SE371683 C	19750306	SE19710014472	19711111
US3831612 A	19740827	US19720289527	19720915
US3851902 A	19741203	US19740451789	19740318

Priority:

SE19700006545 19700513 US19700046252 19700615 SE19710014472 19711111
 SE19710014472 19711111 US19720289527 19720915 US19720298527 19721018

Probable Assignee: EASTMAN KODAK CO

Assignee(s): (std): EASTMAN KODAK CO ; ROBINSON K ; ROBINSON KLAS ROBERT WILLIAM ; ROBINSON KLAS ; ROBINSON K R W ; ROBINSON KLAS R W

Assignee(s): ROBINSON KLAS ROBERT WILLIAM TAEBY SCHWEDEN ; ROBINSON K SW ; EASTMAN KODAK CO US ; EASTMAN KODAK CY ; EASTMAN KODAK CY US

Inventor(s): (std): LIMOGES R ; ROBINSON K ; ROBINSON KLAS ROBERT WILLIAM ; ROBERT WILLIAM ROBINSON KLAS ; ROBINSON K R W ; LIMOGES RAYMOND FERNAND ; ROBINSON KLAS R W

Inventor(s): FERNAND LIMOGES RAYMOND ; ROBINSON KLAS ROBERT WILLIAM TAEBY SCHWEDEN ; ROBINSON K SW ; LIMOGES R US ; WILLIAM ROBINSON KLAS ROBERT

Abstract: A method of installing a spool between misaligned underwater pipeline sections to effect connection thereof, as in the repair of a pipeline, the hook-up of a riser flow pipe to an underwater pipeline, or the connection of two underwater pipelines, is disclosed. The method is based upon the precise determination of the spatial relation between the pipe ends and the determination of an angle of entry of the spool in a direction to avoid binding between the pipe and spool ends. The method involves placement of guides defining surfaces extending beyond the perimeter of both the pipe and spool ends which define the direction of entry of the spool between the pipe ends and protect the surfaces from damage. The manner of placement of the guide surfaces is determined when the spool is constructed, so that once the spool is lowered underwater, the angle of entry can be readily perceived by aligning the guide surfaces. This minimizes the necessity for orientation of the spool underwater. The guide surfaces may be oriented to permit insertion of the spool at angles as much as 180 DEG apart. Accordingly, an angle of entry which facilitates insertion from a direction generally above the pipeline ends can often be found.

Classifications:

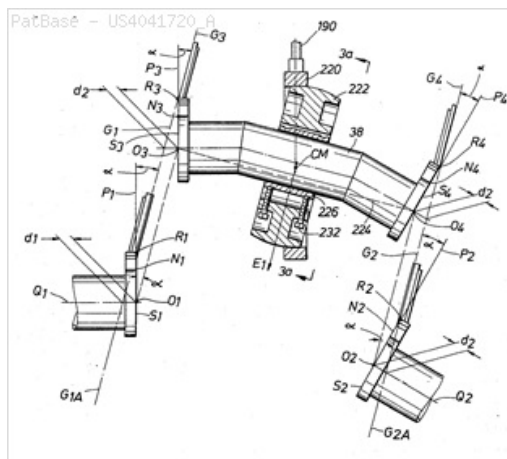
International (IPC 8-9): B23K9/028 F16L1/26 G01B5/00 G01B5/25 G01B7/31 (Advanced/Invention);

International (IPC 1-7): B23K37/04 F16L1/00 F16L1/04 F16L23/00 F16L55/00 G01B3/14 G01B3/38 G01B5/00 G01B5/20 G01B5/25 G01B7/14 G01B7/31 G01C13/00

CPC: Y10T29/49735 Y10T29/49737 Y10T29/49741 Y10T29/49742 Y10T29/49442 Y10T29/49758 Y10T29/49771 Y10T29/4978 F16L1/26 G01B7/31

European: F16L1/26 G01B7/31

US: 138/97 285/18 285/27 29/402.12 29/402.13 29/402.15 29/402.16 29/404 29/407.05 29/407.1 29/890.148 33/180R 33/21.3 33/504 33/529 405/156 405/170 61/110



Family:

Publication number	Publication date	Application number	Application date
AU197617376 A1	19780309	AU19760017376	19760901
AU509188 B2	19800424	AU19760017376	19760901
CA1079060 A1	19800610	CA19760260233	19760831
DE2637648 A1	19770616	DE19762637648	19760820
DE2702163 A1	19770818	DE19772702163	19770120
FR2337846 A1	19770805	FR19760026428	19760901
GB1561764 A	19800305	GB19760036260	19760901
JP52049054 A2	19770419	JP19760104812	19760901
NL7609639 A	19770304	NL19760009639	19760830
NO762910 A	19770303	NO19760002910	19760824
NO762910 L	19770303	NO19760002910	19760824
US4041720 A	19770816	US19760654411	19760202
US4120095 A	19781017	US19760713281	19760810

Priority:

US19750609196 19750902 US19760654411 19760202

Probable Assignee: LEBORG MAURICE PIERRE

Assignee(s): (std): LEBORG M P ; LEBORG MAURICE P ; LEBORG MAURICE PIERRE ; LEBORG MAURICE ; MAURICE PIERRE LEBORG

Assignee(s): MOORISU PIA REBOOGU ; MAURICE PIERRE LEBORG TE HOUSTON TEXAS VER ST V AM ; LEBORG MAURICE PIERRE ; LEBORG MP

Inventor(s): (std): LEBORG MAURICE PIERRE ; LEBORG M P ; MOORISU PIA REBOOGU ; LEBORG MAURICE P

Inventor(s): M P LEBORG ; PIERRE LEBORG MAURICE ; MP LEBORG ; MAURICE PIERRE LEBORG

28) Family number: 44432240 (US2010044102A)

© PatBase

Title: METHODS AND APPARATUS FOR REMOVAL AND CONTROL OF MATERIAL IN LASER DRILLING OF A BOREHOLE

Abstract: There is provided a system, apparatus and methods for removal of material for the path of a laser beam during laser drilling of a borehole and for removal of displaced borehole material from the borehole during laser drilling. In particular, there are provided paths, dynamics and parameters of fluid flows, and apparatus for obtaining such, for use in conjunction with a laser bottom hole assembly.

Classifications:

International (IPC 8-9): A61K48/00 B01J19/12 B08B7/00 B08B9/02

B08B9/023 B08B9/027 B08B9/043 B08B9/055 B23K26/00

B23K26/04 B23K26/046 B23K26/06 B23K26/064 B23K26/073

B23K26/08 B23K26/10 B23K26/12 B23K26/122 B23K26/14

B23K26/146 B23K26/16 B23K26/24 B23K26/352 B23K26/36

B23K26/38 B23K26/382 B23K26/40 B23K26/402 B23K26/70

B23K37/02 B23P11/00 B63B17/00 B63B35/28 B63C11/40

B63C11/44 B63C11/48 B63G8/00 B63G8/08 B65H55/00 B65H59/00

E01C23/08 E01C23/12 E02B17/00 E02D17/00 E21B10/00 E21B10/50

E21B10/54 E21B10/60 E21B17/00 E21B17/20 E21B19/00 E21B19/22

E21B21/00 E21B21/08 E21B21/10 E21B21/14 E21B21/16 E21B23/00

E21B23/14 E21B29/00 E21B29/02 E21B29/06 E21B29/08 E21B29/12

E21B33/00 E21B33/038 E21B33/06 E21B33/064

E21B33/12 E21B33/13 E21B34/04 E21B36/04 E21B37/00 E21B37/08

E21B4/02 E21B4/04 E21B41/00 E21B41/04 E21B43/00

E21B43/01 E21B43/11 E21B43/114 E21B43/116 E21B43/119 E21B43/24

E21B43/26 E21B43/267 E21B44/00 E21B47/00

E21B47/113 E21B47/12 E21B49/00 E21B7/00 E21B7/12 E21B7/14

E21B7/15 E21B7/16 E21C25/64 E21C27/24 E21C35/00

E21C37/16 E21C37/18 E21C41/00 E21D9/10 F16L23/00 F21V15/01

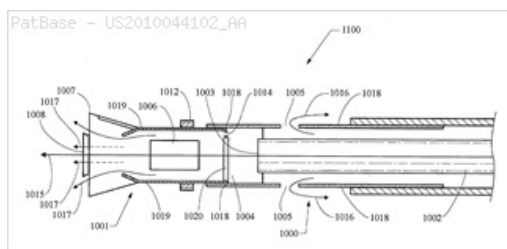
F21V15/06 F21V29/00 F21V29/15 F21V8/00 G01J1/04

G01M11/00 G01M5/00 G02B6/08 G02B27/14 G02B27/20 G02B6/02

G02B6/14 G02B6/26 G02B6/28 G02B6/32 G02B6/36

G02B6/38 G02B6/42 G02B6/44 H01J27/24 H01J40/14 H01L21/00

H01L31/00 H01L31/02 H01L31/0224 H01L31/0304



H01L31/05 H01L31/054 H01L31/055 H01S3/00 H01S3/04 H01S3/042 H01S3/067 H01S3/08 H01S3/094 H01S3/0941
H01S3/109 H01S3/16 H01S3/23 H01S3/30 H01S5/00 H01S5/022 H01S5/024 H01S5/042 H01S5/40 H02G1/08 H04B10/079
H04B10/80 H05K7/20 (Advanced/Invention);
B08B7/00 B23K101/04 B23K103/00 B23K103/10 B60P1/54 B63B19/00 B63B21/00 B63B35/00 B66C23/36 E02B17/00
E21B15/00 E21B23/00 E21B37/00 E21B43/00 E21B43/11 E21B43/116 E21B43/16 E21B49/00 E21B7/04 E21B7/15 G02B23/24
G02B6/32 G02B6/36 G02B6/38 G02B6/42 G02B6/44 G02B6/50 G21C17/017 H01S3/00 H01S3/094 H01S3/16 (Advanced/Non-
invention);
B65H55/00 E21B17/00 E21B7/00 E21B7/14 G02B6/44 (Core/Invention)
International (IPC 1-7): E21B29/08
CPC: E21B4/18 E21B17/203 E21B21/12 E21B21/16 H01L31/03046 Y02E10/544 H04B10/807 H01L2924/01015
H01L2924/01047 H01L2924/00014 B23K26/36 E21B4/02 E21C25/00 E21D9/08 E01C23/12 E21B44/00 E21B33/076 F17D5/00
B08B9/04 B08B9/0436 B08B7/0071 B08B9/023 B08B9/027 H01L31/0201 H01L31/022433 H01L31/0508 H01L31/054
B08B9/02 B08B9/055 G02B6/502 B23K26/142 B63G2008/007 B63G8/001 E21B41/04 E01C23/127 G01M5/0025 G01M5/0033
G01M5/0091 G01M11/35 Y02E10/52 G02B6/4436 G02B6/4492 E02D17/00 B23K26/0732 E21B17/00 G02B6/02395 B23K26/04
E21B43/119 E21B43/26 G02B26/0875 H01L2924/00011 B23K26/402 E21B43/162 E21B49/00 H01S3/06733 H01S3/0941
G02B6/2817 G02B6/3871 G02B6/3897 H01S3/08 G02B6/3604 E02B17/027 B23K26/03 B23K37/02 B23K26/12 B63B17/00
B63B19/00 B63B21/00 B63B35/00 B63B35/28 E21B19/002 B23K2101/06 B23K2103/04 G02B6/0229 B82Y20/00 F16L41/004
F16L55/46 H01S3/02 G02B23/2492 H01S3/005 H01S3/094003 H01S3/1608 E21B36/00 E21B33/038 E21B19/004 E21B29/12
F16L23/003 G02B6/262 H01S3/042 B23K26/0096 B23K26/046 B23K26/0608 B23K26/0869 B23K26/703 H01S5/0071
H01S5/02296 H01S5/02423 H01S5/042 H01S5/4025 B23K26/0604 B23K26/0676 B23K37/0288 B23K37/0294 B23K26/40
B23K2103/52 E01C23/08 E21C25/64 E21C27/24 E21C37/18 E21D9/1073 G02B6/4402 G02B6/4413 G02B6/4415 G02B6/443
G02B6/4458 Y10T29/49826 B23K26/06 B23K26/382 H01S3/0675 H01S3/094007 H01S3/094015 H01S3/094042
H01S3/094046 H01S3/094092 H01S3/094096 H01S3/09415 H01S3/1616 H01S3/1693 H01S3/1695 H01S3/2383 H01S3/302
H01S3/109 H01S3/1603 G02B6/4417 G02B6/4427 G02B6/14 G02B6/3813 G02B6/3814 G02B6/3818 G02B2006/4297
H01S3/0064 E21B37/00 G02B6/44 E01C23/088 E01C23/128 E21B33/063 E21B34/045 E21B7/12 E21B33/06 E21B33/064
B23K26/1462 B23K26/00 B23K26/24 E02B2017/0052 E02B2017/0095 B23K2101/04 B60P1/5423 B66C23/36 E21B41/00
H01S3/0071 H01S3/04 B23K26/0093 B23K26/0622 B23K26/0626 B23K26/0648 B23K26/073 B23K26/0736 B23K26/14
B23K26/1476 B23K26/384 B23K26/386 B23K2103/30 B23K2103/50 B23K26/10 E21B4/04 E21B2023/008 E21B21/103
E21B7/15 E21B21/00 E21B21/08 E21B43/11 G02B6/32 G02B6/3624 G02B6/4296 B08B7/0042 B08B9/043 B23K26/064
B23K26/0652 B23K26/106 B23K26/1224 B23K26/127 B23K26/146 B23K26/1464 B23K26/38 B23K2103/10 E21B7/14
E21B10/60 E21B29/02 E21B36/04 E21B37/08 E21B43/00 E21B43/01 G21C17/017 E21B29/00 E21B33/1204 E21B33/13
European: B08B7/0052 B23K26/00M B23K26/06C B23K26/06C3 B23K26/06C5 B23K26/10 B23K26/10R1 B23K26/12B
B23K26/12F B23K26/14D B23K26/14N1 B23K26/38 B23K26/40B7 B63G8/00B E21B10/60 E21B17/20B E21B19/00A2
E21B21/08 E21B21/12 E21B21/16 E21B29/12 E21B33/038 E21B37/00 E21B4/18 E21B7/14 E21B7/15 G02B6/44C1
G02B6/44C6 G02B6/44C7A H04B10/807 L23K203/10 S02B6/42H S02B6/44C10 S02B6/44C5B S02B6/44C6 S02B6/44C7A
S02B6/44C7F
US: 1/1 114/26 114/312 114/313 114/337 134/1.1 166/242.2 166/250.1 166/280.1 166/288 166/297 166/298 166/304
166/336 166/338 166/341 166/341S 166/358 166/358S 166/361 166/361S 166/363 166/363S 166/364 166/376 166/379
166/379S 166/381 166/381S 166/384 166/385 166/55 166/55.1 166/55.2 166/55.6 166/65.1 166/65.100S 166/66 166/75.11
166/75.110S 166/77.1 166/77.2 175/107 175/11 175/15 175/15P 175/16 175/162 175/16P 175/16S 175/40 175/424 175/5
175/57 175/5S 175/6 175/6S 175/65S 175/92 175/92S 219/121.61 219/121.67 219/121.67S 219/121.7 219/121.72
219/121.720P 219/121.84 219/60R 219/61 242/159 242/159S 250/215 250/227.11 250/492.1 250/492.100P 254/134.3FT
254/134.3R 254/134.4 29/428 29/428S 299/14 299/29 359/226.2 362/259 362/317 362/553 362/553S 372/14 372/4 372/9
385/100 385/102 385/104 385/109 385/109P 385/111 385/12 385/13 385/134 385/26 385/88 385/89 385/92 385/93 385/94

Family:

Publication number	Publication date	Application number	Application date
 AU2009340454 AA	20100826	AU20090340454	20090819
 AU2012222154 AA	20120830	AU20120222154	20120224
 AU2012259435 AA	20121129	AU20120259435	20120224
 AU2012259435 AA	20130912	AU20120259435	20120224
 AU2012259435 AA	20121129	AU20120259435	20120224
 AU2012259435 BB	20160922	AU20120259435	20120224
 AU2012259443 AA	20130912	AU20120259443	20120224
 AU2012259443 AA	20121129	AU20120259443	20120224
 AU2014228980 AA	20151008	AU20140228980	20140314
 AU2014228980 BB	20180222	AU20140228980	20140314
 BR112013001512 A2	20160607	BR20131101512	20110719
 BR112013021478 A2	20161011	BR20131121478	20120223
 BR112013021480 A2	20161011	BR20131121480	20120224
 BR112015004458 A2	20170704	BR20151104458	20130830
 BR112015004458 A8	20190827	BR20151104458	20130830
 BRPI0918403 A2	20151124	BR2009PI18403	20090819
 CA2734492 AA	20100826	CA20092734492	20090819
 CA2734492 C	20160517	CA20092734492	20090819
 CA2805437 AA	20130114	CA20112805437	20110719
 CA2805437 C	20160906	CA20112805437	20110719
 CA2808214 AA	20130212	CA20112808214	20110816
 CA2808214 C	20160223	CA20112808214	20110816
 CA2823922 AA	20100826	CA20092823922	20090819
 CA2827958 AA	20130821	CA20122827958	20120224
 CA2827963 AA	20130821	CA20122827963	20120224
 CA2827979 AA	20130821	CA20122827979	20120224
 CA2891500 AA	20150513	CA20132891500	20131115
 CA2906738 AA	20150914	CA20142906738	20140314
 CN102187046 A	20110914	CN200980141304	20090819
 CN102187046 B	20150429	CN200980141304	20090819
 CN103492668 A	20140101	CN201280019899	20120224
 CN103492668 B	20170215	CN201280019899	20120224
 CN103492669 A	20140101	CN201280020047	20120224
 CN103502564 A	20140108	CN201280019473	20120224
 DE602013044874 D1	20181108	DE201360044874T	20130219
 DK2678519 T3	20190805	DK20120749039T	20120224
 EP2315904 A1	20110504	EP20090840554	20090819
 EP2315904 A4	20160420	EP20090840554	20090819
 EP2315904 B1	20190206	EP20090840554	20090819
 EP2399155 A1	20111228	EP20100786516	20100217
EP2399155 A4	20140709	EP20100786516	20100217
EP2596395 A2	20130529	EP20110810287	20110719

EP2596395 A4	20171227	EP20110810287	20110719
EP2606201 A1	20130626	EP20110818657	20110816
EP2606201 A4	20180307	EP20110818657	20110816
EP2611566 A1	20130710	EP20110822594	20110831
EP2611566 A4	20171108	EP20110822594	20110831
EP2664010 A2	20131120	EP20120734537	20120110
EP2664010 A4	20180627	EP20120734537	20120110
EP2678512 A1	20140101	EP20120749304	20120223
EP2678512 A4	20170614	EP20120749304	20120223
EP2678519 A1	20140101	EP20120749039	20120224
EP2678519 A4	20170823	EP20120749039	20120224
EP2678519 B1	20190626	EP20120749039	20120224
EP2678520 A1	20140101	EP20120789633	20120224
EP2678520 A4	20180328	EP20120789633	20120224
EP2678521 A1	20140101	EP20120789937	20120224
EP2678521 A4	20180307	EP20120789937	20120224
EP2715887 A1	20140409	EP20120793799	20120601
EP2715887 A4	20161123	EP20120793799	20120601
EP2739429 A2	20140611	EP20120820743	20120802
EP2739429 A4	20161102	EP20120820743	20120802
EP2739429 B1	20200212	EP20120820743	20120802
EP2820466 A1	20150107	EP20130754543	20130219
EP2820466 A4	20160330	EP20130754543	20130219
EP2820466 B1	20181010	EP20130754543	20130219
EP2890859 A2	20150708	EP20130833557	20130830
EP2890859 A4	20161102	EP20130833557	20130830
EP2929602 A2	20151014	EP20130860660	20131207
EP2929602 A4	20161221	EP20130860660	20131207
GC3576 A	20150604	GC2009P014608	20091031
GC5934 A	20170716	GC2013P023714	20130302
JP2012500350 T2	20120105	JP20110523959T	20090819
JP2012518210 T2	20120809	JP20110551172T	20100217
JP2015017498 A2	20150129	JP20140191026	20140919
JP5684151 B2	20150311	JP20110551172T	20100217
JP5844868 B2	20160120	JP20140191026	20140919
MX2011001908 A1	20110620	MX20110001908	20090819
MX355677 B	20180425	MX20110001908	20090819
RU2011110388 A	20120927	RU20110110388	20090819
RU2011138270 A	20130327	RU20110138270	20100217
RU2522016 C2	20140710	RU20110110388	20090819
RU2551392 C2	20150520	RU20110138270	20100217
SG192915 A1	20130930	SG20130063839	20120224
SG192916 A1	20130930	SG20130063847	20120224
SG192918 A1	20130930	SG20130063862	20120224
US2010044102 AA	20100225	US20090543968	20090819
US2010044103 AA	20100225	US20090543986	20090819
US2010044104 AA	20100225	US20090544038	20090819
US2010044105 AA	20100225	US20090544094	20090819
US2010044106 AA	20100225	US20090544136	20090819
US2010215326 AA	20100826	US20100706576	20100216
US2012020631 AA	20120126	US20100840978	20100721
US2012067643 AA	20120322	US20110211729	20110817
US2012068086 AA	20120322	US20110210581	20110816
US2012074110 AA	20120329	US20110222931	20110831
US2012217015 AA	20120830	US20110034017	20110224
US2012217018 AA	20120830	US20110034175	20110224
US2012217019 AA	20120830	US20110034183	20110224
US2012248078 AA	20121004	US20120403692	20120223
US2012255774 AA	20121011	US20120403615	20120223
US2012255933 AA	20121011	US20120366882	20120206
US2012261188 AA	20121018	US20120403132	20120223
US2012266803 AA	20121025	US20120347445	20120110
US2012267168 AA	20121025	US20120403287	20120223
US2012273269 AA	20121101	US20120403723	20120223
US2012273470 AA	20121101	US20120403741	20120223
US2012275159 AA	20121101	US20120403509	20120223
US2013011102 AA	20130110	US20120486795	20120601
US2013175090 AA	20130711	US20130777650	20130226
US2013192893 AA	20130801	US20130800559	20130313
US2013192894 AA	20130801	US20130800933	20130313
US2013220626 AA	20130829	US20130849831	20130325
US2013228372 AA	20130905	US20130782869	20130301
US2013228557 AA	20130905	US20130768149	20130215
US2013266031 AA	20131010	US20130782942	20130301
US2013319984 AA	20131205	US20130966969	20130814
US2014000902 AA	20140102	US20130015003	20130830
US2014060802 AA	20140306	US20130800820	20130313
US2014060930 AA	20140306	US20130800879	20130313
US2014090846 AA	20140403	US20130105949	20131213
US2014190949 AA	20140710	US20140213212	20140314
US2014231085 AA	20140821	US20120565345	20120802
US2014231398 AA	20140821	US20130139680	20131223

US2014248025 AA	20140904	US20130057567	20131018
US2015129203 AA	20150514	US20130082026	20131115
US2015307174 AA	20151029	US20150791172	20150702
US2015308194 AA	20151029	US20140330980	20140714
US2015321290 AA	20151112	US20150803228	20150720
US2015322738 AA	20151112	US20130104395	20131212
US2016017661 AA	20160121	US20140335627	20140718
US2016084008 AA	20160324	US20150958864	20151203
US2016090790 AA	20160331	US20130852719	20130328
US2016186497 AA	20160630	US20150746382	20150622
US2016186524 AA	20160630	US20160064165	20160308
US2016187588 AA	20160630	US20160997072	20160115
US2016221125 AA	20160804	US20130080722	20131114
US2016222763 AA	20160804	US20130058681	20131021
US2016251940 AA	20160901	US20140214304	20140314
US2016299304 AA	20161013	US20160154718	20160513
US2016341906 AA	20161124	US20160147269	20160505
US2017016299 AA	20170119	US20160218509	20160725
US2017059854 AA	20170302	US20160140412	20160427
US2017183913 A9	20170629	US20130782869	20130301
US2017191314 AA	20170706	US20170445238	20170228
US2017214213 AA	20170727	US20130099948	20131207
US2017252858 AA	20170907	US20160349914	20161111
US2017266760 AA	20170921	US20170612679	20170602
US2017321486 AA	20171109	US20170656976	20170721
US2018045024 AA	20180215	US20170603192	20170523
US2018045895 AA	20180215	US20170788752	20171019
US2018163477 AA	20180614	US20170821411	20171122
US2018328150 AA	20181115	US20180048238	20180728
US2019040726 AA	20190207	US20180058546	20180808
US2019178036 AA	20190613	US20190267327	20190204
US2019240770 AA	20190808	US20190237691	20190101
US2019309576 AA	20191010	US20190442773	20190617
US2019383120 AA	20191219	US20190409815	20190511
US2020011145 AA	20200109	US20190458083	20190630
US8424617 BB	20130423	US20090544094	20090819
US8511401 BB	20130820	US20090544136	20090819
US8571368 BB	20131029	US20100840978	20100721
US8627901 BA	20140114	US20100896021	20101001
US8636085 BB	20140128	US20090543968	20090819
US8662160 BB	20140304	US20110210581	20110816
US8684088 BB	20140401	US20110034183	20110224
US8701794 BB	20140422	US20130800559	20130313
US8720575 BB	20140513	US20130849831	20130325
US8757292 BB	20140624	US20130800933	20130313
US8783360 BB	20140722	US20110034017	20110224
US8783361 BB	20140722	US20110034175	20110224
US8820434 BB	20140902	US20090544038	20090819
US8826973 BB	20140909	US20090543986	20090819
US8869914 BB	20141028	US20130800820	20130313
US8879876 BB	20141104	US20130057567	20131018
US8936108 BB	20150120	US20130800879	20130313
US8997894 BB	20150407	US20130777650	20130226
US9027668 BB	20150512	US20120403692	20120223
US9074422 BB	20150707	US20120403287	20120223
US9080425 BB	20150714	US20120347445	20120110
US9089928 BB	20150728	US20120565345	20120802
US9138786 BB	20150922	US20120366882	20120206
US9242309 BB	20160126	US20130768149	20130215
US9244235 BB	20160126	US20130782942	20130301
US9267330 BB	20160223	US20120403723	20120223
US9284783 BA	20160315	US20130852719	20130328
US9327810 BB	20160503	US20150791172	20150702
US9347271 BB	20160524	US20100706576	20100216
US9360631 BB	20160607	US20120403509	20120223
US9360643 BB	20160607	US20120486795	20120601
US9399269 BB	20160726	US20140213212	20140314
US9492885 BB	20161115	US20150803228	20150720
US9512679 BB	20161206	US20130104395	20131212
US9534447 BB	20170103	US20140335627	20140718
US9545692 BB	20170117	US20130080722	20131114
US9562395 BB	20170207	US20120403615	20120223
US9664012 BB	20170530	US20130105949	20131213
US9669492 BB	20170606	US20130966969	20130814
US9719302 BB	20170801	US20130782869	20130301
US9784037 BB	20171010	US20150746382	20150622
US9845652 BB	20171219	US20130015003	20130830
US10001612 BB	20180619	US20160154718	20160513
US10036232 BB	20180731	US20130058681	20131021
US10042123 BB	20180807	US20160147269	20160505
US10053967 BB	20180821	US20130082026	20131115

US10195687 BB	20190205	US20130139680	20131223
US10199798 BB	20190205	US20150958864	20151203
US10301912 BB	20190528	US20140214304	20140314
US10323460 BB	20190618	US20170821411	20171122
US10337273 BB	20190702	US20160218509	20160725
US10481339 BB	20191119	US20170788752	20171019
WO10096086 A1	20100826	WO2009US54295	20090819
WO10144160 A1	20101216	WO2010US24368	20100217
WO12012436 A2	20120126	WO2011US44548	20110719
WO12012436 A3	20120315	WO2011US44548	20110719
WO12024285 A1	20120223	WO2011US47902	20110816
WO12031009 A1	20120308	WO2011US50044	20110831
WO12096966 A2	20120719	WO2012US20789	20120110
WO12096966 A3	20121004	WO2012US20789	20120110
WO12116148 A1	20120830	WO2012US26265	20120223
WO12116153 A1	20120830	WO2012US26277	20120223
WO12116155 A1	20120830	WO2012US26280	20120223
WO12116284 A1	20120830	WO2012US26526	20120224
WO12161789 A1	20121129	WO2012US26471	20120224
WO12161797 A1	20121129	WO2012US26525	20120224
WO12167102 A1	20121206	WO2012US40490	20120601
WO13019959 A2	20130207	WO2012US49338	20120802
WO13019959 A3	20130328	WO2012US49338	20120802
WO13130302 A1	20130906	WO2013US26673	20130219
WO14036430 A2	20140306	WO2013US57569	20130830
WO14036430 A3	20140626	WO2013US57569	20130830
WO14078663 A2	20140522	WO2013US70321	20131115
WO14078663 A3	20140821	WO2013US70321	20131115
WO14089544 A2	20140612	WO2013US73760	20131207
WO14089544 A3	20140807	WO2013US73760	20131207
WO14144591 A2	20140918	WO2014US29067	20140314
WO14144591 A3	20141211	WO2014US29067	20140314
WO14144887 A2	20140918	WO2014US29482	20140314
WO14144887 A3	20141204	WO2014US29482	20140314
WO14149114 A2	20140925	WO2013US77614	20131223
WO14149114 A3	20150115	WO2013US77614	20131223
WO18075799 A1	20180426	WO2017US57442	20171019

Priority:

US20080090384P	20080820	US20080110273P	20081003	US20080102730P	20081003
US20080106472P	20081017	US20090320581	20090129	US20090153271P	20090217
CA20092734492	20090819	CA20092823922	20090819	JP20110523959	20090819
JP20110523959T	20090819	US20090543968	20090819	US20090543986	20090819
US20090544094	20090819	US20090544136	20090819	US20090544038	20090819
WO2009US54295	20090819	US20090247796P	20091001	US20100295562P	20100115
US20100706576	20100216	WO2010US24368	20100217	US20100840978	20100721
US20100374594P	20100817	US20100378910P	20100831	US20100896021	20101001
US20110431827P	20110111	US20110439970P	20110207	US20110431830P	20110207
US20110034037	20110224	US20110034017	20110224	US20110034175	20110224
US20110034183	20110224	US20110446412P	20110224	US20110446407P	20110224
US20110446047P	20110224	US20110446312P	20110224	US20110446042P	20110224
US20110446041P	20110224	US20110446043P	20110224	US20110446040P	20110224
US20110493174P	20110603	WO2011US44548	20110719	US20110514391P	20110802
US20110210581	20110816	WO2011US47902	20110816	US20110211729	20110817
US20110222931	20110831	WO2011US50044	20110831	US20120347445	20120110
WO2012US20789	20120110	US20120366882	20120206	US20120403692	20120223
US20120403287	20120223	US20120403723	20120223	US20120403741	20120223
US20120403509	20120223	US20120403615	20120223	US20120403132	20120223
WO2012US26265	20120223	WO2012US26526	20120224	WO2012US26471	20120224
WO2012US26525	20120224	US20120605429P	20120301	US20120605422P	20120301
US20120605413P	20120301	US20120605401P	20120301	US20120605434P	20120301
US20120486795	20120601	WO2012US40490	20120601	US20120565345	20120802
WO2012US49338	20120802	US20120696142P	20120901	US20120727096P	20121115
US20120734809P	20121207	US20120745661P	20121224	US20130755745P	20130123
US20130768149P	20130215	US20130768149	20130215	EP20130754543	20130219
WO2013US26673	20130219	US20130777650	20130226	US20130782869	20130301
US20130782942	20130301	US20130800559	20130313	US20130800933	20130313
US20130800820	20130313	US20130800879	20130313	US20130786687P	20130315
US20130786875P	20130315	US20130786763P	20130315	US20130798875P	20130315
US20130849831	20130325	US20130852719	20130328	US20130966969	20130814
US20130015003	20130830	WO2013US57569	20130830	US20130057567	20131018
US20130058681	20131021	US20130080722	20131114	US20130082026	20131115
WO2013US70321	20131115	US20130099948	20131207	WO2013US73760	20131207
US20130104395	20131212	US20130105949	20131213	US20130139680	20131223
US20140213212	20140314	US20140214304	20140314	WO2014US29067	20140314
US20140270288	20140505	US20140330980	20140714	US20140335627	20140718
US20150746382	20150622	US20150791172	20150702	US20150803228	20150720
US20150958864	20151203	US20150262870P	20151203	US20150266509P	20151211
US20160997072	20160115	US20160064165	20160308	US20160140412	20160427
US20160147269	20160505	US20160154718	20160513	US20160218509	20160725
US20160410724P	20161020	US20160349914	20161111	US20160425793P	20161123
US20170445238	20170228	US20170603192	20170523	US20170612679	20170602
US20170656976	20170721	US20170788752	20171019	US20170821411	20171122
US20180048238	20180728	US20180058546	20180808	US20190237691	20190101
US20190267327	20190204	US20190409815	20190511	US20190442773	20190617
US20190458083	20190630				

Probable Assignee: FORO ENERGY INC

Assignee(s): (std): DEWITT RON A ; DEWITT RONALD A ; FAIRCLOTH BRAIN O ; FAIRCLOTH BRIAN O ; FORO EHNERDZHI INK ; FORO ENERGY INC ; GRAY WILLIAM C ; GRUBB DARYL L ; HAVLINEK KENNETH L ; JONES ALBERTUS REBECCA ; KOBlick YESHAYA ; LAND MARK S ; LINYAEV EUGENE J ; MARSHALL SCOTT A ;

MCKAY RYAN P ; MESNARD DAVID R ; MOXLEY JOEL F ; NORTON RYAN J ; RINZLER CHARLES C ; SCHROIT SAM N ; UNDERWOOD LANCE D ; WOLFE DANIEL L ; ZEDIKER MARK S ; ZIMMERMAN TOM ; YEARWOOD JOHN ; KELLERMANN FRED C ; ALLEN ERIK C ; BAILEY ANDYLE G ; BERGERON HENRY A ; CHEVRON USA INC ; CLARK PHILIP V ; DE WITT RONALD A ; DEUTCH PAUL D ; VOLKMAR JOHN F ; NEHLSN JAMES P ; MAKKI SIAMAK ; LINYAEV EUGENCE J ; KOLACHALAM SHARATH K ; KOLACHALAM SHARATH K ; KOLACHALAM SHARATH ; FRAZE JASON D ; FORO ENERGY INC STAR ; FORO ENERGY ; FORD ENERGY INC ; FAIRDOTH BRIAN O ; ELY JOHN

Assignee(s): ENERGY UNITED STATES DEPARTMENT OF ; FORO ENERGY INC LITTLETON ; DEUTSCH PAUL D ; CHEVRON U S A INC ; ELY JOHN L

Inventor(s): (std): ALLEN ERIK C ; ANDYLE G BAILEY ; BAILEY ANDYLE G ; BERGERON HENRY A ; BRIAN O FAIRCLOTH ; CLARK PHILIP V ; DANIEL L WOLFE ; DARYL L GRUBB ; DE WITT RONALD A ; DEUTCH PAUL D ; DEWITT RON A ; DEWITT RONALD A ; ELY JOHN ; FAIRCLOTH BRIAN O ; FAIRCLOTH BRIAN O ; FEHRKLOT BRAJAN O ; FRAZE JASON D ; GRAY WILLIAM C ; GRUBB DARYL ; GRUBB DARYL L ; HAVLINEK KENNETH L ; JOEL F MOXLEY ; MCKAY RYAN P ; MESNARD DAVID R ; MOKSLI DZHOEL F ; MOXLEY JOEL F ; NEHLSN JAMES P ; NORTON RYAN J ; PAUL D DEUTCH ; RINZLER CHARL Z K ; RINZLER CHARLES C ; SCHROIT SAM N ; SHARATH K KOLACHALAM ; UNDERWOOD LANCE D ; VOLKMAR JOHN F ; WOLFE DANIEL L ; YESHAYA KOBLICK ; ZEDIKER MARK S ; KOBLICK YESHAYA ; KOBLIK JESHAJA ; LAND MARK S ; LEHND MARK S ; LINYAEV EUGENCE J ; MARK S LAND ; MARK S ZEDIKER ; MARSHALL SCOTT A ; MAKKI SIAMAK ; LINYAEV EUGENE J ; KOLACHALAM SHARATH K ; KOLACHALAM SHARATH ; KELLERMANN FRED C ; JONES ALBERTUS REBECCA ; CHARLES C RINZLER ; ZIMMERMAN TOM ; YEARWOOD JOHN ; ELY JOHN L ; LEE IAN ; KUZNETSOV ANDREY ; KOLACHALAM SHARATH K ; FAIRCLOTH BRIAN ; FAIRDOTH BRIAN O

Inventor(s): PHILIP V CLARK ; CHARLES CRINZLER ; HENRY A BERGERON ; ERIK C ALLEN ; MARK SZEDIKER ; ZEDIKER MARK S CASTLE ROCK ; KOLACHALAM SHARATH K SUGAR LAND ; GRUBB DARYL L HOUSTON ; FAIRCLOTH BRIAN O EVERGREEN ; JOEL FMOXLEY ; DEUTSCH PAUL D ; BRIAN OFAIRCLOTH

Agent(s): SPRUSON AND FERGUSON; CASSAN MACLEAN; CASSAN MACLEAN IP AGENCY INC; BUNGARTZ KLAUS PETER; BUNGARTZ CHRISTOPHERSEN PARTNERSCHAFT MBB PATENTANWALTE; TERSTEEGEN FELIX; BTB IP BUNGARTZ BALTZER PARTNERSCHAFT MBB PATENTANWALTE; BUNGARTZ CHRISTOPHERSEN PARTNERSCHAFT MBB PATENTANWALTE; SABA AND CO TMP; SAUD M A SHAWWAF LAW OFFICE; ITOH SHIGERU; BRINKS HOFER GILSON AND LIONE; FORO ENERGY/BHGL; FORO ENERGY BHGL; GLEN; GLEN P; STEPTOE AND JOHNSON LLP; STEPTOE AND JOHNSON; BRIAN; STEPTOE AND JOHNSON LLC; BELVIS LAW LLC; BELVIS GLEN P; FREEMAN JOHN C; BELVIS GLEN P 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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

29) Family number: 33356240 (US2006207464A)

© PatBase

Title: AMMUNITION CASING

Abstract: An ammunition article is provided which comprises a casing and a cap wherein the casing is formed from a polymeric material that has a room temperature notched Izod impact value greater than about 10 ft lbs/in and then has a ratio of notched Izod impact value at room temperature to notch Izod impact value at about -40 degrees centigrade of less than about 4.

Classifications:

International (IPC 8-9): B29B11/02 B29B9/06 B29C45/00 B29C47/00 B60C1/00 C08F283/00 C08G10/00 C08G12/42 C08G61/00 C08G61/10 C08G64/22 C08G75/23 C08G8/26 C08J3/20 C08J9/00 C08K3/04 C08K3/36 C08K3/40 C08L101/00 C08L15/00 C08L41/00 C08L51/00 C08L61/00 C08L61/18 C08L65/00 C08L65/02 C08L69/00 C08L71/00 C08L71/08 C08L71/10 C08L71/12 C08L73/00 C08L77/06 C08L79/08 C08L81/06 C08L9/06 C09D165/00 C09D165/02 C09D201/00 C09D5/18 F16L11/04 F16L11/08 F42B33/02 F42B33/04 F42B5/297 F42B5/30 F42B5/307 F42B5/313 G01N33/00 (Advanced/Invention);

C08F283/04 F42B5/30 (Advanced/Non-invention);

B29B11/00 B29B9/02 B29C45/00 B29C47/00 C08G10/00 C08G61/00 C08G64/00 C08J3/20 C08J9/00 C08K3/00 C08L101/00 C08L15/00 C08L61/00 C08L65/00 C08L69/00 C08L71/00 C08L77/00 C08L79/00 C08L81/00 C08L9/00 C09D165/00 C09D201/00 C09D5/18 F16L11/04 F42B5/00 (Core/Invention);

F42B (Subclass/Invention)

International (IPC 1-7): C08L65/00 C08L65/02 F42B5/30

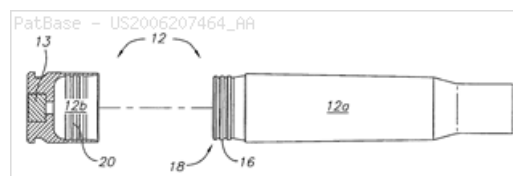
CP: C08L71/10 F16L11/083 C08L71/08 Y10T428/31504 Y10T428/31678 Y10T428/31507 Y10T428/31786 C08J2379/08 C08L79/08 C08J5/043 C08J5/18 C08J2365/02 C08J2371/10 C08L2205/02 C08G75/23 C08G2650/40 C08L71/00 C08L65/00 C08L2666/14 C08L2666/18 C08L2666/22 B29C45/00 C08G61/10 C08G2261/312 C08L65/02 C08L81/06 F42B5/30 C08L69/00 F42B5/297 F42B5/307 F42B5/313

European: C08G75/23 C08J5/04G C08J5/18 C08L65/00 C08L65/02 C08L69/00 C08L71/00 C08L71/10 C08L79/08 C08L81/06 F16L11/08D2 F42B5/30 G03C1/015 G03C1/492 G03C1/494 G03C1/50 M08G261/312 M08G650/40 M08J365/02 M08J371/10 M08J379/08 M08L205/02 M08L65/00 M08L65/02 M08L69/00 M08L71/00 M08L79/08 M08L81/06 S03C1/34

US: 1/1 102/466 102/467 264/176.1 264/176.100S 264/219 264/319 264/328.1 264/328.100S 428/411.1 428/412 428/457 428/480 521/134 524/494 524/521 524/537 524/542 525/212 525/212S 525/390 525/390S 525/397 525/397S 525/416 525/416P 525/420 525/420P 525/435 525/436 525/437 525/461 525/461P 525/461S 525/462 525/471 525/471P 525/534 525/535 528/125 528/127 528/171 528/218 528/220 528/396 528/396S 528/397 73/866 86/32

Family:

Publication number	Publication date	Application number	Application date
AT433478 E	20090615	AT20060724964T	20060307
AT483759 E	20101015	AT20070726654T	20070306
AT487763 E	20101115	AT20070726661T	20070306
AT491748 E	20110115	AT20070726646T	20070306
AT517946 E	20110815	AT20070726660T	20070306
AT520954 E	20110915	AT20060724963T	20060307
AT527314 E	20111015	AT20070726641T	20070306
AU2006221935 AA	20060914	AU20060221935	20060307
AU2006221935 BB	20120202	AU20060221935	20060307
BRPI0809687 A2	20141007	BR2008PI09687	20080320
BRPI0809687 B1	20180605	BR2008PI09687	20080320
CN101137886 A	20080305	CN200680007462	20060307



CN101137886 B	20100602	CN200680007462	20060307
CN101171299 A	20080430	CN200680015598	20060307
CN101171299 B	20121226	CN200680015598	20060307
CN101395220 A	20090325	CN200780007587	20070306
CN101395220 B	20121010	CN200780007587	20070306
CN101679724 A	20100324	CN200880016666	20080320
CN101679746 A	20100324	CN200880016637	20080320
CN101679746 B	20120530	CN200880016637	20080320
DE602006007220 D1	20090723	DE200660007220T	20060307
DE602006023830 D1	20111117	DE200660023830T	20060307
DE602007009654 D1	20101118	DE200760009654T	20070306
DE602007010429 D1	20101223	DE200760010429T	20070306
DE602007011298 D1	20110127	DE200760011298T	20070306
DE602007016083 D1	20110922	DE200760016083T	20070306
DE602007017637 D1	20111201	DE200760017637T	20070306
DE602008036442 D1	20150312	DE200860036442T	20080320
DK2134789 T3	20150427	DK20080718103T	20080320
EP1858977 A2	20071128	EP20060724964	20060307
EP1858977 B1	20090610	EP20060724964	20060307
EP1859224 A1	20071128	EP20060724963	20060307
EP1859224 B1	20110817	EP20060724963	20060307
EP1994092 A2	20081126	EP20070726641	20070306
EP1994092 B1	20111005	EP20070726641	20070306
EP1994093 A2	20081126	EP20070726660	20070306
EP1994093 B1	20110727	EP20070726660	20070306
EP1994094 A2	20081126	EP20070726661	20070306
EP1994094 B1	20101110	EP20070726661	20070306
EP2001955 A2	20081217	EP20070726654	20070306
EP2001955 B1	20101006	EP20070726654	20070306
EP2064286 A1	20090603	EP20070726646	20070306
EP2064286 B1	20101215	EP20070726646	20070306
EP2134789 A1	20091223	EP20080718103	20080320
EP2134789 B1	20150121	EP20080718103	20080320
ES2356153 T3	20110405	ES20070726661T	20070306
ES2357979 T3	20110504	ES20070726646T	20070306
IL185667 A0	20080106	IL20070185667	20070903
IL185667 A1	20111031	IL20060185667	20060307
IN03885CH2007 A	20071221	IN2007CH03885	20070906
IN03885CN2007 A	20071221	IN2007CN03885	20070906
IN03887CH2007 A	20080627	IN2007CH03887	20070906
IN03887CN2007 A	20080627	IN2007CN03887	20070906
IN04665CH2008 A	20090313	IN2008CH04665	20080904
IN04665CN2008 A	20090313	IN2008CN04665	20080904
IN05790CH2009 A	20100108	IN2009CH05790	20091001
IN05790CN2009 A	20100108	IN2009CN05790	20091001
IN263212 B	20141017	IN2007CN03887	20070906
IN263447 B	20141031	IN2007CN03885	20070906
JP2008531837 T2	20080814	JP20080500189T	20060307
JP2008531977 T2	20080814	JP20080500188T	20060307
JP2009529077 T2	20090813	JP20080557743T	20070306
JP2009529079 T2	20090813	JP20080557751T	20070306
JP2010502796 T2	20100128	JP20090527073T	20070306
JP5023151 B2	20120912	JP20090527073T	20070306
JP5087534 B2	20121205	JP20080500188T	20060307
JP5148473 B2	20130220	JP20080500189T	20060307
JP5179387 B2	20130410	JP20080557743T	20070306
JP5252400 B2	20130731	JP20080557751T	20070306
KR101265869 B1	20130521	KR20077022591	20060307
KR101273022 B1	20130611	KR20077022825	20060307
KR20070114384 A	20071203	KR20077022825	20060307
KR20070117631 A	20071212	KR20077022591	20060307
NO20074595 A	20071005	NO20070004595	20070911
NO20074595 L	20071005	NO20070004595	20070911
NO338386 B1	20160815	NO20070004595	20070911
RU2007137053 A	20090420	RU20070137053	20060307
RU2406058 C2	20101210	RU20070137053	20060307
US2006207464 AA	20060921	US20050074616	20050307
US2008293840 AA	20081127	US20070850739	20070906
US2008312387 AA	20081218	US20080061442	20080402
US2009036594 AA	20090205	US20070281019	20070306
US2009069507 AA	20090312	US20070281033	20070306
US2009069511 AA	20090312	US20070281023	20070306
US2009234077 AA	20090917	US20070281027	20070306
US2010016518 AA	20100121	US20070438968	20070306
US2010305261 AA	20101202	US20100853128	20100809
US2011046292 AA	20110224	US20100940098	20101105
US2013014665 AA	20130117	US20120545475	20120710
US2013217834 AA	20130822	US20120726705	20121226
US2014235784 AA	20140821	US20120628200	20120927
US7750091 BB	20100706	US20070850739	20070906
US7820767 BB	20101026	US20070281033	20070306

US8845686 BB	20110105	US200708346033	20070105
US8240252 BB	20120814	US20050074616	20050307
US8754162 BB	20140617	US20070281019	20070306
US8813650 BB	20140826	US20120545475	20120710
US8850985 BB	20141007	US20120628200	20120927
US9145499 BB	20150929	US20120726705	20121226
US9200157 BB	20151201	US20070438968	20070306
WO06094987 A1	20060914	WO2006EP60533	20060307
WO06094988 A2	20060914	WO2006EP60535	20060307
WO06094988 A3	20061123	WO2006EP60535	20060307
WO07101845 A2	20070913	WO2007EP52073	20070306
WO07101845 A3	20080228	WO2007EP52073	20070306
WO07101847 A2	20070913	WO2007EP52077	20070306
WO07101847 A3	20071227	WO2007EP52077	20070306
WO07101852 A2	20070913	WO2007EP52095	20070306
WO07101852 A3	20080228	WO2007EP52095	20070306
WO07101857 A2	20070913	WO2007EP52102	20070306
WO07101857 A3	20080103	WO2007EP52102	20070306
WO07101858 A2	20070913	WO2007EP52103	20070306
WO07101858 A3	20080306	WO2007EP52103	20070306
WO08028695 A1	20080313	WO2007EP52079	20070306
WO08119676 A1	20081009	WO2008EP53383	20080320
WO08119677 A1	20081009	WO2008EP53391	20080320

Priority:

US20050074616	20050307	EP20060724963	20060307	EP2006EP60535	20060307
WO2006EP60533	20060307	WO2006EP60535	20060307	US20060836946P	20060811
US20060842369P	20060906	US20060842367P	20060906	US20060842368P	20060906
US20060842366P	20060906	US20060842365P	20060906	EP20070726660	20070306
EP20070726661	20070306	EP20070726641	20070306	EP20070726654	20070306
US20070281019	20070306	US20070281033	20070306	US20070281023	20070306
US20070281027	20070306	US20070438968	20070306	WO2007EP52073	20070306
WO2007EP52102	20070306	WO2007EP52103	20070306	WO2007EP52095	20070306
WO2007EP52077	20070306	WO2007EP52079	20070306	US20070909514P	20070402
US20070909541P	20070402	US20070912989P	20070420	US20070850739	20070906
EP20080718103	20080320	WO2008EP53391	20080320	WO2008EP53383	20080320
US20080061442	20080402	US20080281027	20080828	US20100853128	20100809
US20100940098	20101105	US20120545475	20120710	US20120628200	20120927
US20120726705	20121226				

Probable Assignee: SOLVAY ADVANCED POLYMERS LLC

Assignee(s): (std): ALEXANDER BRIAN ; BRADEMEYER DOUGLAS ; CARTER ROY L ; MALJKOVIC NIKICA ; MASSILLON HENRI ; MYRICK LESLIE ; RUSHING TODD S ; SOLVAY ADVANCED POLYMERS L L C ; SOLVAY ADVANCED POLYMERS LLC ; SOLVAY SPECIALTY POLYMERS USA ; SOLVEJ EHDVANST POLIMERS EHL EHL SI ; STERN BRIAN A ; THOMAS DAVID B ; WEINBERG SHARI ; SOLVAY ; SCHULER TIMOTHY ; MYRICK LESLIE J ; HARDING SCOTT A ; EL HIBRI MOHAMMAD JAMAL ; DAVIS CHRISTOPHER ; CHAVERS ROMANA B

Assignee(s): SOLVEJ ADVANCED POLYMERS LIC ; SOLVAY SOCIETE ANONYME ; SOLVAY SPECIALTY POLYMERS USA LLC ALPHARETTA ; US GOVERNMENT REPRESENTED BY SECRETARY OF ARMY AS ; SOLVEJ EHDVANST POLIMERS EHLEHLSI ; SOLVAY SPECIALTY POLYMERS USA LLC ; SOLVAY ADVANCED POLYMERS LLC ALPHARETTA ; MISSISSIPPI POLYMER TECHNOLOGIES INC

Inventor(s): (std): BRIAN ALEXANDER ; BRIAN STERN ; CARTER ROY L ; DOUGLAS BRADEMEYER ; ALEXANDER BRIAN ; BRADEMEYER DOUGLAS ; JAMAL EL HIBRI MOHAMMAD ; MALJKOVIC NIKICA ; MALJKOVIC NLKICA ; MASSILLON HENRI ; MOHAMMAD JAMAL EL HIBRI ; MYRICK LESLIE ; NIKICA MALJKOVIC ; RUSHING TODD S ; SHARI WEINBERG ; STERN BRIAN A ; THOMAS DAVID B ; RASHING TODD S ; MYRICK LESLIE J ; MAL KOVICH NIKITSA ; LESLIE MYRICK ; HENRI MASSILLON ; HARDING SCOTT A ; EL HIBRI MOHAMMAD JAMAL ; WEINBERG SHARI ; STERN BRIAN ; CHAVERS ROMANA B ; SCHULER TIMOTHY ; DAVIS CHRISTOPHER

Inventor(s): CHAVERS ROMANA B KILN ; MAL'KOVICH NIKITSA ; RUSHING TODD S CLINTON ; RUSHING TODD ; EL HIBRI MOHAMMAD ; THOMAS DAVID B POPLARVILLE ; TODD S RUSHING ; WEINBERG SHARI ATLANTA FULTON ; STERN BRIAN A DULUTH ; MYRICK LESLIE J POPLARVILLE ; MALJKOVIC NIKICA NEW ORLEANS ; BRADEMEYER DOUGLAS CUMMING ; EL HI BRI MOHAMMAD ; EL HIBRI MOHAMMAD JAMAL ATLANTA ; HARDING SCOTT A SLIDELL ; CARTER ROY L US HOUSTON ; CHAVERS ROMANA ; DAVIS CHRISTOPHER DIAMONDHEAD

Agent(s): PHILLIPS ORMONDE FITZPATRICK; JACQUES PHILIPPE; JACQUES PHILIPPE ET AL; VANDE GUCHT ANNE; REINHOLD COHN AND PARTNERS; CHRISTIE PARKER AND HALE LLP; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT PC; SOLVAY ADVANCED POLYMERS LLC C O KIM MANSON ESQ; SOLVAY C O B ORTEGO IAM NAFTA; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP; KPPB LLP; OBLON MCCLELLAND MAIER AND NEUSTADT 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 SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

30) Family number: 30417244 (US5681027A)

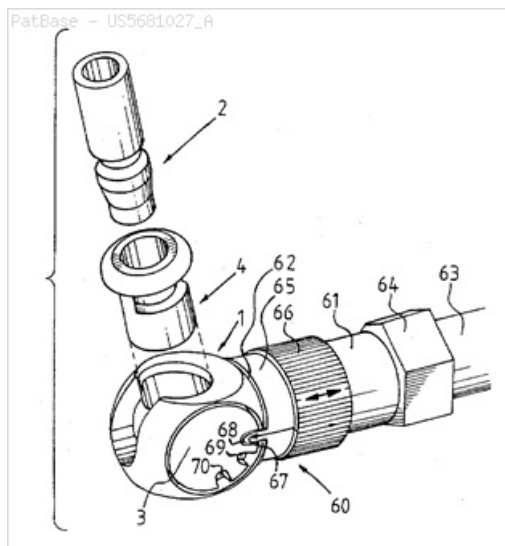
© PatBase

Title: INSERTABLE TYPE SAFETY COUPLING FOR PRESSURE PIPES

Abstract: PCT No. PCT/CH94/00008 Sec. 371 Date Oct. 30, 1995 Sec. 102(e) Date Oct. 30, 1995 PCT Filed Jan. 18, 1994 PCT Pub. No. WO94/17322 PCT Pub. Date Aug. 4, 1994A plug-in safety coupling for pressure lines including a coupling socket (1) having a blocking member (3) pivotally mounted therein and a plug (2) insertable therein for pressureless coupling and uncoupling. The blocking member (3) is secured against pivotation at least in the flow position by means of at least one bolt or cam. The bolt or cam (67) is displaceably guided at the coupling socket (1), and in the blocking position engages into a bore or a recess in the blocking member (3). The blocking member (3) has a through bore extending perpendicularly to its pivotal axis into which an adapter (4) having a through bore, is insertable and fits tightly and sealingly and where an internal surface of the adapter (4) is shaped to receive the plug (2) to be inserted.

Classifications:

International (ipc 8-9): A61K39/395 A61K41/00 A61K47/48
A61K49/00 A61K51/10 A61P35/00 C07K16/00 C07K16/18
C12N15/09 F16L19/00 F16L27/02 F16L37/24 F16L37/38 F16L37/44
F16L37/47 (Advanced/Invention);
A61K38/00 F16L27/02 (Advanced/Non-invention);
A61K39/395 A61K41/00 A61K47/48 A61K49/00 A61K51/02
A61P35/00 C07K16/00 C07K16/18 C12N15/09 F16L27/02
F16L37/28 (Core/Invention);
A61K38/00 (Core/Non-invention)
International (ipc 1-7): F16L F16L037/38 F16L27/02 F16L27/08
F16L37/08 F16L37/24 F16L37/28 F16L37/38 F16L37/44
CPC: Y10T137/88102 F16L37/47
European: F16L37/47
US: 137/616.7 251/149.2 251/149.9



Family:

Publication number	Publication date	Application number	Application date
AT140071 E	19960715	AT19940903717T	19940118
AU199458072 A1	19940815	AU19940058072	19940118
AU669967 B2	19960627	AU19940058072	19940118
BRPI9403824 A	19990601	BR1994PI03824	19940118
CA2117636 AA	19940802	CA19942117636	19940118
CA2117636 C	20051011	CA19942117636	19940118
CH686530 A	19960415	CH19930000191	19930122
CN1040357 C	19981021	CN19941090024	19940118
CN1101213 A	19950405	CN19941090024	19940118
CZ215894 A3	19950118	CZ19940002158	19940118
CZ5840 U1	19970514	CZ19960006093U	19940118
CZ9402158 A3	19950118	CZ19940002158	19940118
DE59400395 D1	19960808	DE19945000395	19940118
DK0632872 T3	19961007	DK19940903717T	19940118
EP0632872 A1	19950111	EP19940903717	19940118
EP0632872 B1	19960703	EP19940903717	19940118
ES2089911 T3	19961001	ES19940903717T	19940118
FI944368 A	19940921	FI19940004368	19940921
FI944368 A0	19940921	FI19940004368	19940921
HU214082 B	19971229	HU19940002510	19940118
HU69867 A2	19950928	HU19940002510	19940118
HU9402510 A0	19941128	HU19940002510	19940118
IL108360 A0	19940412	IL19940108360	19940118
IL108360 A1	19970415	IL19940108360	19940118
JP3558633 B2	20040825	JP19940516532T	19940118
JP7504965 T2	19950601	JP19940516532T	19940118
KR100304857 B1	20011122	KR19940703287	19940922
KR19950701052 A	19950220	KR19940703287	19940922
KR19957001052 A	19950220	KR19947003287	19940118
KR957001052 A	19950220	KR19940703287	19940922
NO312695 B1	20020617	NO19940003003	19940815
NO943003 A	19940815	NO19940003003	19940815
NO943003 A0	19940815	NO19940003003	19940815
NO943003 L	19940815	NO19940003003	19940815
PL174013 B1	19980529	PL19940305515	19940118
PL305515 A1	19950123	PL19940305515	19940118
RU2117850 C1	19980820	RU19940043432	19940921
RU94043432 A	19960710	RU19940043432	19940921
SK114694 A3	19950208	SK19940001146	19940118
TR27636 A	19950614	TR19940000073	19940121
TW259837 B	19951011	TW19940100602	19940125
US5681027 A	19971028	US19950307676	19951030
WO9417322 A1	19940804	WO1994CH00008	19940118
ZA9400331 A	19940922	ZA19940000331	19940118

Priority:

CH19930000191 19930122 CH19930001192 19930419 WO1994CH00008 19940118

Probable Assignee: OETIKER HANS MASCHINEN

Assignee(s): (std): HANS OETIKER A G ; HANS OETIKER AG ; HANS OETIKERAG MASHINEN U AP ; HANS OETIKER MASCHINEN U APPARATEFABRIK AG ; OETIKER HANS MASCH ; OETIKER MASCH U APP F AG ; WUETHRICH ALBRECHT ; OETIKER MASCH U APPARATEFABRIK HANS AG ; KHANS OETIKER MASHINEN U APPARATEFABRIK AG ; HANS OETIKERAG MASHINEN UND AP ; OETIKER HANS ; OETIKER HANS MASCHINEN ; OETIKER MASCHINEN U APP F AG ; OETIKER AG MASCHINEN UND APP F

Assignee(s): KHANS OETIKER AG MASHINEN UND APPARATEFABRIK ; HANS OETIKERAG MASHINEN UND APPARATEFABRIK ; OETIKER MASCHINEN U APPARATEFABRIK HANS AG ; OETIKER AG MASCHINEN UND APPARATEFABRIK HANS ; HANS OETIKERAG MASHINEN U APPARATEFABRIK ; HANS OETIKER MASCHINEN U APPARATEFABRIK HORGEN CH AG ; HANS APPROXIMATELY DIKE CARD STOCK CO ; HANS OETIKER ; HANS OETIKER AG MASCHINEN UND APPARATEFABRIK HORGE ; HANS OETIKER

Inventor(s): (std): ALBRECHT WUETHRICH ; ALBRECHT WUTHRICH ; AL BREKHT VJUTRIKH ; WUTHRICH ALBRECHT ;
WUETHRICH ALBRECHT

Inventor(s): WUETHRICH ALBRECHT CH 6110 WOLHUSEN CH

Agent(s): GRIFFITH HACK; MARKS AND CLERK; REINHOLD COHN AND PARTNERS

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 LI 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

31) Family number: 19727248 (FR766327A)

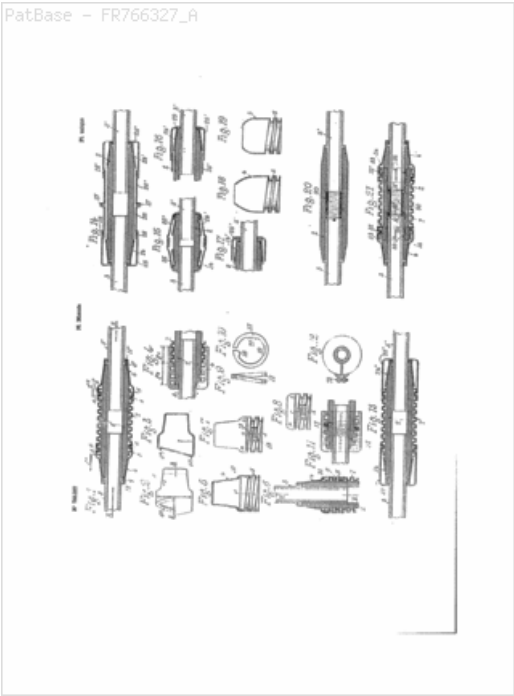
© PatBase

Title: DISPOSITIF POUR LE RACCORDEMENT DE TUYAUX OU PIECES ANALOGUES DEVICE FOR PIPE CONNECTION PARTS
OR SIMILAR (Machine translation)

Abstract: Source: FR766327A [FR] [Source: Claim 1] RESUME. L'invention a pour objet un dispositif de raccordement etanche et amovible de deux tuyaux rigides permettant a ces tuyaux une certaine oscillation dans tous les sens des coudes d'un arc de cercle quel conque, ce dispositif du type dans lequel l'etancheite est obtenue en comprimant au moyen de deux raccords de forme inte rieure conique ou cylindrique un manchon en substance deformable entourant les deux tuyaux a assembler est remarquable non tamment par les caracteristiques suivantes considerees separement ou en combinaisons a. II comporte en combinaison Un manchon en matiere deformable, dans lequel sont engagees les extremités des deux tubes ou autres pieces a reunir, Des raccords destines a assurer le serrage des extremités dudit manchon sur lesdits tubes ou organes analogues grace a une translation de ces dispositifs suivant l'axe longitudinal du raccordement Et des moyens, independants du systeme de serrage et destines a provoquer ladite translation; b. Le manchon en substance deformable est recouvert d'un tube amovible metal lique ou en toute autre matiere dure filete ou taraude partiellement ou en totalite et sur ou dans lequel se visssent les raccords taraudes ou filetes; c. Le tube amovible est flexible et est constitue de spires helicoidales agrafees ou reunies autrement les unes aux autres; d. Le tube amovible est forme d'ele ments rigides articulés entre eux; e. Dans le but de rendre le dispositif de securite contre l'incendie les joints et re vetements du raccordement sont ininflam mables et, en particulier, les spires du tube amovible metallique sont munies de joints d'etancheite; f. Le tube amovible metallique filete est remplace par un ou plusieurs elements d'helice munis ou non d'asperites, dents ou crampons et montes sur le manchon en matiere deformable; g. Les deux raccords opposes sont reunis au tube metallique amovible ou aux ele ments d'helice precites par l'intermediaire d'une bague filetee pouvant supprimer le mouvement de rotation des raccords propre ment dits; h. Le filetage du raccord est constitue par un simple rebord de la tranche heli- coïdale du raccord; i. Le prolongement cylindrique filete ou taraude en totalite ou par segments du raccord ou la bague en tenant lieu sont munis de fentes appropriees permettant de retrecir le raccord ou sa bague afin de le serrer davantage sur le tube metallique flexible ou sur les elements d'helice precites, en particulier lorsque le filetage est consti tue suivant h, par la tranche du raccord; j. TL7n collier en matiere quelconque permet d'obtenir le serrage de la base des raccords ou bagues lorsque ceux-ci sont munis de fentes appropriees; k. Chaque raccord comporte en arriere des filets ou de la bague amovible une sur face conique, sphero-conique, parabolique ou analogue, destinee a comprimer le man chon en substance deformable, lors de la translation dudit raccord; l. La surface tronconique ou analogue est taraudee de telle sorte qu'elle se visse dans le manchon deformable en meme temps que ledit raccord ou sa bague se visse dans le tube metallique ou les elements helicoi daux en tenant lieu; <I>m.</I> Deux elements de forme conique ou analogue opposes, independants, comprimes par les raccords, ecrous, bagues ou disposi tifs appropries, remplacent les surfaces ana logues des raccords eux-memes; n. Les raccords ecrous sont assembles entre eux de facon rigide ou semi-rigide, la souplesse du systeme etant obtenue par le deplacement des cones par friction sur les surfaces internes des raccords avec ou sans l'interposition d'une rondelle en ma tiere dure ou encore par la deformation d'une matiere elastique intercalee entrele cone et le raccord sous forme de pastille, rondelle ou autre; o. Une helice metallique a spires join tives, de la dimension de la section du trou interieur du manchon ou tube en matiere deformable est placee entre les extremités des deux tubes rigides a connecter et est maintenue soit directement par ces tubes et le manchon elastique, soit par des embout coiffant lesdits tubes rigides et dans les quels l'helice est ou non fixee; p. Des butees sont prevues pour eviter l'allongement du tube metallique amovible; q. Lesdites butees sont constituees par des bagues ou anneaux ancrés dans le man chon en matiere deformable; r. Lesdites butees comportent une sur face exterieure cylindrique deformable par flexibilite, grace a des fentes longitudinales, et sur laquelle s'engage le tube amovible, de telle sorte que tout allongement de ce tube provoque le serrage de la butee sur le manchon en matiere deformable et par suite l'arret du tube amovible. **Machine translation:** [Source: Claim 1] [0003]. A subject of the invention is a device for removable connection tight and two rigid pipes allowing these pipes a certain oscillation in every sense of the bends with an arc of circle, this device of the type in which the conch what sealing is obtained by compressing by means of two cylindrical or conical shape fittings inte than a sleeve in deformable substance surrounding the two tubes to assemble is noteworthy in particular by the following features taken separately or in no Combinations a. II comprises in combination a sleeve in deformable material, in which are engaged the ends of the two tubes or other parts to gather, fittings, intended to ensure the clamping of ends of said sleeve on said tubes or similar bodies through a translation of these devices along the longitudinal axis of the connection and means, independent of the clamping system and intended to cause said translation; b. The deformable sleeve in substance is covered with a removable metal tube compound or any other hard material threaded or partially or fully threaded and on or in which Screw threaded fittings or threaded tube; c. the agrafees removable is flexible and consists of helical flights or otherwise joined to each other; d. The removable tube is formed of rigid elements articulated between them; e ele. In order to make the security apparatus against fire the ininflam of mables connection seals and re garments are and, in particular, the turns of the tube metal removable are equipped with seals; f. The removable metal tube is replaced by one or more elements of threaded propeller fitted or not asperities, teeth or spikes and mounted on the deformable material sleeve; g. The two opposing fittings are joined to the metal tube to the foregoing propeller removable or ele elements via a threaded ring which may delete the rotational movement of said element; h. Clean fittings The thread of the connector is formed by a single lip of the coïdale of the coupling edge face heli-; i. The extension threaded cylindrical threaded or in whole or by fitting or the ring segments in lieu are equipped with slots for retrecir suitable fitting or its bushing to tighten further on flexible metallic tube or on the foregoing helix elements, in particular when the thread is constitute following h, via the edge face of the connector kills; j. TL7n Necklace in any material makes it possible to obtain base to tighten the fittings or rings when the latter are equipped with suitable slots; k. Each fitting comprises aft of threads or a conical tapered-sphero removable ring on face, parabolic, or the like, intended to compress the deformable man chon in substance, during the translational movement of said fitting; l. The frustoconical surface or the like is threaded so that it is screwed in the deformable sleeve at the same time as said coupling or its bushing is screwed into the metal tube or the helicoi elements springs in lieu; <i>M</i> Two elements of conical shape or the like independent opposing, compressed by the fittings, nuts, rings or devices suitable provisions, replace the surfaces ana logues fittings themselves; n. Fittings nuts are assembled together so rigid or semi-rigid, the flexibility of the system being obtained by moving the cones by friction on the inner surfaces of the connectors with or without the interposition of a washer in my hard animals or by the deformation of resilient material interposed between<b>the cone and the fitting in the form of a pellet, washer or another; o. A propeller metal to join, the dimension of the cross tive turns of the inner bore of the sleeve or deformable material tube is placed between the ends of two rigid pipes to connect and is maintained either directly by these tubes and elastic sleeve either by styling nozzle said rigid pipes and in which the propeller is or is not attached; p. stops are provided to prevent the elongation of the removable metal tube; q. Said stops are made by clips or rings in the deformable material; r anchors chon man. Said stops comprise a cylindrical outer face deformable by flexibility, through the longitudinal slots, and on which undertakes the removable tube, so that any extension of this tube causes the clamping of the deformable stop on the sleeve in material and, consequently, the cessation of the removable tube.

Classifications:

International (IPC 8-9): F16L21/00 F16L27/107
F16L59/02 (Advanced/Invention);
F16L21/00 F16L27/00 F16L59/02 (Core/Invention)
International (IPC 1-7): F16L21/00 F16L59/14



Family:

Publication number	Publication date	Application number	Application date
FR766327 A	19340626		19330321

Priority:

19330321

Inventor(s): (std) MAZADE EMILE ALEXANDRE FERDINA
Inventor(s): MAZADE EMILE ALEXANDRE FERDINAND

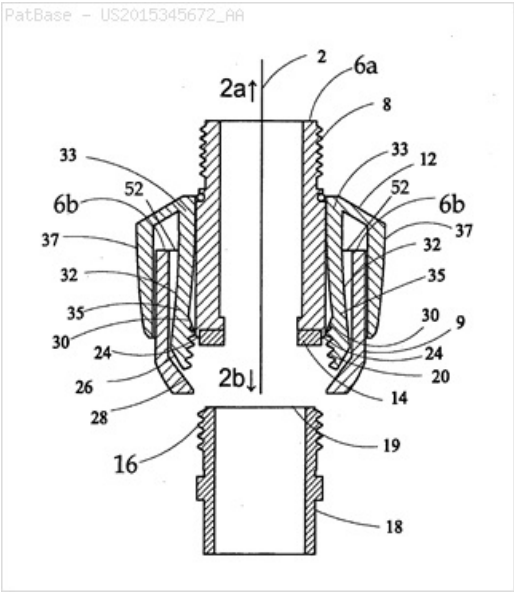
32) Family number: 56489261 (US2015345672A) © PatBase

Title: THREAD CLAMPING COUPLER DEVICE

Abstract: A hose coupler is described capable of quick connection and disconnection with only a small amount of rotation required to achieve a fluid-tight seal. A plurality of threaded segments are arranged about a central axis of the coupler into a segment set. Such segments comprise a flexible, elastic material that is capable bending towards or away from the central axis under an applied force but returns to their normal as-manufactured shape upon removal of the applied force. Ease of connection and disconnection without the requirement for substantial force to be applied is one of the salient advantages of the coupler described herein.

Classifications:

International (IPC 8-9): F16B37/00 F16B37/08 F16L11/00 F16L15/04 F16L15/08 (Advanced/Invention)
CPC: F16L37/1215 F16B33/006 F16B37/0864 F16L15/08 F16L15/04 F16L37/16
US: 285/81



Family:

Publication number	Publication date	Application number	Application date
CA2891462 AA	20150513	CA20132891462	20131113
US2015345672 AA	20151203	US20130392045	20131113
WO14077865 A1	20140522	WO2013US00256	20131113

Priority:

US20120796548P 20121114 US20130392045 20131113 WO2013US00256 20131113

Probable Assignee: SMITH RONALD A

Assignee(s): (std): SMITH RONALD A

Inventor(s): (std): SMITH RONALD A

Agent(s): FASKEN MARTINEAU DUMOULIN LLP; WOLKEN GEORGE JR

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

33) Family number: 22833263 (US6186557B)

© PatBase

Title: PIPE CONNECTION AND COMBINATION OF A CONNECTION AND A DETACHING TOOL

Abstract: The invention is directed to a coupling assembly having a male member (1) with a spigot (5) to be received in an opening (21) in a female member (2), and a radially deformable retaining element (3) which is arranged in a recess (22) in the female member (2) and is radially elastically deformable and adapted to be urged into the recess (22) during the coupling operation by a support element (12) disposed on the spigot (5). In the locked position, the spigot (5) is locked against being pulled out of the opening due to the cooperation between the support element (12) and the retaining element (3). To uncouple the coupling assembly, an unlocking element (15) is provided. The support element (15) is releasably connected with the spigot (5) in order to enable assembly of the unlocking element (15).

Classifications:

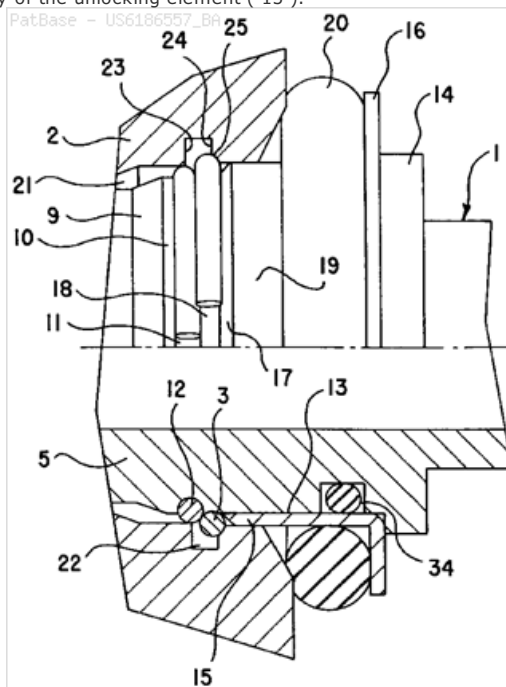
International (ipc 8-9): F16L37/088 F16L37/12 (Advanced/Invention); F16L37/00 (Core/Invention)

International (ipc 1-7): F16L3/500 F16L35/00 F16L37/088 F16L37/12

CPC: F16L37/0887 Y10S285/906

European: F16L37/088

US: 285/308 285/321 285/330 285/39 285/81 285/906



Family:

Publication number	Publication date	Application number	Application date
AT195997 E	20000915	AT19980936230T	19980618
AU199885331 A1	19990125	AU19980085331	19980618
BRPI9809538 A	20000620	BR1998PI09538	19980618
CN1097690 C	20030101	CN19988005625	19980618
CN1258341 A	20000628	CN19988005625	19980618
CZ293208 B6	20040317	CZ19990004652	19980618
CZ465299 A3	20000614	CZ19990004652	19980618
CZ9904652 A3	20000614	CZ19990004652	19980618
DE19728137 C1	19980723	DE19971028137	19970702
DE29803195 U1	19990805	DE19982003195U	19980224
DE59800255 D1	20001005	DE19985000255	19980618
EP0932789 A1	19990804	EP19980936230	19980618
EP0932789 B1	20000830	EP19980936230	19980618
ES2150817 T3	20001201	ES19980936230T	19980618
JP2000501493 T2	20000208	JP19990506089T	19980618
JP3255235 B2	20020212	JP19990506089T	19980618
TR9903330 T2	20000421	TR19990003330T	19980618
US6186557 BA	20010213	US19990147599	19990129
WO9901691 A1	19990114	WO1998DE01687	19980618

Priority:

DE19971028137 19970702 DE19982003195U 19980224 WO1998DE001687 19980618
DE19985000255 19980618 WO1998DE01687 19980618

Probable Assignee: JOHANNES SCHAFER VORM STETTINER SCHRAUBENWERKE GMBH AND CO KG

Assignee(s): (std): CO KG ; FUNK HANS GEORG ; JOHANNES SCHAEFER ; JOHANNES SCHAEFER VORMALS ; JOHANNES SCHAFER VORM STETTINE ; JOHANNES SCHAEFER VORM STETTIN ; SCHAEFER JOHANNES ; JOHANNES SCHAFER VORM STETTINER SCHRAUBENWERKE ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GM ; JOHANNES SCHAFER VORM STETTINER SCHRAUBENWERKE GMB ; JOHANNES SCHAFER VORMALS STETT ; JOHANNES SCHAFER WAS STETT.. ; SCHAEFER STETTINER SCHRAUBEN

Assignee(s): JOHANNES SCHAFER WAS STETTINER SCHRAUBENWERKE GMBH AND CO KG.. ; JOHANNES SCHAFER

VORM STETTINER SCHRAUBENWERKE GMBH AND CO KG ; JONANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GMBH AND CO KG ; JOHANNES SCHAEFER VORMALS STETTINER SCHRAUBENWERKE GMBH AND CO KG ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GMBH AND CO KG ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GM ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GM ; JOHANNES SCHAEFER VORMALS STETTINER SCHRAUBENWERKE GMBH AND CO KG ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GMBH AND CO KG 35410 HUNGEN DE ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GMBH AND CO KG ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GMBH and ; JOHANNES SCHAEFER VORM STETTINER SCHRAUBENWERKE GMBH AND CO 35410 HUNGEN DE KG ; JOHANNES SCHAEFER WAS STETTINER SCHRAUBENWERKE GMBH AND CO KG.. ; JOHANNES SCHAEFER VORMALS STETTINER SCHRAUBENWERKE ; COKG

Inventor(s): (std): FUNK GEORG ; FUNK HANS GEORG ING GRAD ; HANS GEORG FUNK ; HANS G FUNK ; HANSG FUNK ; FUNK HANS G ; FUNK HANS GEORG

Inventor(s): FUNK HANS GEORG ING GRAD 35410 HUNGEN DE

Agent(s): ARENT FOX KINTNER PLOTKIN AND KAHN PLLC

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

34) Family number: 25344265 (GB916006A)

© PatBase

Title: Pipe couplings

Abstract: 916,006. Pipe couplings. RESISTOFLEX CORPORATION. June 13, 1961 [June 20, 1960], No. 21342/61. Class 99(1).). [Also in Group XXVI]. In a pipe line coupling the members 11, 12 to be coupled are drawn into engagement by an internally screw-threaded coupling nut 10 mounted for rotation on one of the members and co-operating with external screw threads 20 on the other member, and there is provision for effecting relative rotation between the nut and member 12 consisting of a gear-toothed element 25 on the member 12 and screwthreaded operating means carried by the nut for engagement with the element 25 when the nut and member 12 are in screw-threaded engagement. As shown, a split annular gear, or toothed segment 25 is secured in a channel 26 of the member 12, and the operating means comprises a transverse threaded spindle 29 journaled in a housing 31 of the nut 10, the spindle being arranged for tangential meshing with the gear 25 when the nut 10 and member 12 are screw-threadedly engaged; when the threads 30 on the spindle encounter the gear 25, rotation of the spindle advances the nut with respect to the member 12 until the members 11, 12 are about to compress the seal 21, a wrench then being applied to the spindle to continue advancement of the nut until the joint is fully assembled. A reduced portion 17 of the flange 15 on the member 11, allows the nut 10 a degree of eccentric freedom when the part 58 of the nut coincides with that portion and facilitates starting of the nut on the member 12. The seal 21 of hardened steel has a web portion 37 which is positioned in a channel provided by annular recesses 40, 41 in the ends of the members and a rigid portion 48 integral with a pair of diverging, annular resilient lips 49, 50 which form with the portion 48 concave surfaces, the lips, on full tightening of the joint, being deflected inwardly by frustoconical surfaces 52, 53 of the members. Soft metal annuli, e.g. of copper, may be disposed in dovetail section channels of the members and be engaged by the lips of the seal. The metal seal may be replaced by a known resilient seal of rubber.

Classifications:

International (IPC 8-9): F16L17/08 F16L19/00

F16L37/10 (Advanced/Invention);

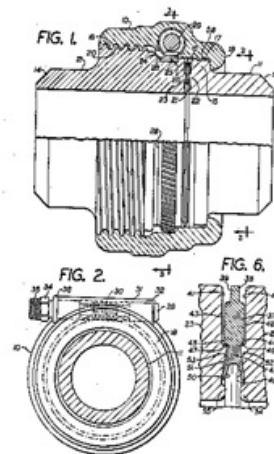
F16L17/00 F16L19/00 F16L37/00 (Core/Invention)

International (IPC 1-7): F06L F16J15/08 F16L19/06

CPC: F16L17/08 F16L19/00 F16L37/101

European: F16L17/08 F16L19/00 F16L37/10B

PatBase - GB916006_A



Family:

Publication number	Publication date	Application number	Application date
CH404316 A	19651215	CH19610007212	19610620
GB916006 A	19630116	GB19610021342	19610613
LU40273 A	19610817		19610617

Priority:

US19600037484 19600620

Probable Assignee: RESISTOFLEX CORP

Assignee(s): (std): RESISTOFLEX CORP

Inventor(s): (std): HELMUT ARTHUR RINK ; IRVING DAVID PRESS

Inventor(s): ARTHUR RINK HELMUT ; DAVID PRESS IRVING

Title: CONNECTOR, ESPECIALLY FOR A PNEUMATIC, HYDRAULIC OR ELECTRICAL TRANSMISSION LINK

Abstract: The connection (1) has a pair of axially interfitting connector halves (3,4) which are secured in the assembled position via a releasable latch device (6), provided by latch elements (7,8) associated with respective connector halves, one of which is displaced radially between the locking and released position via a manual operating element (25). The operating element fits peripherally around one connector half, extending convex to a longitudinal plane (24) intersecting the plug-in axis and the latch device, with manual displacement in the direction of its plane against a spring bias, to release the latch.

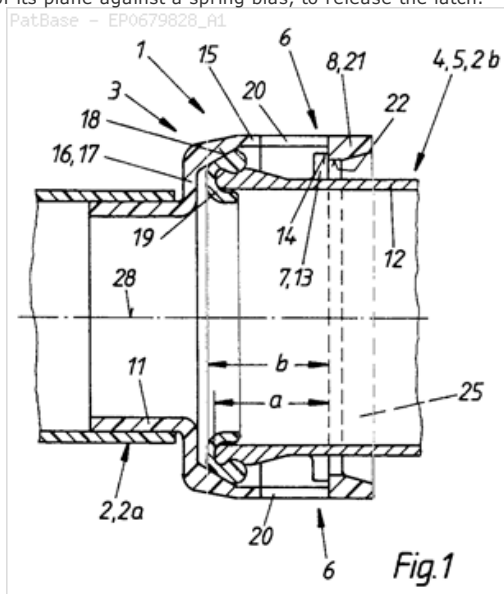
Classifications:

International (IPC 8-9): A61C1/18 A61C17/02 A61C17/022
A61C17/06 A61M39/00 A61M39/22 F16K7/17 F16L37/084 F16L37/12
F16L55/10 F16L55/124 (Advanced/Invention);
A61C1/08 A61C17/00 A61C17/06 A61M39/00 F16K7/12 F16L37/00
F16L55/10 (Core/Invention)

International (IPC 1-7): A61C17/02 A61C17/12 A61M39/00
F16K31/126 F16K7/10 F16K7/17 F16L37/084 F16L55/10

CPC: A61C1/18 A61C17/04 F16L55/124

European: A61C1/18 A61C17/04 F16L55/124



Family:

Publication number	Publication date	Application number	Application date
AT170606 E	19980915	AT19950106209T	19950425
DE29506422 U1	19951012	DE19952006422U	19950413
DE59503404 D1	19981008	DE19955003404	19950425
EP0679828 A1	19951102	EP19950106209	19950425
EP0679828 B1	19980902	EP19950106209	19950425

Priority:

DE19944414935 19940428 DE19952006422U 19950413 DE19955003404 19950425

Probable Assignee: KALTENBACH AND VOIGT

Assignee(s): (std): KALTENBACH AND VOIGT

Assignee(s): KALTENBACH AND VOIGT GMBH AND CO ; KALTENBACH AND VOIGT GMBH AND CO 88400 BIBERACH DE

Inventor(s): (std): PUESCHNER GEORG

Inventor(s): PUESCHNER GEORG D 88299 LEUTKIRCH DE

Designated states: AT DE IT

36) Family number: 63814280 (US2016305891A)

Title: PIPE INSPECTION SYSTEM WITH JETTER PUSH-CABLE

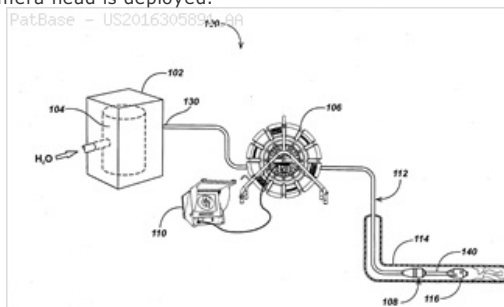
Abstract: Pipe inspection systems including a camera push-cable, jetter, and camera assembly are disclosed. A jetter nozzle may be attached to spin and/or propel the camera head within a pipe or other cavity. A cutter line may be attached to the camera head to clean obstructions. A sonde may be coupled to a camera head to generate magnetic field signals for use with a buried utility locator to locate a pipe or other cavity into which the camera head is deployed.

Classifications:

International (IPC 8-9): B05B1/14 B05B13/06 B08B9/00 B08B9/032
B08B9/043 B08B9/049 E03F7/12 E03F9/00 G01M3/00 G01N21/954
H04N5/225 (Advanced/Invention);
F16C1/00 F16L101/12 F16L101/30 H04N5/225 (Advanced/Non-invention)

CPC: B08B9/0433 B08B9/0321 B08B9/0325 B08B2209/04 F16C1/00
F16L2101/12 F16L2101/30 G01M3/005 G01M3/38 G01N21/954
B05B1/14 B05B13/0627 H04N5/2252 B08B9/0495 E03F7/12
E03F9/00 H04N5/2258 H04N2005/2255 B05B13/0636

US: 1/1 134/18 348/84



Family:

Publication number	Publication date	Application number	Application date
US2016305891 AA	20161020	US20150690285	20150417
US2017128989 AA	20170511	US20160289703	20161010
US2017315065 A9	20171102	US20150690285	20150417
US9468954 BA	20161018	US20110073919	20110328

US9791382 BB	20171017	US20150690285	20150417
US9914157 BB	20180313	US20160289703	20161010
US10359368 BA	20190723	US20170728410	20171009

Priority:

US20100318122P 20100326 US20110073919 20110328 US20150690285 20150417
US20160289703 20161010 US20170728410 20171009

Probable Assignee: SEESCAN INC

Assignee(s): (std): CHAPMAN ERIC ; CHAPMAN ERIC M ; OLSSON MARK S ; THOMPSON MATTHEW J ; SEESCAN INC ; TAYLOR JUSTIN W ; TURGEON MICHAEL E

Assignee(s): SEEKTECH INC ; SEEK TECH INC

Inventor(s): (std): OLSSON MARK S ; THOMPSON MATTHEW J ; CHAPMAN ERIC ; TAYLOR JUSTIN W ; CHAPMAN ERIC M ; TURGEON MICHAEL E

Agent(s): STEVEN C ; TIETSWORTH ESQ STEVEN C

37) Family number: 69564282 (US2018119823A)

© PatBase

Title: BIASING MEMBERS FOR VALVE ASSEMBLY

Abstract: A valve assembly may include a valve having an upper valve surface and a lower valve surface. The valve may be movable in a slot in a housing between an open position and a closed position, and the slot may have an upper slot surface and a lower slot surface. The valve assembly may include a biasing member movably positioned within the housing that may be configured to urge the valve toward one of the upper slot surface and the lower slot surface.

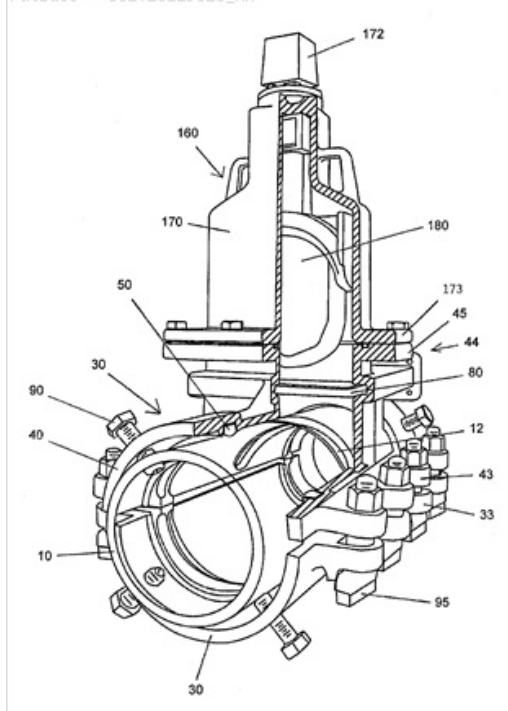
Classifications:

International (IPC 8-9): F16K3/02 F16K3/18 F16K3/20 F16K3/312 F16K31/50 F16L41/06 F16L55/105 (Advanced/Invention)

CPC: F16K3/0281 F16K3/18 F16K3/312 F16L41/06 F16L55/105 F16K3/20 F16K31/508

US: 1/1 251/193

PatBase - US2018119823_AA



Family:

Publication number	Publication date	Application number	Application date
EP3532753 A1	20190904	EP20170801150	20171027
IN201917016343 A	20190802	IN201917016343	20190424
US2018119823 AA	20180503	US20170794959	20171026
WO18081526 A1	20180503	WO2017US58708	20171027

Priority:

US20160414427P 20161028 US20170794959 20171026 WO2017US58708 20171027

Probable Assignee: ADVANCED VALVE TECHNOLOGIES LLC

Assignee(s): (std): ADVANCED VALVE TECH INC

Assignee(s): ADVANCED VALVE TECHNOLOGIES INC ; ADVANCED VALVE TECHNOLOGIES LLC ; ANTARES CAPITAL LP AGENT AS ; FREEDOM 3 CAPITAL LLC ; VALVE ACQUISITION LLC ; STONEGATE ASSET CO II LLC ; NORTHWESTERN MUTUAL LIFE INSURANCE CO AGENT AS ; COWBOY ACQUISITION LLC

Inventor(s): (std): MURPHY KEVIN ; MURPHY COLIN ; MURPHY MICHAEL ; MURPHY COLIN P ; MURPHY KEVIN P ; MURPHY MICHAEL S

Agent(s): ZACCO DENMARK A S ; YARBERRY KYLE E

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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

Title: PROCEDE ET DISPOSITIF DE TOPOGRAPHIE DE RESEAUX SOUTERRAINS, NOTAMMENT DE GAZ, AVEC CONTINUITE DE SERVICE

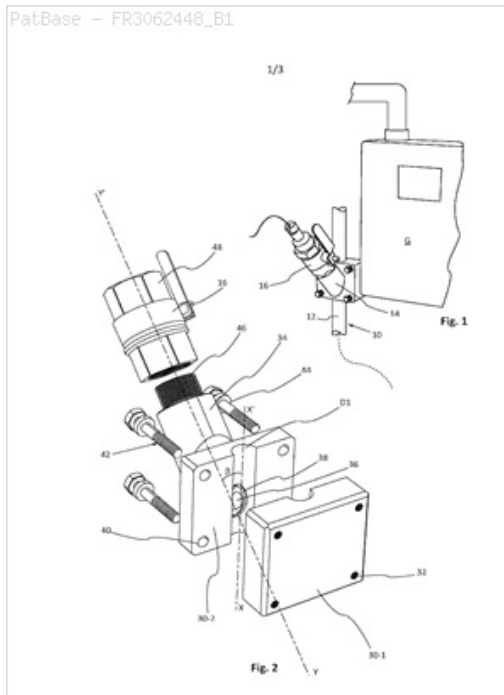
Abstract: Source: FR3062448B [FR] L'objet de l'invention est un procede de topographique d'une canalisation (12) souterraine d'un reseau, a partir de l'arrivee accessible de ladite canalisation, notamment applicable a une canalisation de gaz. Le procede consiste a realiser de facon etanche un perçage de la canalisation sous pression, a introduire de facon etanche une tete de generation de donnees dans ladite canalisation en charge avec un accelerometre et un gyroscope, a la deplacer et a enregistrer le cheminement en traitant les donnees D mesurees pour une visualisation en direct, notamment. Le procede prevoit d'obturer de facon definitive le perçage realise dans ladite canalisation. L'invention couvre aussi tout le dispositif associe pour la mise en œuvre du procede.

Classifications:

International (IPC 8-9): F16L101/30 F16L55/48 (Advanced/Invention); F16L101/30 (Advanced/Non-invention)

CPC: F16L41/008 F16L41/06 F17D1/04 G01C7/06 G01C15/00

PatBase - FR3062448_B1



Family:

Publication number	Publication date	Application number	Application date
FR3062448 A1	20180803	FR20170070107	20170202
FR3062448 B1	20190329	FR20170070107	20170202

Priority:

FR20170070107 20170202

Probable Assignee: AVI ORN IND

Assignee(s): (std): AVI ORN IND

Inventor(s): (std): BARREY BERNARD ; TARAZONA FLORENT

Inventor(s): FLORENT TARAZONA ; BERNARD BARREY

Agent(s): AQUINOV

Title: PLUG-IN COUPLING FOR FLUIDIC SYSTEMS

Abstract: The invention relates to a plug-in coupling for fluidic systems, in particular for CO₂- and fuel-conducting systems, comprising a housing (1) and a plug (2) which can be inserted into the housing (1), it being possible for the plug (2) to be inserted by means of a plug stem (3) into a receiving opening (4) of the housing (1) in a manner sealed by at least one circumferential seal (5, 5a, 5b) and, when inserted, for it to be locked therein against release by means of a locking device comprising at least one latching element (7) arranged on the plug (2) and a latching shoulder (8) interacting with the latching element (7), and the housing (1) being of two-part design by comprising an inner housing part (1a) and an outer housing part (1b), which can be connected releasably to the inner housing part (1a) and essentially surrounds the inner housing part (1a). In order to make it possible to install it without destroying it, it is proposed that the latching shoulder (8) is formed at one end in an entry region (4a) of the receiving opening (4) on the outer housing part (1b).

Classifications:

International (IPC 8-9): F16J15/02 F16J15/06 F16L19/00 F16L27/00 F16L37/08 F16L37/088 F16L39/00 (Advanced/Invention);

F16J15/02 F16J15/06 F16L19/00 F16L27/00 F16L37/00

F16L39/00 (Core/Invention)

International (IPC 1-7): F16J15/02 F16L37/00 F16L37/084

F16L37/088 F16L37/14

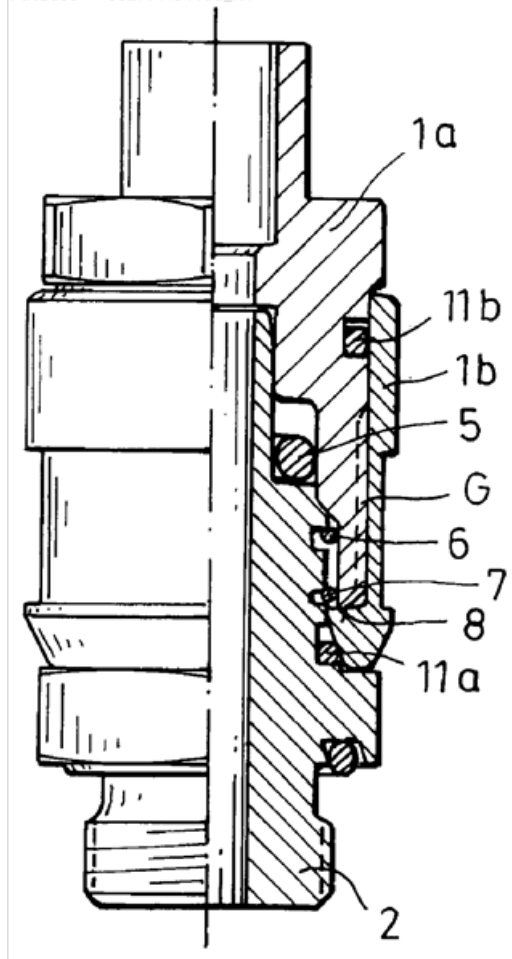
CPC: F16L21/02 F16J15/022 F16J15/062 F16L37/088 F16L2201/10

F16L2201/20

European: F16J15/02B2 F16J15/06C F16L21/02 F16L37/088

US: 285/276 285/277 285/277P 285/305 285/319 285/321 285/321S

285/351 285/351S 285/374

**Family:**

Publication number	Publication date	Application number	Application date
AT298859 E	20050715	AT20030008547T	20030414
AT331176 E	20060715	AT20040008398T	20040407
DE20205833 U1	20020808	DE20022005833U	20020415
DE20314133 U1	20040923	DE20032014133U	20030910
DE502004000793 D1	20060803	DE200450000793T	20040407
DE50300689 D1	20050804	DE20035000689	20030414
EP1355100 A2	20031022	EP20030008547	20030414
EP1355100 A3	20031203	EP20030008547	20030414
EP1355100 B1	20050629	EP20030008547	20030414
EP1469247 A1	20041020	EP20040008398	20040407
EP1469247 A9	20050406	EP20040008398	20040407
EP1469247 B1	20060621	EP20040008398	20040407
US2004090066 AA	20040513	US20030414262	20030415
US2009108580 AA	20090430	US20080037555	20080226
US7258371 BA	20070821	US20040822570	20040412
US7338094 BB	20080304	US20030414262	20030415
US7841629 BB	20101130	US20080037555	20080226

Priority:

DE20022005833U	20020415	DE20035000689	20030414	EP20030008547	20030414
US20030414262	20030415	DE20032014133U	20030910	EP20040008398	20040407
DE200450000793T	20040407	US20080037555	20080226		

Probable Assignee: VOSS AUTOMOTIVE GMBH**Assignee(s):** (std): HOFFMAN MARTIN ; HOFFMANN MARTIN ; VOSS AUTOMOTIVE GMBH**Inventor(s):** (std): HOFFMAN MARTIN ; MITTERER REINER ; BORGMIEIER OLAV ; TERLAU NORBERT ; KAMINSKI VOLKER ; WESTMEIER JOERG ; HAGEN HARALD ; HOFFMANN MARTIN**Agent(s):** GREENSPAN MYRON; LACKENBACH SIEGEL LLP; MYRON**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**40) Family number: 40839299** (US2007267197A)

© PatBase

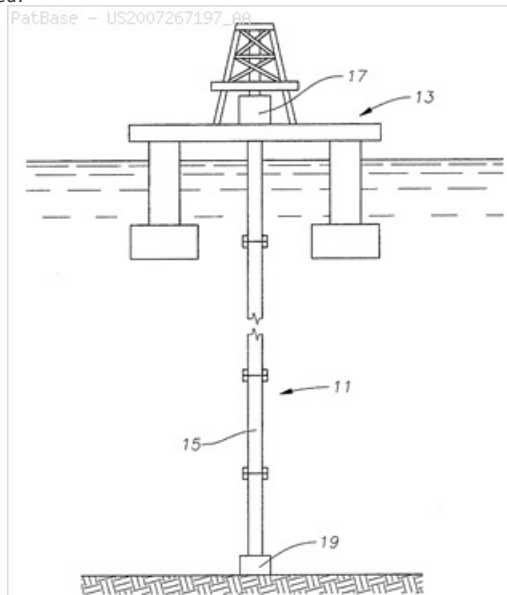
Title: RAPID MAKEUP DRILLING RISER

Abstract: A connector for connecting sections of drilling riser pipe wherein a first riser contains a pin assembly with an external first grooved profile and a second riser contains a housing assembly. An internal split pivoting latch segment assembly carried by the housing assembly contains a second grooved profile adapted to mate to the first grooved profile and a split actuation ring movably carried by the housing assembly forces the second grooved profile of the latch segment assembly into engagement with the first grooved profile of the pin assembly. A plurality of retraction links engage an upper

edge of the latch segment assembly to disengage the second grooved profile of the latch segment assembly from the first grooved profile of the pin assembly if the risers are to be disconnected.

Classifications:

International (IPC 8-9): E21B17/01 E21B17/08 E21B33/038
F16L37/00 (Advanced/Invention);
E21B17/00 E21B17/02 (Core/Invention)
CPC: E21B17/08 Y10S285/92 E21B17/085 E21B33/038 F16L37/002
European: E21B17/08 E21B17/08A E21B33/038 F16L37/00B
US: 166/338 166/345 166/359 166/367 285/322 285/81 285/920



Family:

Publication number	Publication date	Application number	Application date
BRPI0711912 A2	20120103	BR2007PI11912	20070518
BRPI0711912 B1	20180206	BR2007PI11912	20070518
GB200820749 A0	20081217	GB20080020749	20070518
GB2450854 A1	20090107	GB20080020749	20070518
GB2450854 B2	20111102	GB20080020749	20070518
US2007267197 AA	20071122	US20070750708	20070518
US7686087 BB	20100330	US20070750708	20070518
WO07136793 A1	20071129	WO2007US11985	20070518

Priority:

US20060801667P 20060519 US20070750708 20070518 WO2007US11985 20070518

Probable Assignee: VETCO GRAY INC

Assignee(s): (std): HAVELKA DANIEL L ; PALLINI JOSEPH W ; STEWART SCOTT I ; VETCO GRAY INC ; VETCO GREY INC ; WONG STEVE M

Inventor(s): (std): HAVELKA DANIEL L ; STEWART SCOTT I ; PALLINI JOSEPH W ; WONG STEVE M ; JOSEPH W PALLINI ; DANIEL L HAVELKA ; SCOTT I STEWART ; STEVE M WONG

Agent(s): BRACEWELL AND GIULIANI LLP; BRACEWELL AND GIULIANI

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 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

41) Family number: 30175312 (US2002163181A)

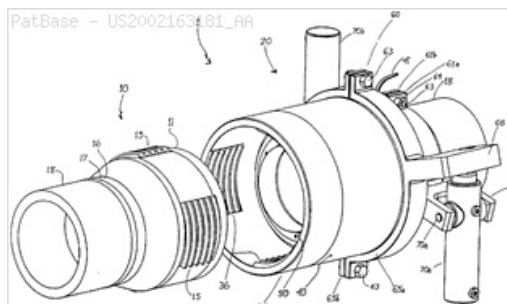
© PatBase

Title: REMOTELY PRETENSIONED THREADED TUBULAR CONNECTIONS

Abstract: This invention is a method and apparatus for making a pressure-containing threaded tubular connection, suitable for remotely operated connection and separation, utilizing electrical heating to reduce the amount of makeup torque required to produce reliable preloading of the connection. One aspect of the present invention comprises: 1) a first hub with male threads on its exterior and having a sealing face and axial flow passage, b) a second hub having an axial flow passage and carrying an annular seal which can be mated with the sealing face of the first hub and mounting a rotatable nut having female threads on its interior and integral nut heating means. After stabbing and initial make-up of the connection, the nut is heated and thereby expanded in a controlled manner and the connection retightened. Following cooling, the structural connection is fully preloaded and the annular seal fully compressed so that it seals. Reversing the procedure permits disconnection.

Classifications:

International (IPC 8-9): A61M39/00 E21B19/16 F16B4/00 F16L15/08
F16L35/00 F16L37/00 (Advanced/Invention);
A61M39/00 E21B19/00 F16B4/00 F16L15/00 F16L35/00
F16L37/00 (Core/Invention)
International (IPC 1-7): E21B19/16 F16B4/00 F16L15/00 F16L15/08
F16L17/00 F16L21/08 F16L37/00 F16L53/00
CPC: Y10T29/49428 Y10T29/49865 F16L15/08 F16L37/002
Y10S285/92
European: F16L15/08 F16L37/00B
US: 2/944.7 2/989.014 28/538.6 28/54.1 285/18 285/334.1
285/334.2 285/354 285/354P 285/360 285/381.1 285/386 285/391
285/401 285/41 285/920 29/447 29/890.14



Family:

Publication number	Publication date	Application number	Application date
AU2002305283 AA	20021118	AU20020305283	20020502

AU2002305283 AH	20051117	AU20020305283	20020502
CA2445002 AA	20031021	CA20022445002	20020502
CA2445002 C	20091222	CA20022445002	20020502
GB200324585 A0	20031126	GB20030024585	20020502
GB2390655 A1	20040114	GB20030024585	20020502
GB2390655 B2	20050302	GB20030024585	20020502
US2002163181 AA	20021107	US20020133093	20020426
US2004245779 AA	20041209	US20040869268	20040616
US6764110 BB	20040720	US20020133093	20020426
US7431351 BB	20081007	US20040869268	20040616
WO02090809 A2	20021114	WO2002US13596	20020502
WO02090809 A3	20050728	WO2002US13596	20020502

Priority:

US20010288729P 20010504 US20020133093 20020426 WO2002US13596 20020502
US20040869268 20040616

Probable Assignee: RUSSELL LARRY R

Assignee(s): (std): RUSSELL LARRY R ; RUSSELL LARRY RAYNER

Assignee(s): LARRY RAYNER RUSSELL

Inventor(s): (std): RUSSELL LARRY R ; RUSSELL LARRY RAYNER

Inventor(s): LARRY R RUSSELL ; LARRY RAYNER RUSSELL

Agent(s): KIRBY EADES GALE BAKER; HALL ELIZABETH R; ELIZABETH R

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 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

42) Family number: 57354320 (US2017145667A)

© PatBase

Title: FLUID GOVERNING SYSTEM

Abstract: A fluid governing system including a fluid inlet and fluid inlet port coupleable to an upstream pipe segment; a fluid outlet and a fluid outlet port coupleable to a downstream pipe segment; a flow unit; a metering inlet path in flow communication with the fluid inlet; a metering outlet path in flow communication with the fluid outlet, the metering inlet path is in flow communication with the metering outlet path through the flow unit which is articulable between the metering inlet path and the metering outlet path; a pressure responsive sealing diaphragm for selective sealing a metering inlet port; an inlet chamber disposed at a face of the sealing diaphragm, the inlet chamber in flow communication with the fluid inlet; a control chamber disposed at an opposite face of the sealing diaphragm; and a control fluid duct extending between the inlet chamber and the control chamber.

Classifications:

International (IPC 8-9): E03B7/00 E03B7/07 E03B7/09 F02C

F02C1/00 F16L55/00 G01F1/00 G01F15/00

G01F15/18 (Advanced/Invention);

F02C (Subclass/Invention)

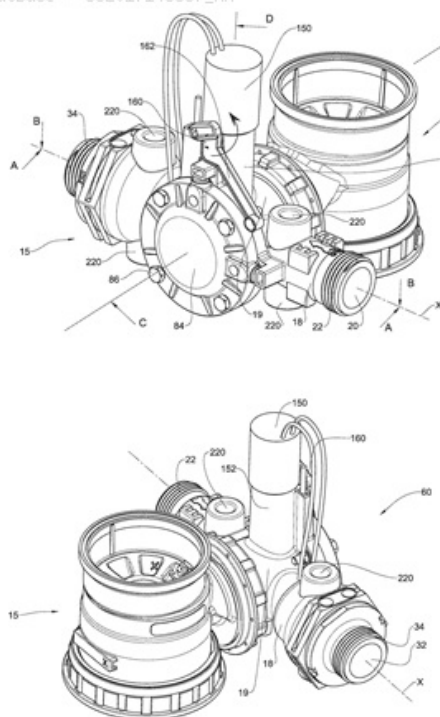
CPC: E03B7/072 E03B7/074 E03B7/075 F16L55/02736 F16L55/02772

G01F1/06 G01F15/125 G01F15/18 E03B7/00 E03B7/07 E03B7/095

F16L55/00 G01F15/005 G01F15/185

US: 1/1 137/357

PatBase - US2017145667_AA



Family:

Publication number	Publication date	Application number	Application date
CA2948300 AA	20161107	CA20152948300	20150510
EP3146114 A1	20170329	EP20150793116	20150510
EP3146114 A4	20180516	EP20150793116	20150510
IL232537 A0	20140831	IL20140232537	20140511
IL232537 A1	20190630	IL20140232537	20140511
US2017145667 AA	20170525	US20150310338	20151010
US2017145667 AA	20170525	US20150310338	20150510
US10533307 BB	20200114	US20150310338	20150510

Priority:

IL20140232537 20140511 WO2015IL50484 20150510 WO2015IL50484 20151010

Probable Assignee: AQUA RIMAT LTD

Assignee(s): (std): AQUA RIMAT LTD ; WINT WI LTD

Assignee(s): GAL ALON HAIM ; HERTZ LIOR ; RAVID SHAY

Inventor(s): (std): GAL ALON HAIM ; HERTZ LIOR ; RAVID SHAY

Agent(s): RIDOUT AND MAYBEE LLP; IANNONE CARLO LUIGI; REINHOLD COHN AND PARTNERS; DORSEY AND WHITNEY LLP; PUGATSCH SHENDELZON RIMMA

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

43) Family number: 44964327 (US2012315082A)

© PatBase

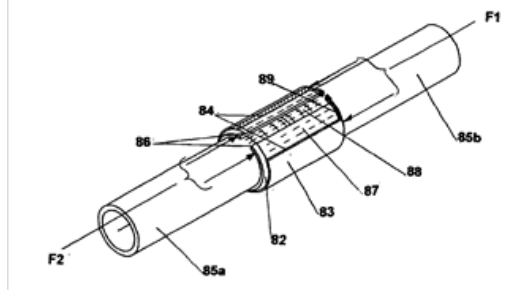
Title: METHOD OF FORMING A COUPLING

Abstract: There is provided a method of forming a coupling between a first body (71, 72) and a third body (76), which comprises selecting a first body having a first body layer and a third body having a third body layer; sandwiching a second body layer of a deformable body (74) between said first body layer and said third body layer; forming a first coupling between the third body layer and the second body layer; and forming a second coupling between the first body layer and the second body layer by providing a friction-enhancing fluid medium between the first body layer and the second body layer and without introducing relative sliding there-between pressing the second body layer against the first body layer such as to deform the second body layer into cold pressure welding contact with the first body layer.

Classifications:

International (IPC 8-9): B23K20/02 B23K20/16 B32B37/10 B32B9/00 F16L13/02 F16L37/02 (Advanced/Invention)
CPC: B23K20/021 B23K20/16 F16L13/0281 F16L13/147 Y10T403/477
European: B23K20/02B B23K20/16 F16L13/02G F16L13/14F
US: 264/249 403/270

PatBase - US2012315082_AA



Family:

Publication number	Publication date	Application number	Application date
EP2536528 A1	20121226	EP20110706901	20110214
GB201002620 A0	20100331	GB20100002620	20100216
GB201014651 A0	20101020	GB20100014651	20100903
US2012315082 AA	20121213	US20110579476	20110214
WO11101616 A1	20110825	WO2011GB00194	20110214

Priority:

GB20100002620 20100216 GB20100014651 20100903 WO2011GB00194 20110214

Probable Assignee: BALL BURNISHING MACH TOOLS

Assignee(s): (std): BALL BURNISHING MACH TOOLS ; LINZELL GEOFFREY ROBERT

Assignee(s): BALL BURNISHING MACHINE TOOLS LIMITED ; BALL BURNISHING MACHINE TOOLS LTD

Inventor(s): (std): LINZELL GEOFFREY ROBERT

Agent(s): LINZELL GEOFFREY ROBERT

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

44) Family number: 43624337 (US2009200694A)

© PatBase

Title: EXTRUSION DIE VACUUM SEALS AND METHODS

Abstract: An extrusion die configured to have an interior chamber sealed from the atmosphere is disclosed. The extrusion die includes an extrusion die head disposed at a downstream end of the interior chamber; and a vacuum seal disposed at an upstream end of the interior chamber; wherein the vacuum seal is configured to selectively form a seal between the extrusion die and a product disposed in the interior chamber. The vacuum seal includes an annular sealing surface disposed at an inner diameter of the vacuum seal; a hollow, interior chamber; and a plurality of bellows disposed between the annular sealing surface and the extrusion die; wherein the vacuum seal is configured to selectively form a seal between the extrusion die and a product disposed in the interior chamber. A method of selectively sealing an end of an extrusion die is also disclosed.

Classifications:

International (IPC 8-9): B28B3/12 B29C47/02 B29C47/04 B29C47/06 B29C47/08 B29C47/20 B29C47/76 B29C47/78 B29C47/90 B29C48/30 B29C48/32 B29C48/76 B29C48/885 B29C48/90 B29C49/00 B29C59/04 B29D23/00 B32B37/02 B32B38/00 B32B38/04 B32B43/00 F16L25/00 F25D13/06 F25D17/02 F25D23/00 (Advanced/Invention);

B29C47/06 B29C47/12 B29C49/00 (Advanced/Non-invention);
 B29C47/02 B29C47/06 B29C47/20 B29C47/76 B29C47/78
 B29C59/04 B32B37/02 B32B38/00 B32B38/04 B32B43/00
 F25D13/00 F25D17/00 F25D23/00 (Core/Invention);
 B29C47/06 (Core/Non-invention)

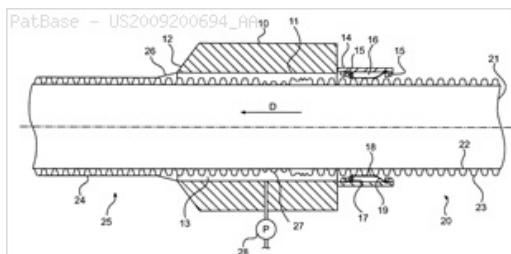
International (IPC 1-7): B29C47/02 B29C47/06 B29C47/12
 B29C49/00 B29D23/00 F16L25/00

CPC: B29C2035/1658 B29L2023/18 B29L2023/186 B29C48/0015
 B29C48/87 B29C48/08 B29C48/34 F16L11/15 B29C48/0017
 B29C48/0022 B29C48/90 B29C48/904 B29C48/9115 B29C49/0021
 B29C2948/92571 B29C2948/9258 B29C2948/92619
 B29C2948/92704 B29C2948/92876 B29C2948/92923 B29D23/18

F16L25/0054 Y10T156/1025 B29C48/09 B29C48/13 B29C48/151
 B29C48/21 B29C48/269 B29C48/30 B29C48/303 B29C48/336 B29C2948/92085 B29C2948/92304 B29C2948/92409
 B29C2948/92609 B29C2948/92904 B29C2948/9298 B29L2009/00 B29L2016/00 B29L2023/22 B29L2024/003

European: B29C47/00J10 B29C47/02B B29C47/08W B29C47/12D B29C47/28 B29C47/88C2 B29D23/18 F16L11/15
 F16L25/00K4 L29C35/16C L29C47/00J10 L29C47/00J6 L29C47/00L12 L29C47/00L6B L29C47/00L7 L29C47/06P L29C47/26D
 L29C49/00C2 L29C947/92B16 L29C947/92B44 L29C947/92C8D L29C947/92E14 L29C947/92E16 L29C947/92E18
 L29C947/92E18B L29C947/92E26 L29C947/92F10 L29C947/92F22 L29C947/92F8C L29C947/92F8D L29L16/00 L29L23/18
 L29L23/18C L29L23/22 L29L24/00C L29L9/00

US: 156/210 156/210S 156/378 156/378S 156/391 156/498 156/498S 156/500 156/500S 156/64 156/64P 264/101 264/101P
 264/171.29 264/209.3 264/209.300P 277/354 277/354S 425/113 425/113S 425/133.1 425/296 425/326.1 425/336 425/363
 425/369 425/377 425/380 425/388 425/392 425/396 425/461 425/72.1 62/259.1 62/259.100S 62/378 62/378S 62/63 62/63P



Family:

Publication number	Publication date	Application number	Application date
AR080484 AA	20120411	AR2011P100745	20110310
BR112012022191 A2	20190910	BR20121122191	20110304
CA2681901 AA	20100414	CA20092681901	20091008
CA2681901 C	20170516	CA20092681901	20091008
CA2681902 AA	20100414	CA20092681902	20091008
CA2681902 C	20170214	CA20092681902	20091008
CA2792088 AA	20110915	CA20112792088	20110304
CA2792088 C	20161004	CA20112792088	20110304
CL2009000311 A1	20090814	CL2009000311	20090211
CL2012002460 A1	20121221	CL20120002460	20120905
CL54119 B	20170412	CL20120002460	20120905
CL54623 B	20170816	CL2009000311	20090211
MX2012010200 A1	20121001	MX20120010200	20110304
PE07652013 A1	20130626	PE20120001461	20110304
PE20130765 A1	20130626	PE20120001461	20110304
US2009200694 AA	20090813	US20080028990	20080211
US2010089074 AA	20100415	US20080250960	20081014
US2010090366 AA	20100415	US20080251034	20081014
US2010224306 AA	20100909	US20100721253	20100310
US7988438 BB	20110802	US20080028990	20080211
US8114324 BB	20120214	US20080251034	20081014
US8579624 BB	20131112	US20100721253	20100310
WO09102642 A1	20090820	WO2009US33461	20090206
WO11112456 A2	20110915	WO2011US27210	20110304
WO11112456 A3	20120126	WO2011US27210	20110304

Priority:

US20080028990 20080211 US20080250960 20081014 US20080251034 20081014
 US20100721253 20100310 WO2011US27210 20110304

Probable Assignee: ADVANCED DRAINAGE SYSTEMS INC

Assignee(s): (std): KELLEY DAVID J ; SUTTON GERALD S ; SHAFFER WILLIAM V ; ADVANCED DRAINAGE SYST ; KOLBET RANDALL A

Assignee(s): PNC BANK NATIONAL ASSOCIATION ; PSA INC ; SEWER TAP INC ; SPARTAN CONCRETE INC ; STORMTECH LLC ; HANCOR HOLDING CORP ; HANCOR INC ; HANCOR INT INC ; MEDIA PLUS INC ; BARCLAYS BANK PLC ADMINISTRATIVE AGENT AS ; ADS INT INC ; ADS STRUCTURES INC ; ADS VENTURES INC ; ADS WORLDWIDE INC ; ADVANCED DRAINAGE OF OHIO INC ; ADVANCED DRAINAGE SYSTEMS INC

Inventor(s): (std): SUTTON GERALD S ; SHAFFER WILLIAM V ; KOLBET RANDALL A ; KELLEY DAVID J ; DAVID J KELLEY ; GERALD S SUTTON ; RANDALL A KOLBET ; WILLIAM V SHAFFER

Inventor(s): DAVID JKELLEY ; RANDALL AKOLBET ; WILLIAM VSHAFFER ; GERALD SSUTTON

Agent(s): SMART AND BIGGAR ; SMART AND BIGGAR LLP ; ALESSANDRI ; ESTUDIO FEDERICO VILLASECA Y COMPANIA ; FINNEGAN HENDERSON FARABOW GARRETT AND DUNNER LLP ; GARRETT ARTHUR S

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 NZ 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

45) Family number: 65759340 (US2017146177A)

© PatBase

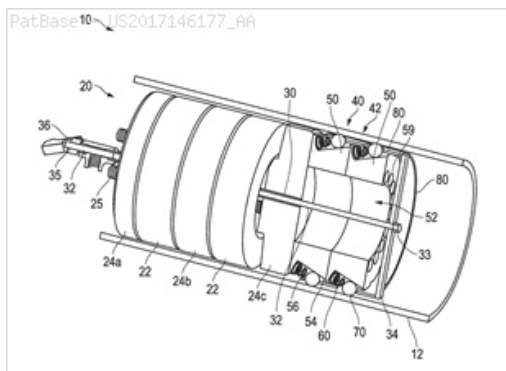
Title: GRIPPING APPARATUS AND DEVICES FOR PLUGGING OF PIPES, ORIFICES OR CONNECTING

Abstract: A gripping apparatus for use in gripping a pipe, for holding forces, or restraining relative movement. The pipe defines an inside radius. The gripping apparatus has an outer surface where the outer surface defines a transition surface or a curve. In certain embodiments the transition surface or curve has a radius less than or equal to the inside radius of the pipe.

Classifications:

International (IPC 8-9): E21B33/129 F16L29/02 F16L37/33
 F16L55/10 F16L55/11 F16L55/128 F16L55/132 F16L55/136
 F16L55/1645 F16L55/179 F16L7/02 (Advanced/Invention)

CPC: F16L55/136 F16L2101/60 E21B23/01 F16L55/1283 F16L55/132 F16L55/11 F16L55/1133
US: 1/1 138/89



Family:

Publication number	Publication date	Application number	Application date
AU2016355337 AA	20180621	AU20160355337	20161118
CA3004787 AA	20180508	CA20163004787	20161118
CA3004787 C	20190115	CA20163004787	20161118
EP3377797 A1	20180926	EP20160867288	20161118
EP3377797 A4	20191030	EP20160867288	20161118
US2017146177 AA	20170525	US20160356206	20161118
US2017152985 AA	20170601	US20160381394	20161216
US2018119866 AA	20180503	US20170852239	20171222
US9810364 BB	20171107	US20160381394	20161216
US9927058 BB	20180327	US20160356206	20161118
WO17087890 A1	20170526	WO2016US62928	20161118
WO19126684 A1	20190627	WO2018US67165	20181221

Priority:

US2015025831P 20151120	US20160313376P 20160325	US20160366591P 20160725
US20160356206 20161118	WO2016US62928 20161118	US20160381394 20161216
US20170852239 20171222	US20180771723P 20181127	

Probable Assignee: USA IND INC

Assignee(s): (std): USA IND INC

Assignee(s): SALLEE RICHARD ; SUE CASEY ; SUE TRACY

Inventor(s): (std): SALLEE RICHARD ; SUE CASEY ; SUE TRACY

Agent(s): FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; RIDOUT AND MAYBEE LLP; POTTER CLARKSON LLP; MARK A; OATHOUT LAW FIRM; LAURA; OATHOUT MARK 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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

46) Family number: 6882340 (US4107452A)

© PatBase

Title: Electrically conductive pipe fitting

Abstract: A fitting for the end of a plastic pipe segment includes a body having an open-ended bore in which the pipe segment is received. A wedge-shaped grip ring and annular gasket are fitted over the pipe segment and compresses against an annular shoulder provided in the sidewall of the bore by a compression nut threaded into the open end of the bore. Abutting complementarily inclined surfaces on the compression nut and the grip ring provide simultaneous radial compression of the grip ring and axial compression of the gasket when the compression nut is tightened. A sleeve-shaped stiffener within the pipe segment prevents deformation of the pipe wall. A plurality of radially extending serrations on the inside surface of the grip ring and on the outside surface of the stiffener engage the inner and outer surfaces of the pipe wall to secure the pipe segment to the fitting. An electrically conductive collar may be provided within the bore to establish electrical continuity between adjacent pipe segments.

Classifications:

International (IPC 8-9): F16L25/01 F16L47/16

F16L47/26 (Advanced/Invention);

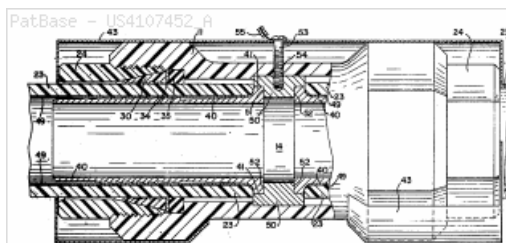
F16L25/00 F16L47/00 (Core/Invention)

International (IPC 1-7): F16L11/12

CPC: F16L25/01 F16L47/16 F16L47/26

European: F16L25/01 F16L47/16 F16L47/26

US: 174/84S 285/250 285/323 285/383 285/423 285/55 285/81 361/215



Family:

Publication number	Publication date	Application number	Application date
US4107452 A	19780815	US19760732378	19761014

Priority:

US19760732378 19761014

Probable Assignee:

RAZVI MASOOD H

Assignee(s): (std):

RAZVI MASOOD H

Inventor(s): (std):

RAZVI MASOOD H

Title: VALVE CONNECTIONS

Abstract: A valve assembly having a valve body; at least one port to receive tubing; and a collar group to secure the tubing to the port, wherein the collar group is selected from a first collar group configured to secure the tubing by a flattening a washer, thereby driving teeth of the washer into the tubing, and a second collar group having a smooth interior surface to which the tubing is bonded, wherein either the first or the second collar groups may be interchangeably threaded onto the port.

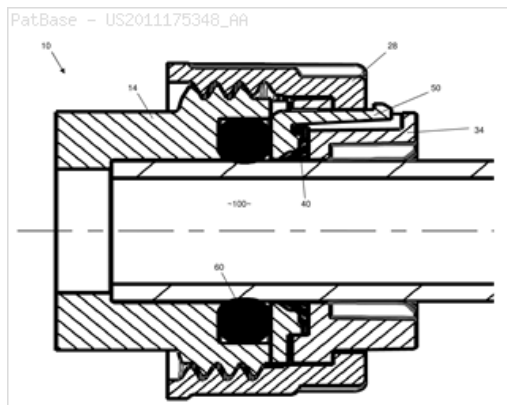
Classifications:

International (IPC 8-9): F16K27/00 F16L19/00 F16L19/03 F16L19/08 F16L19/10 F16L29/00 F16L37/12 (Advanced/Invention)

CPC: F16L19/12 F16L19/10

European: F16L19/10

US: 251/148 285/313 285/313P 285/340 285/354 285/382

**Family:**

Publication number	Publication date	Application number	Application date
BR112012017682 A2	20160405	BR20121117682	20110112
BR112012017682 B1	20200331	BR20121117682	20110112
CN102782383 A	20121114	CN201180006834	20110112
CN102782383 B	20150311	CN201180006834	20110112
DE602011026134 D1	20160616	DE201160026134T	20110112
EP2536970 A1	20121226	EP20110700496	20110112
EP2536970 B1	20160504	EP20110700496	20110112
IN07034CN2012 A	20140103	IN2012CN07034	20120813
JP2013518219 T2	20130520	JP20120550031T	20110112
JP5968226 B2	20160810	JP20120550031T	20110112
US2011175348 AA	20110721	US20110004212	20110111
US2012326439 AA	20121227	US20120594651	20120824
US8833733 BB	20140916	US20110004212	20110111
WO11090856 A1	20110728	WO2011US20946	20110112

Priority:

US20100297226P 20100121	US20110004212 20110111	EP20110700496 20110112
WO2011US20946 20110112	US20110004212 20110111	US20120594651 20120824

Probable Assignee: AUTOMATIC SWITCH CO

Assignee(s): (std): AUTOMATIC SWITCH CO ; BOGERT ROY B ; GANCI CHRISTOPHER

Assignee(s): AUTOMATIC SWITCH CO FLORHAM PARK ; AUTOMATIC SWITCH COMPANY

Inventor(s): (std): GANCI CHRISTOPHER ; BOGERT ROY B ; CHRISTOPHER GANCI ; ROY B BOGERT

Agent(s): LEMCKE BROMMER AND PARTNER PATENTANWALTE PARTNERSCHAFT MBB; BRYN JACOBSEN CAELIA; KAWAGUTI AND PARTNERS; LOCKE LORD LLP; TERRELL DAVID 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 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

Title: CONNECTING DEVICE FOR PIPES OF DEFORMABLE MATERIALS

Abstract: The device has an insert (21) with a threading (35) formed of a half-round net with wide pitch to be screwed in an end of a pipe (1). The insert or a socket (41) has a variable section to deform radially the pipe end to lock it by radial crushing between the insert and socket. The socket and a connection (51) respectively have hexagonal gripping areas (45, 55) allowing the use of existing open end wrenches.

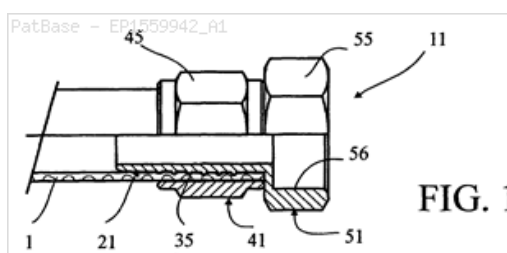
Classifications:

International (IPC 8-9): F16L33/22 F16L33/24 (Advanced/Invention); F16L33/22 F16L33/24 (Core/Invention)

International (IPC 1-7): F16L21/04 F16L33/22 F16L33/24 F16L47/04 F16L47/24

CPC: F16L33/226 F16L33/24

European: F16L33/22H2 F16L33/24

**Family:**

Publication number	Publication date	Application number	Application date
EP1559942 A1	20050803	EP20050290215	20050201
FR2865791 A1	20050805	FR20040000948	20040202

Priority:

FR20040000948 20040202

Probable Assignee: RIQUIER HOLDING

Assignee(s): (std): RIQUIER HOLDING ; RIQUIER HOLDING S A

Assignee(s): RIQUIER HOLDING SA

Inventor(s): (std): PALIER FRANCOIS

Inventor(s): FRANCOIS PALIER

Agent(s): CABINET LAURENT ET CHARRAS

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

49) Family number: 69830356 (US2019301641A)

© PatBase

Title: SUBSEA FLANGE TOOL

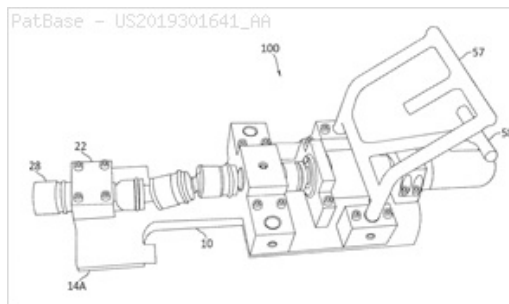
Abstract: A torquing tool for rotating bolts connecting a pipe flange in a subsea environment, comprising a first guide for guiding movement of the torquing along a pipe, a socket for engaging a first bolt, a shaft for transferring torque from a motor to the socket, and a first protruding member for insertion between the pipe and a second bolt of the pipe flange, to prevent the torquing tool from rotating due to counter torque created while applying torque to the first fastener. The torquing tool can further comprise a second protruding member adjacent the socket, wherein the second protruding member can be inserted between the pipe and a third bolt of the pipe flange. The torquing tool can further comprise an angled shaft for transferring torque from the motor to the socket, wherein an axis of rotation of the motor is different from an axis of rotation of the socket.

Classifications:

International (IPC 8-9): B23P19/06 E21B19/16 E21B41/04

E21B43/013 F16L1/00 F16L1/26 (Advanced/Invention)

CPC: B23P19/06 F16L1/26



Family:

Publication number	Publication date	Application number	Application date
AU2017362324 AA	20190606	AU20170362324	20171115
GB201906859 A0	20190626	GB20190006859	20171115
GB2570093 A1	20190710	GB20190006859	20171115
ID201907870 A	20191108	ID2019PID04339	20171115
MX2019005586 A1	20190812	MX20190005586	20171115
US2019301641 AA	20191003	US20170461341	20171115
WO18093914 A1	20180524	WO2017US61818	20171115

Priority:

US20160422455P 20161115

US20170461341 20171115

WO2017US61818 20171115

Probable Assignee: WRIGHT DAVID

Assignee(s): (std): WRIGHT DAVID C ; WRIGHT DAVID ; DAVID C WRIGHT

Inventor(s): (std): WRIGHT DAVID ; WRIGHT DAVID C ; DAVID C WRIGHT

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; RATU SANTI ERMAWATI ST; 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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

50) Family number: 2363378 (US4350372A)

© PatBase

Title: EXPANSION COUPLING FOR LARGE DIAMETER PLASTIC PIPES

Abstract: An expansion coupling connecting a first pipe with a second pipe includes an imperforate expansion member having a first cylindrical end capable of fitting to and forming an impervious fluid seal with the first pipe and a second cylindrical end capable of fitting to and forming an impervious fluid seal to the second pipe. Integrally formed with and interspaced between the first and second cylindrical ends is an expandable, contractable bellows. A sliding sleeve fits over the expansion member and both protects it and prevents distortion of the bellows portion of the expansion member. The sliding sleeve has a first sleeve member, a portion of which connects to the first pipe and a portion of which extends over the bellows, and a second sleeve member, a portion of which connects to the second pipe and a portion of which slides over that portion of the first sleeve member located over the bellows. As the bellows expands and contracts the respective sleeve members slide with respect to each other.

Classifications:

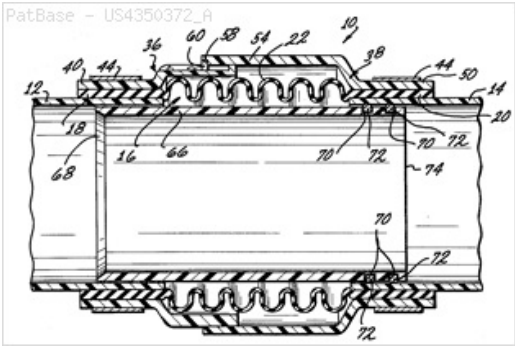
International (IPC 8-9): F16L27/12 (Advanced/Invention);

F16L27/12 (Core/Invention)

International (IPC 1-7): F16L27/12

CPC: F16L27/111 F16L27/1275

European: F16L27/12
US: 285/226 285/301 285/45



Family:

Publication number	Publication date	Application number	Application date
CA1170686 A1	19840710	CA19810377499	19810513
US4350372 A	19820921	US19800170477	19800721

Priority:

US19800114051 19800121 US19800170477 19800721 CA19810377499 19810513

Probable Assignee: LSP PRODUCTS GROUP INC

Assignee(s): (std): LOGSDON DUANE D

Assignee(s): LOGSDON FOUNDATION ; LSP SPECIALTY PRODUCTS CO ; LSP PRODUCTS GROUP INC ; LSPCLOSE INC

Inventor(s): (std): LOGSDON DUANE D

Agent(s): BORDEN LADNER GERVAIS LLP