

Search history

Search PN=(WO2015031273) (Results 1)

1:

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Search 2 AND (TAC = track WF2 chain) (Results 28)

3:

Search 3 AND (TAC = rotate# W3 (sleeve* OR bush*)) (Results 9)

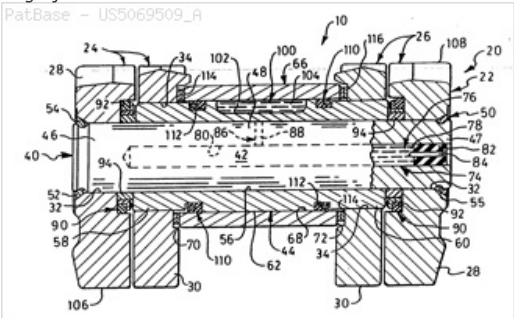
4:

Title: ENDLESS TRACK CHAIN WITH ROTATABLE SLEEVE

Abstract: Source: US5069509A An endless track chain is provided with a rotatable sleeve that is mounted about the track bushing to provide the track with longer external bushing life. The rotatable sleeve is sealed and lubricated, as is the standard track joint. However, each is separate from the other with its own supply of lubricant. As a consequence, a failure of a seal for the rotatable sleeve has no effect on the track hinge joint.

Classifications:

International (ipc 8-9): B62D55/088 B62D55/092
B62D55/20 (Advanced/Invention);
B62D55/08 B62D55/20 (Core/Invention)
International (ipc 1-7): B62D55/088 B62D55/092 B62D55/21
CPC: B62D55/0887 B62D55/092 B62D55/202
European: B62D55/088D B62D55/092 B62D55/20E
US: 305/104 305/11 305/118 305/204 305/58PC 305/58R



Family:

Publication number	Publication date	Application number	Application date
AU199064248 A1	19920107	AU19900064248	19900823
AU630841 B2	19921105	AU19900064248	19900823
CA2062955 AA	19911129	CA19902062955	19900823
CA2062955 C	20001114	CA19902062955	19900823
US5069509 A	19911203	US19900540042	19900618
WO9119634 A1	19911226	WO1990US04749	19900823

Priority:

US19900540042 19900618 WO1990US04749 19900823

Probable Assignee: CATERPILLAR INC

Assignee(s): (std): CATERPILLAR INC

Assignee(s): JOHNSON MARK L ; OERTLEY THOMAS E

Inventor(s): (std): JOHNSON MARK L ; OERTLEY THOMAS E

Inventor(s): THOMAS E OERTLEY ; MARK L JOHNSON

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; KIRBY EADES GALE BAKER

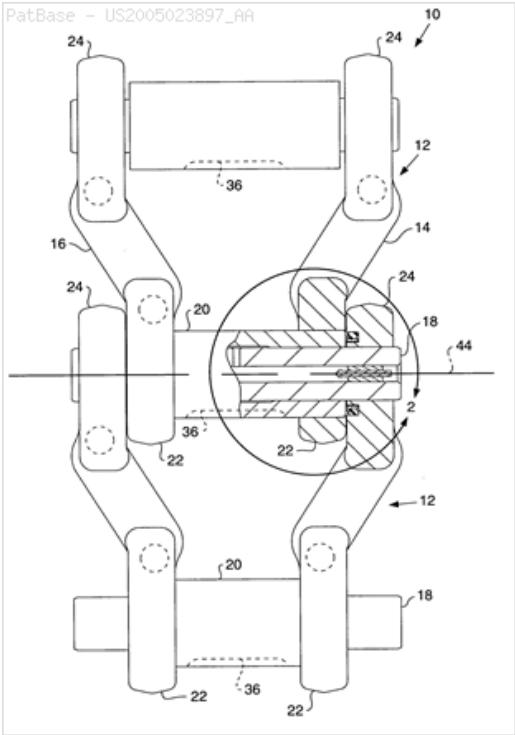
Designated states: AU CA

Title: METHOD AND APPARATUS FOR REBUILDING TRACK ASSEMBLY

Abstract: Source: US2005023897A A method and apparatus for rebuilding a **track chain** assembly is disclosed which restores the ability of the pin joint to retain lubricant to its original condition. The method includes disassembling the **track chain** assembly, reassembling the **track chain** assembly and sealing the radial surface of the track bushing at a location radially inward or radially outward from the original seal location. The apparatus includes a seal assembly with a seal portion moved either inward or outward from the original seal location.

Classifications:

International (ipc 8-9): B62D55/092 B62D55/21
B62D55/32 (Advanced/Invention);
B62D55/00 B62D55/08 B62D55/20 (Core/Invention)
International (ipc 1-7): E05D7/10
CPC: B62D55/092 B62D55/21 B62D55/32
European: B62D55/092 B62D55/21 B62D55/32
US: 305/202



Family:

Publication number	Publication date	Application number	Application date
ITTO20040505 A1	20041020	IT2004TO00505	20040720
US2005023897 AA	20050203	US20030631534	20030731

Priority:

US20030631534 20030731

Probable Assignee: CATERPILLAR INC

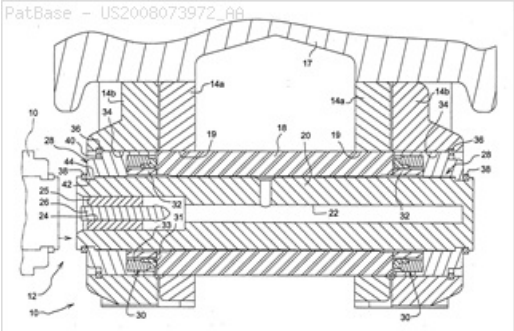
Assignee(s): (std): ANDERTON PETER W ; CATERPILLAR INC ; KUPPER DAVID G ; METZ JERRY A
Inventor(s): (std): ANDERTON PETER W ; KUPPER DAVID G ; METZ JERRY A
Inventor(s): KUPPER DAVID ; METZ JERRY ; ANDERTON PETER
Agent(s): CATERPILLAR INC 100 NE ADAMS STREET

Title: CARTRIDGE FOR USE AS JOINT IN ENDLESS **TRACK CHAIN** AND ASSOCIATED METHOD

Abstract: Source: US2008073972A A cartridge is provided for use as a joint between links of an endless **track chain**. The cartridge is designed for assembly prior to attachment of the cartridge to the links. An associated method is disclosed.

Classifications:

International (IPC 8-9): B62D55/00 B62D55/12 B62D55/205
B62D55/21 B62D55/32 (Advanced/Invention);
B62D55/00 B62D55/08 B62D55/20 (Core/Invention)
CPC: B62D55/0887 B62D55/21 B62D55/213
European: B62D55/088D B62D55/21 B62D55/21C
US: 305/103 305/106 305/203



Family:

Publication number	Publication date	Application number	Application date
CA2600819 AA	20080322	CA20072600819	20070906
DE502007011401 D1	20130502	DE200750011401T	20070921
EP1902932 A1	20080326	EP20070116976	20070921
EP1902932 B1	20130306	EP20070116976	20070921
JP2008074391 A2	20080403	JP20070213229	20070820
US2008073972 AA	20080327	US20060525367	20060922
US7766433 BB	20100803	US20060525367	20060922

Priority:

CA20072600819 20070906 EP20070116976 20070921 US20060525367 20060922

Probable Assignee: DEERE AND CO

Assignee(s): (std): DEERE AND CO

Assignee(s): DEERE AND CO MOLINE ; DEERE and COMPANY ; MULLIGAN PATRICK JOHN ; WODRICH TIMOTHY DIRK ; SCHRAUBEN KEVIN DOUGLAS ; BIHL DANIEL FREDERICK

Inventor(s): (std): BIHL DANIEL ; BIHL DANIEL FREDERICK ; MULLIGAN PATRICK J ; MULLIGAN PATRICK JOHN ; SCHRAUBEN KEVIN D ; SCHRAUBEN KEVIN DOUGLAS ; WODRICH TIMOTHY D ; WODRICH TIMOTHY DIRK

Inventor(s): SCHRAUBEN KEVIN D BELLEVUE ; MULLIGAN PATRICK J DUBUQUE ; BIHL DANIEL DUBUQUE

Agent(s): BORDEN LADNER GERVAIS LLP; LOESER IRIS; MASUI CHUJI; ONO SHINJIRO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO; DEERE AND COMPANY; DEERE AND CO

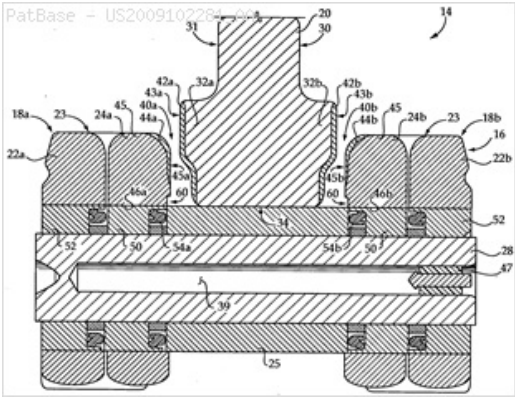
Designated states: AL AT BA DE HR MK YU

Title: MACHINE AND TRACK ASSEMBLY FOR USE THEREWITH

Abstract: Source: US2009102281A A track assembly for a machine includes a track having inner track seals, a rotatable track engaging element such as an idler or drive sprocket and a contact interface for protecting the seals during guiding the track about the rotatable element. The contact interface may include sacrificial wear material on the rotatable element and sacrificial wear material on corresponding track links. The contact interface may have a configuration based on a location of the seals, and is adapted to inhibit wear of the track links in regions adjacent the seals. In another aspect, the contact interface is a guide interface.

Classifications:

International (IPC 8-9): B62D55/08 B62D55/088 B62D55/12 B62D55/14 B62D55/20 B62D55/21 F16H55/30 F16H55/36 (Advanced/Invention); B62D55/08 B62D55/14 B62D55/20 (Core/Invention)
CPC: B62D55/145 B62D55/21
European: B62D55/14D B62D55/21
US: 305/104 305/104P 305/106 305/106S 305/124 305/124S 305/137 305/137P 305/193 305/193S 305/194 305/194S 305/195 305/195S 305/197 305/198 305/199 305/199P 305/199S 305/201 474/152 474/152S 474/166 474/166S



Family:

Publication number	Publication date	Application number	Application date
CN101827747 A	20100908	CN200880112004	20081010
CN101827747 B	20130213	CN200880112004	20081010
DE602008017678 D1	20120927	DE200860017678T	20081010
EP2200890 A1	20100630	EP20080839995	20081010
EP2200890 B1	20120801	EP20080839995	20081010
ES2390938 T3	20121119	ES20080839995T	20081010
US2009102281 AA	20090423	US20070975206	20071018
US2011006597 AA	20110113	US20100888542	20100923
US2012193976 AA	20120802	US20120443290	20120410
US2012193977 AA	20120802	US20120443353	20120410
US2012193978 AA	20120802	US20120443429	20120410
US2012193980 AA	20120802	US20120443396	20120410
US8100483 BB	20120124	US20070975206	20071018
US8172342 BB	20120508	US20100888542	20100923
US8465110 BB	20130618	US20120443353	20120410
US8540325 BB	20130924	US20120443290	20120410
WO09051674 A1	20090423	WO2008US11680	20081010

Priority:

EP20080839995	20081010	US20070975206	20071018	US20100888542	20100923
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Probable Assignee: CATERPILLAR INC

Assignee(s): (std): CLARKE DONOVAN ; CLARKE DONOVAN S ; DIEKEVERS MARK ; DIEKEVERS MARK S ; PENROD VICTOR M ; ZHENG JIANPING ; RECKER ROGER L ; STEINER KEVIN L ; STEINER KEVIN ; CATERPILLAR INC

Assignee(s): CATERPILLAR INC PEORIA

Inventor(s): (std): CLARKE DONOVAN ; CLARKE DONOVAN S ; DIEKEVERS MARK ; DIEKEVERS MARK S ; JIANPING ZHENG ; PENROD VICTOR ; PENROD VICTOR M ; RECKER ROGER ; RECKER ROGER L ; STEINER KEVIN ; STEINER KEVIN L ; ZHENG JIANPING

Inventor(s): ZHENG JIANPING C O CATERPILLAR INC ; ZHENG JIANPINGC O CATERPILLAR INC PEORIA ; STEINER KEVIN L C O CATERPILLAR INC ; STEINER KEVIN LC O CATERPILLAR INC PEORIA ; RECKER ROGER L C O CATERPILLAR INC ; RECKER ROGER LC O CATERPILLAR INC PEORIA ; PENROD VICTOR M C O CATERPILLAR INC ; PENROD VICTOR MC O CATERPILLAR INC PEORIA ; DIEKEVERS MARK S C O CATERPILLAR INC ; DIEKEVERS MARK SC O CATERPILLAR INC PEORIA ; CLARKE DONOVAN S C O CATERPILLAR INC ; CLARKE DONOVAN SC O CATERPILLAR INC PEORIA

Agent(s): KRAMER BARSKE SCHMIDTCHEN PATENTANWALTE PARTG MBB; PREUSS UDO; CATERPILLAR C O LIELL MCNEIL AND HARPER; CATERPILLAR C O LIELL MCNEIL AND HARPER INTELLECTUAL PROPERTY DEPARTMENT; LIELL AND MCNEIL; BECKMAN WILLIAM A ET AL

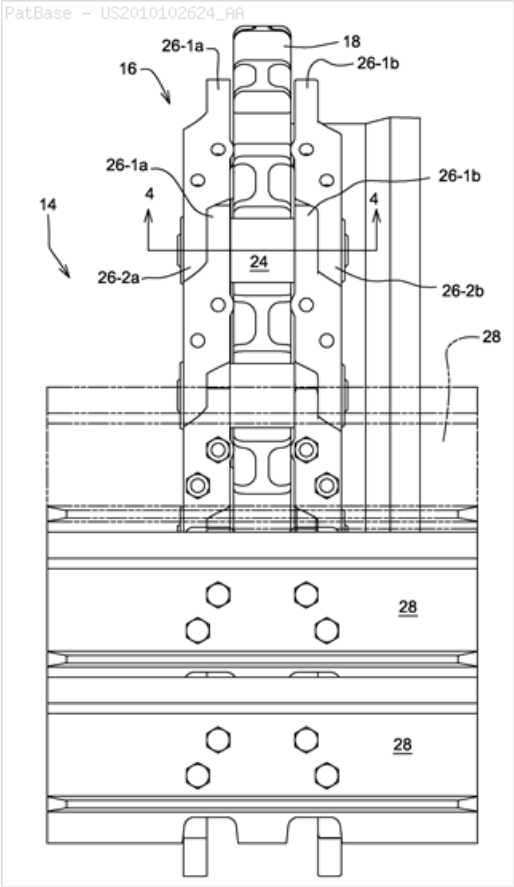
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Title: DUAL-BUSHING **TRACK CHAIN** CARTRIDGE

Abstract: Source: US2010102624A An endless track chairs for use with a track-type vehicle comprises a cartridge joined to the links of first and second link sets for relative rotation between the link sets.

Classifications:

International (ipc 8-9): B60B19/00 B62D55/088 B62D55/12 B62D55/18 B62D55/20 B62D55/205 B62D55/21 B62D55/26 E02F9/02 F16C17/10 F16C17/18 F16C33/74 F16F1/34 F16G13/02 (Advanced/Invention); B62D55/18 B62D55/20 E02F9/02 F16C17/00 F16C33/72 (Core/Invention)
CPC: B62D55/18 B62D55/088 B62D55/20 B62D55/205 F16C2326/20 B62D55/21
European: B62D55/21
US: 305/104 305/118 305/195 305/195P 305/198 305/198S 305/202



Family:

Publication number	Publication date	Application number	Application date
CN101723006 A	20100609	CN200910180289	20091013
CN101723006 B	20130313	CN200910180289	20091013
IT1396271 B1	20121116	IT2009RM00540	20091020
ITRM20090540 A1	20100425	IT2009RM00540	20091020
JP2010133230 A2	20100617	JP20090243335	20091022
JP5480591 B2	20140423	JP20090243335	20091022
KR101650288 B1	20160823	KR20090101021	20091023
KR20100045930 A	20100504	KR20090101021	20091023
US2010102624 AA	20100429	US20080257976	20081024
US7850256 BB	20101214	US20080257976	20081024

Priority:

US20080257976 20081024

Probable Assignee: DEERE AND CO

Assignee(s): (std): DEERE AND CO ; MULLIGAN PATRICK J

Assignee(s): DEERE AND COMPANY

Inventor(s): (std): MULLIGAN PATRICK J

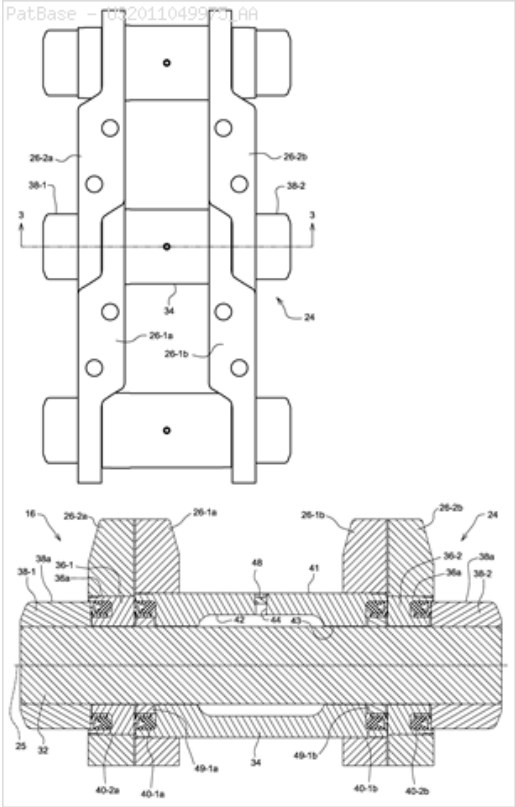
Agent(s): TAKEUCHI SHIGEO; ONO SHINJIRO; SHAMOTO ICHIO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO; DEERE AND COMPANY; DEERE AND CO

Title: **TRACK CHAIN** JOINT WITH ROTATABLE PIN

Abstract: Source: US2011049975A A **track chain** joint for an endless **track chain** of a track-type vehicle is configured to engage first and second sprockets of a drive wheel of the track-type vehicle.

Classifications:

International (IPC 8-9): B62D55/092 B62D55/12 B62D55/13 B62D55/20 B62D55/205 B62D55/21 (Advanced/Invention)
CPC: B62D55/092 B62D55/12 B62D55/202 B62D55/21
European: B62D55/092 B62D55/12 B62D55/20E B62D55/21
US: 305/195 305/196 305/196P 305/202 305/202S



Family:

Publication number	Publication date	Application number	Application date
CA2712661 AA	20110227	CA20102712661	20100813
CA2712661 C	20170307	CA20102712661	20100813
DE602010004400 D1	20130307	DE201060004400T	20100826
EP2289775 A2	20110302	EP20100174197	20100826
EP2289775 A3	20110907	EP20100174197	20100826
EP2289775 B1	20130102	EP20100174197	20100826
US2011049975 AA	20110303	US20090548682	20090827
US8070241 BB	20111206	US20090548682	20090827

Priority:

CA20102712661 20100813 EP20100174197 20100826 US20090548682 20090827

Probable Assignee: DEERE AND CO

Assignee(s): (std): DEERE AND CO ; MULLIGAN PATRICK J

Assignee(s): DEERE AND CO MOLINE ; DEERE AND COMPANY

Inventor(s): (std): MULLIGAN PATRICK J

Inventor(s): MULLIGAN PATRICK J DUBUQUE

Agent(s): BORDEN LADNER GERVAIS LLP; MUENCH CHRISTIAN

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

Title: **TRACK CHAIN** CARTRIDGE HAVING THRUST BEARINGS

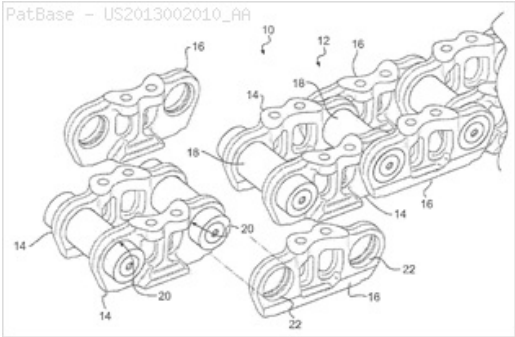
Abstract: Source: US2013002010A A cartridge for a **track chain** is disclosed. The cartridge includes a track pin. The cartridge also includes a **rotatable bushing** and a **rotatable** bearing located on the track pin. The cartridge further includes a first thrust bearing located on the track pin between the bearing and the bushing. The first thrust bearing is configured to contact the rotatable bearing and configured to contact the **rotatable bushing**. The first thrust bearing is configured to bear thrust loads and not radial loads. The cartridge may further include a collar located at an end of the track pin. The cartridge includes a second thrust bearing located between the bearing and the collar. The second thrust bearing is configured to contact the rotatable bearing and configured to contact the collar. The second thrust bearing is configured to bear thrust loads and not radial loads.

Classifications:

International (IPC 8-9): B62D55/088 B62D55/21 (Advanced/Invention)

CPC: B62D55/21 B62D55/0887

US: 1/1 305/104 305/202



Family:

Publication number	Publication date	Application number	Application date
US2013002010 AA	20130103	US20120532278	20120625
US9126645 BB	20150908	US20120532278	20120625
WO13003552 A1	20130103	WO2012US44577	20120628

Priority:

US20110501879P 20110628 US20120532278 20120625

Probable Assignee: CATERPILLAR INC

Assignee(s): (std): CATERPILLAR INC ; HASSELBUSCH MICHAEL ; JOHANNSEN ERIC JAMES

Inventor(s): (std): HASSELBUSCH MICHAEL ; JOHANNSEN ERIC JAMES

Agent(s): FINNEGAN HENDERSON FARABOW GARRETT AND DUNNER LLP; BARNES D JAMES ET AL

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

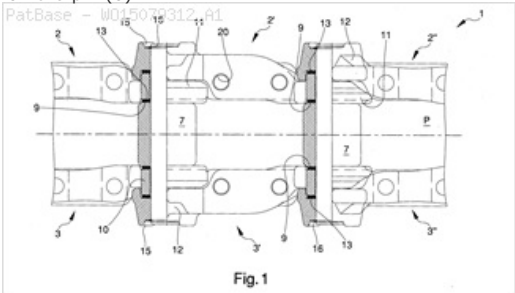
Abstract: The **track chain** (1) comprises: a plurality of links (2, 3, 2', 3', 2'', 3'') hinged in pairs, wherein each link comprises a pair of lateral semi-links (2, 3, 2', 3', 2'', 3''), each semi-link (2, 3, 2', 3', 2'', 3'') comprising a first and a second through hole (4, 5); at least a hinge pin (6), which articulates a pair of adjacent links and is inserted both in the first holes (4) of a link of the pair and in the second holes (5) of the other link, to define their mutual articulation; and at least a **rotating bushing** (7), mounted revolving on the pin (6), between the semi-links (2, 3, 2', 3', 2'', 3'') connected to the pin (6); the bushing (7) and the semi-links (2, 3, 2', 3', 2'', 3'') being dry-mounted on the pin (6).

Classifications:

International (IPC 8-9): B62D55/088 B62D55/21

F16G1/10 (Advanced/Invention)

CPC: B62D55/213 B62D55/0887 B62D55/21



Family:

Publication number	Publication date	Application number	Application date
BR102013030651 A2	20160202	BR20131030651	20131128
WO15079312 A1	20150604	WO20141B02617	20141128

Priority:

BR20131030651 20131128

Probable Assignee: UNDERCARRIAGE PARTECIPATION S R L

Assignee(s): (std): UNDERCARRIAGE PARTECIPATION S R L ; UNDERCARRIAGE PARTICIPATION S R L

Assignee(s): UNDERCARRIAGE PARTICIPATION SRL ; UNDERCARRIAGE PARTECIPATION SRL

Inventor(s): (std): BIOLCHINI PAOLO

Inventor(s): PAOLO BIOLCHINI

Agent(s): SBRENNIA NICOLA

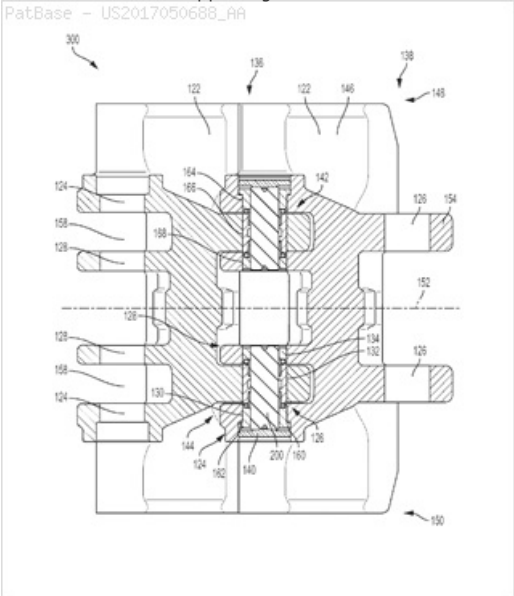
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Title: LUBRICATED CARTRIDGE FOR HYDRAULIC MINING SHOVEL TRACK

Abstract: Source: US2017050688A A cartridge assembly for a track chain includes a bushing and a track pin. The bushing has an outer surface and an inner surface, the inner surface defining a passage in the form of a cylindrical bore. The bushing forms a lubrication reservoir adjacent the inner surface and extending towards the outer surface of the bushing. The track pin is disposed within the cylindrical bore, and the bushing is rotatable with respect to the track pin. An outer surface of the track pin is in fluid communication with the lubrication reservoir. The outer surface of the bushing corresponds with an outer diameter of the cartridge assembly. The outer diameter of the cartridge assembly is less than a diameter of supporting bores such that the cartridge assembly is rotatable with respect to inside surfaces of the supporting bores.

Classifications:

International (IPC 8-9): B62D55/088 B62D55/092 B62D55/21 B62D55/32 (Advanced/Invention)
CPC: B62D55/092 B62D55/088 B62D55/32 B62D55/21
US: 305/105



Family:

Publication number	Publication date	Application number	Application date
US2017050688 AA	20170223	US20150830275	20150819
WO17030780 A1	20170223	WO2016US45118	20160802

Priority:

US20150830275 20150819

Probable Assignee: CATERPILLAR INC

Assignee(s): (std): CATERPILLAR INC

Inventor(s): (std): KOWALSKI THOMAS J ; OERTLEY THOMAS E

Agent(s): RUFENER A BRYCE ET AL

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