

Foreign Patents

Cam Followers			
Country	Application No.	Patent No.	Title
DE	17156433.9	602017005404.6	CAM FOLLOWER WITH TIRE HAVING AXIAL MOVEMENT MITIGATION FEATURES
DE	14717946.9	602014022308-7	NEEDLE ROLLER CAM FOLLOWER FOR HIGHER MILEAGE APPLICATIONS OF LIGHT, MEDIUM AND HEAVY DUTY VEHICLES
DE	16151075.5	602016020661.7	ROLLER FOR A FUEL PUMP ACTUATOR
EP	17156433.9	3211257	CAM FOLLOWER WITH TIRE HAVING AXIAL MOVEMENT MITIGATION FEATURES
EP	14717946.9	2971624	NEEDLE ROLLER CAM FOLLOWER FOR HIGHER MILEAGE APPLICATIONS OF LIGHT, MEDIUM AND HEAVY DUTY VEHICLES
EP	16151075.5	3048293	ROLLER FOR A FUEL PUMP ACTUATOR
Other Patents Pending			

Collets and Tool Holders			
Country	Application No.	Patent No.	Title
AU	2012311558	2012311558	ADJUSTABLE CLAMPING DEVICE
CH	12759742.5	2758199	ADJUSTABLE CLAMPING DEVICE
CH	13727111	3003614	Locking Mechanism for a Collet Assembly and Collet Assembly Including a Locking Mechanism
DE	12759742.5	602012043042-7	ADJUSTABLE CLAMPING DEVICE
DE	13727111	602013060015-5	Locking Mechanism for a Collet Assembly and Collet Assembly Including a Locking Mechanism
EP	12759742.5	2758199	ADJUSTABLE CLAMPING DEVICE
EP	13727111	3003614	Locking Mechanism for a Collet Assembly and Collet Assembly Including a Locking Mechanism
FR	12759742.5	2758199	ADJUSTABLE CLAMPING DEVICE
FR	13727111	3003614	Locking Mechanism for a Collet Assembly and Collet Assembly Including a Locking Mechanism
JP	2014-531209	6159331	ADJUSTABLE CLAMPING DEVICE
JP	2016-515666	6185158	Locking Mechanism for a Collet Assembly and Collet Assembly Including a Locking Mechanism
Other Patents Pending			

Duct Couplings			
Country	Application No.	Patent No.	Title
DE	04753209	602004041494-8	Flexible Coupling for Gas Conduits
DE	04801780	602004022672.6	Spring-Loaded 'L'-Shaped Seal Ring
DE	09165565	602004041494-8	Offset Stacked Sealing System
EP	04753209	1631764	Flexible Coupling for Gas Conduits
EP	04801780	1639202	Spring-Loaded 'L'-Shaped Seal Ring
EP	09165565	2157340	Offset Stacked Sealing System
FR	04753209	1631764	Flexible Coupling for Gas Conduits
FR	04801780	1639202	Spring-Loaded 'L'-Shaped Seal Ring
FR	09165565	2157340	Offset Stacked Sealing System
GB	04753209	1631764	Flexible Coupling for Gas Conduits
GB	04801780	1639202	Spring-Loaded 'L'-Shaped Seal Ring
GB	09165565	2157340	Offset Stacked Sealing System
NL	04753209	1631764	Flexible Coupling for Gas Conduits
NL	09165565	2157340	Offset Stacked Sealing System
Other Patents Pending			

Fasteners			
Country	Application No.	Patent No.	Title
Patents Pending			

Plain Journal Bearings			
Country	Application No.	Patent No.	Title
Patents Pending			

Plain Bearings			
Country	Application No.	Patent No.	Title
CN	201611080311.9	106812789	SELF-LUBRICATED THRUST BEARING FOR A HINGED AIRCRAFT WING
DE	14178588.1	2977627	Self-Aligning Outer Race
DE	16201083.9	3173639	SELF-LUBRICATED THRUST BEARING FOR A HINGED AIRCRAFT WING
DE	17171217.7	3255292	BEARING SYSTEM WITH SELF-LUBRICATION FEATURES, SEALS, GROOVES AND SLOTS FOR MAINTENANCE-FREE OPERATION
EP	14178588.1	2977627	Self-Aligning Outer Race
EP	16201083.9	3173639	SELF-LUBRICATED THRUST BEARING FOR A HINGED AIRCRAFT WING

EP	17171217.7	3255292	BEARING SYSTEM WITH SELF-LUBRICATION FEATURES, SEALS, GROOVES AND SLOTS FOR MAINTENANCE-FREE OPERATION
FR	14178588.1	2977627	Self-Aligning Outer Race
GB	17171217.7	3255292	BEARING SYSTEM WITH SELF-LUBRICATION FEATURES, SEALS, GROOVES AND SLOTS FOR MAINTENANCE-FREE OPERATION
Other Patents Pending			

Rods

Country	Application No.	Patent No.	Title
DE	15163639.6	2937579	COMPRESSION ROD HAVING A BUCKLING INITIATING FEATURE
DE	16201382.5	3176463	ROTATION ROD ASSEMBLY WITH SELF LUBRICATING LINER OR GROOVED BUSHINGS
EP	15163639.6	2937579	COMPRESSION ROD HAVING A BUCKLING INITIATING FEATURE
EP	16201382.5	3176463	ROTATION ROD ASSEMBLY WITH SELF LUBRICATING LINER OR GROOVED BUSHINGS
Other Patents Pending			

Rolling Element Bearings

Country	Application No.	Patent No.	Title
CA	2856859	2856859	Top Drive Bearing Made of Non-Vacuum Arc Remelted Steel
DE	13795887.2	2844886	HYBRID BEARING ASSEMBLY WITH ROLLING ELEMENTS AND PLAIN BEARING
DE	14171081	2927115	Composite Annular Seal Assembly for Bearings in Aircraft
DE	14198599.4	602014009258-6	ROLLER PROFILE FOR HOURGLASS ROLLER BEARINGS IN AIRCRAFT
DE	15170500.1	2952758	CORROSION RESISTANT BEARING
DE	15170493.9	602015007527-7	PRONG CAGE FOR A DOUBLE-ROW CONCAVE ROLLER BEARING FOR THE SUPPORT STRUCTURE OF A FLAP AT THE REAR OF AN AIRCRAFT WING
DE	15170498.8	2957781	SUPPORT STRUCTURE OF A FLAP AT THE REAR OF AN AIRCRAFT WING WITH DOUBLE-ROW CONCAVE ROLLER BEARING
DE	15200417.2	3034899	Seal for Self Aligning Roller Bearing
EP	13795887.2	2 844 886	HYBRID BEARING ASSEMBLY WITH ROLLING ELEMENTS AND PLAIN BEARING
EP	14171081	2927115	Composite Annular Seal Assembly for Bearings in Aircraft
EP	14198599.4	2894359	ROLLER PROFILE FOR HOURGLASS ROLLER BEARINGS IN AIRCRAFT
EP	15170500.1	2952758	CORROSION RESISTANT BEARING
EP	15170493.9	2952760	PRONG CAGE FOR A DOUBLE-ROW CONCAVE ROLLER BEARING FOR THE SUPPORT STRUCTURE OF A FLAP AT THE REAR OF AN AIRCRAFT WING
EP	15170498.8	2957781	SUPPORT STRUCTURE OF A FLAP AT THE REAR OF AN AIRCRAFT WING WITH DOUBLE-ROW CONCAVE ROLLER BEARING
EP	15200417.2	3034899	Seal for Self Aligning Roller Bearing
KR	1020150077790	10-1677080	Composite Annular Seal Assembly for Bearings in Aircraft
Other Patents Pending			

Self Lubricated Liners

Country	Application No.	Patent No.	Title
CA	2725433	2725433	Self-Lubricating Surface Coating Composition for Low Friction or Soft Substrate Applications
DE	12162105.6	2565243	Self-Lubricating Surface Coating Composition for Low Friction or Soft Substrate Applications
DE	09739896.0	602009022952-4	Self-Lubricating Surface Coating Composition for Low Friction or Soft Substrate Applications
DE	15186895.7	3001090	Self Lubricating Cam Follower Assembly
EP	12162105.6	2565243	Self-Lubricating Surface Coating Composition for Low Friction or Soft Substrate Applications
EP	09739896.0	2285884	Self-Lubricating Surface Coating Composition for Low Friction or Soft Substrate Applications
EP	15186895.7	3001090	Self Lubricating Cam Follower Assembly
GB	09739896.0	2285884	Self-Lubricating Surface Coating Composition for Low Friction or Soft Substrate Applications
JP	2011-507670	5384619	Self-Lubricating Surface Coating Composition for Low Friction or Soft Substrate Applications
Other Patents Pending			

Spherical Plain Bearings

Country	Application No.	Patent No.	Title
CN	201280045772	ZL 201280045772.6	LOW FRICTION SEAL FOR BEARINGS
CN	201610185771.1	ZL201610185771.1	LOW FRICTION SEAL FOR BEARINGS
CN	201520145572.9	201520145572.9	BOOT SEAL WITH SLIDING RING FOR SPHERICAL PLAIN BEARING
CN	201380074587	ZL201380074587.4	Spherical Plain Bearing with Spring-Ball Configuration
CN	201380081949.2	106170631	BEARING WITH ANCHOR MEMBER
CN	2015106459612	ZL201510645961.2	A VARIABLE FIXED INSTALLATION TORQUE BEARING
DE	12156635	602012010244-6	Spherical plain bearing and a housing in combination with a spherical plain bearing
DE	13791887.6	2923097	SPHERICAL PLAIN BEARING WITH LUBRICATION GROOVE
DE	11729975.0	602011020997.3	Spherical Plain Bearing with Constant Torque
DE	11791701.3	602011017931.4	COMBINATION SPLIT OUTER RING AND SEAL RETENTION METHOD FOR SPHERICAL PLAIN BEARINGS
DE	12162427.4	602012012079-7	Spherical bearing with sealing member, method of sealing a spherical bearing and steering assembly comprising said bearing
DE	12809508.0	2791518	SLOTTED BEARINGS WITH WEAR-RESISTANT TREATMENTS FOR GEARBOX MOUNTING IN A GEARED TURBOFAN ENGINE

DE	12713056.5	2831434	SUPPORT FOR A SPHERICAL BEARING
DE	202012013567.8	202012013567	SUPPORT FOR A SPHERICAL BEARING
DE	12705242.1	602012014656.7	BOOT SEAL WITH SLIDING RING FOR SPHERICAL PLAIN BEARING
DE	13715894	2981723	Tabbed Washer for a Bearing Assembly
DE	17165477	3211254	Tabbed Washer for a Bearing Assembly
DE	13715895.2	602013016447-9	TWO STAGE SEAL FOR A BEARING ASSEMBLY
DE	13715893	2981724	SPHERICAL BEARING AND METHOD OF MAKING THE SAME
DE	13812352.6	2929198	TWO STAGE SEAL FOR A BEARING ASSEMBLY
DE	14712965.4	2964968	LINKAGE APPARATUS HAVING A LOW PROFILE ASYMMETRICAL HEAD
DE	13720281	602013017964-6	Spherical Plain Bearing with Spring-Ball Configuration
DE	15154655.3	2905486	Swaged Bearing Assembly with a Flange Mounted Thereon
DE	15163173.6	2930380	Bearing Assembly with Split Outer Ring Having Interference Fit Tabs and Method of Assembly of Bearing
DE	15154200.8	2905445	TURBOCHARGER WASTEGATE ACTUATOR HIGH TEMPERATURE ROD END WITH A SPHERICAL BEARING AND A METHOD FOR OPERATING THE ACTUATOR
DE	13798787.1	3066351	BEARING WITH ANCHOR MEMBER
DE	15172683.3	2975277	BEARING ASSEMBLY HAVING SURFACE PROTRUSIONS AND A SEAL
DE	16160867.4	602016000848-3	BEARING ASSEMBLY HAVING AN ANTI-ROTATION DEVICE
DE	15187930.1	3002472	A VARIABLE FIXED INSTALLATION TORQUE BEARING
DE	15185647.3	3006751	System for Isolating Electrical Current in a Bearing for Use in an Aircraft Structure
DE	15199806.9	3034897	SPHERICAL BEARING WITH ANNULAR SEAL HAVING AN AUXILIARY SEAL LEG EXTENDING THEREFROM
DE	17202274.1	3324082	Elastomeric Seal Having Impact Protecting Protrusions
DE	18191091.0	3450779	ARRANGEMENT FOR MAINTAINING A POSITION OF A SPRING-BALL ON A SHAFT
EP	12156635	2631501	Spherical plain bearing and a housing in combination with a spherical plain bearing
EP	13791887.6	2923097	SPHERICAL PLAIN BEARING WITH LUBRICATION GROOVE
EP	11791701.3	2640986	COMBINATION SPLIT OUTER RING AND SEAL RETENTION METHOD FOR SPHERICAL PLAIN BEARINGS
EP	12162427.4	2505858	Spherical bearing with sealing member, method of sealing a spherical bearing and steering assembly comprising said bearing
EP	12809508	2791518	SLOTTED BEARINGS WITH WEAR-RESISTANT TREATMENTS FOR GEARBOX MOUNTING IN A GEARED TURBOFAN ENGINE
EP	12713056.5	2831434	SUPPORT FOR A SPHERICAL BEARING
EP	12705242.1	2812590	BOOT SEAL WITH SLIDING RING FOR SPHERICAL PLAIN BEARING
EP	13715894	2981723	Tabbed Washer for a Bearing Assembly
EP	17165477	3211254	Tabbed Washer for a Bearing Assembly
EP	13715895	2981725	TWO STAGE SEAL FOR A BEARING ASSEMBLY
EP	13715893	2981724	SPHERICAL BEARING AND METHOD OF MAKING THE SAME
EP	13812352.6	2929198	TWO STAGE SEAL FOR A BEARING ASSEMBLY
EP	14712965.4	2964968	LINKAGE APPARATUS HAVING A LOW PROFILE ASYMMETRICAL HEAD
EP	13720281	2986862	Spherical Plain Bearing with Spring-Ball Configuration
EP	15154655.3	2905486	Swaged Bearing Assembly with a Flange Mounted Thereon
EP	15163173.6	2930380	Bearing Assembly with Split Outer Ring Having Interference Fit Tabs and Method of Assembly of Bearing
EP	15154200.8	2905445	TURBOCHARGER WASTEGATE ACTUATOR HIGH TEMPERATURE ROD END WITH A SPHERICAL BEARING AND A METHOD FOR OPERATING THE ACTUATOR
EP	13798787.1	3066351	BEARING WITH ANCHOR MEMBER
EP	15172683.3	2975277	BEARING ASSEMBLY HAVING SURFACE PROTRUSIONS AND A SEAL
EP	16160867.4	3070350	BEARING ASSEMBLY HAVING AN ANTI-ROTATION DEVICE
EP	15187930.1	3002472	A VARIABLE FIXED INSTALLATION TORQUE BEARING
EP	15185647.3	3006751	System for Isolating Electrical Current in a Bearing for Use in an Aircraft Structure
EP	15199806.9	3034897	SPHERICAL BEARING WITH ANNULAR SEAL HAVING AN AUXILIARY SEAL LEG EXTENDING THEREFROM
EP	17178646.0	3263927	Multiple Stage Seal for a Bearing Assembly
EP	17202274.1	3324082	Elastomeric Seal Having Impact Protecting Protrusions
EP	18191091.0	3450779	ARRANGEMENT FOR MAINTAINING A POSITION OF A SPRING-BALL ON A SHAFT
ES	16160867.4	3070350	BEARING ASSEMBLY HAVING AN ANTI-ROTATION DEVICE
FR	12156635	2631501	Spherical plain bearing and a housing in combination with a spherical plain bearing
FR	11729975.0	2726750	Spherical Plain Bearing with Constant Torque
FR	12162427.4	2505858	Spherical bearing with sealing member, method of sealing a spherical bearing and steering assembly comprising said bearing
FR	12713056.5	2831434	SUPPORT FOR A SPHERICAL BEARING
FR	12705242.1	2812590	BOOT SEAL WITH SLIDING RING FOR SPHERICAL PLAIN BEARING
FR	17165477	3211254	Tabbed Washer for a Bearing Assembly
FR	13715893	2981724	SPHERICAL BEARING AND METHOD OF MAKING THE SAME
FR	13720281	2986862	Spherical Plain Bearing with Spring-Ball Configuration
FR	15154655.3	2905486	Swaged Bearing Assembly with a Flange Mounted Thereon
FR	15163173.6	2930380	Bearing Assembly with Split Outer Ring Having Interference Fit Tabs and Method of Assembly of Bearing
FR	13798787.1	3066351	BEARING WITH ANCHOR MEMBER

FR	16160867.4	3070350	BEARING ASSEMBLY HAVING AN ANTI-ROTATION DEVICE
FR	15187930.1	3002472	A VARIABLE FIXED INSTALLATION TORQUE BEARING
FR	17202274.1	3324082	Elastomeric Seal Having Impact Protecting Protrusions
FR	18191091.0	3450779	ARRANGEMENT FOR MAINTAINING A POSITION OF A SPRING-BALL ON A SHAFT
GB	13791887.6	2923097	SPHERICAL PLAIN BEARING WITH LUBRICATION GROOVE
GB	0000662	2452900	SPHERICAL PLAIN BEARING WITH LUBRICATION GROOVE
GB	13812352.6	2929198	TWO STAGE SEAL FOR A BEARING ASSEMBLY
GB	17178646.0	3263927	Multiple Stage Seal for a Bearing Assembly
GB	17202274.1	3324082	Elastomeric Seal Having Impact Protecting Protrusions
Other Patents Pending			

Track Roller Bearings			
Country	Application No.	Patent No.	Title
CA	2643029	2643029	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
CN	200810181713	200810181713	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
DE	13818632.5	2934999	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
DE	08168716.2	2067696	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
DE	15198028.1	602015029734-2	SPLIT INNER OR OUTER RACE ROLLER BEARING WITH ROLLING ELEMENTS
EP	13818632.5	2934999	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
EP	08168716.2	2067696	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
EP	15198028.1	3176076	SPLIT INNER OR OUTER RACE ROLLER BEARING WITH ROLLING ELEMENTS
EP	18167181.9	3388702	A TWO PART SEAL FOR A TRACK ROLLER BEARING
JP	2009-003024	5162421	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
MX	MX/a/2008/015243	317295	ACTUATION SYSTEM FOR A LIFT ASSISTING DEVICE AND ROLLER BEARINGS USED THEREIN
Other Patents Pending			