SPEED RESPONSIVE DEVICE FOR ADJUSTING RELATIVE ROTATIONAL POSITION OF COUPLED MEMBERS
- Actuated by fluid or electricity
- Pivoted weight
- Gear segment on pivoted weight
- Pivotal movement opposed by compression of coil spring along its axis
- Pivotal movement opposed by expansion of coil spring along its axis

HAVING LUBRICATING MEANS
- Lubricant impregnated into material
- Metallic material
- For overload release coupling
- For coupling having torque transmitted via radially directed pin received in conforming aperture
- Lubricant supplied to plural pins via common ring which encapsulates pins
- Pin includes longitudinally extending internal passage
- Pin includes longitudinally extending internal passage
- For coupling having torque transmitted via a ball
- For coupling having torque transmitted via intermeshing teeth

HAVING HEATING OR COOLING MEANS

FLEXIBLE COUPLING BETWEEN FLUID-CONDUCTING ROTARY SHAFTS (E.G., COUPLING BETWEEN SECTIONS OF DRILL STRING, ETC.)
- Relative angular displacement of axes of shafts
- Including member deformable by relative movement between shafts
- Member is coiled spring

HAVING CLEANING MEANS

WITH AUXILIARY INDICATOR OR ALARM

FLUID COUPLING
- For transmitting limited pulsating torque (e.g., fluid drive coupling for impulse tool)

..Including piston axially movable in cylinder having axis coextensive with axis of rotation of coupled members
..Including multiple piston-cylinder devices radially spaced from axis of rotation
..Fluid confined in enclosure having flexible walls

ELECTRICAL OR MAGNETIC COUPLING

OVERLOAD RELEASE COUPLING
- Including thermally responsive element
- Torque transmitted via frangible element
- Axially extending pin
- Torque transmitted via radially spaced deformable roller
- Torque transmitted via a ball
- Axially biased
- Torque transmitted via resiliently biased positive drive connection (e.g., cam and follower)
- Axially biased
- By spring coiled about axis of rotation
- Torque transmitted via frictional engagement of coil spring
- Torque transmitted via plural circumferentially spaced friction elements
- Torque transmitted via frictional engagement of conical or frustoconical surfaces
- With separate resilient member for biasing surfaces into engagement
- ...Coil spring
- Torque transmitted via frictional engagement of planar radially extending surfaces
- With separate resilient member for biasing surfaces into engagement
- ...Coil spring
- ...Plural, circumferentially spaced coil springs
CLASS 464 ROTARY SHAFTS, GUDGEONS, HOUSINGS, AND FLEXIBLE COUPLINGS FOR ROTARY SHAFTS

49 COUPLING DEVICE INCLUDES ENDLESS CHAIN ENGAGED WITH CIRCUMFERENTIAL TEETH ON COUPLED MEMBERS
50 COUPLING DEVICE INCLUDES ANGLED OR HINGED ROD HAVING OPPOSITE ENDS RELATIVELY RECIPROCABLE AXIALLY IN BoRES IN SPACED COUPLED MEMBERS
51 TORQUE TRANSMITTED VIA FLEXIBLE ELEMENT
   .With stationary housing
   .And threaded annulus surrounding terminal end of housing for attachment to auxiliary housing
54 .Element coiled sinusoidally about axially spaced driving and driven members
55 .Element is flaccid and operates in tension during torque transmission (e.g., belt, cable, etc.)
56 ..Element has circular cross section
57 .Element has plural convolutions wound about rotational axis
58 ..Plural radially overlapping convoluted elements
59 ..Single element has plural radially overlapping convolutions
60 ..Convoluted element has noncircular cross section
61.1 .Coil spring
62.1 ..Plural
64.1 ...Concentric
66.1 ...Perpendicular to shaft
68.1 ....Between axially spaced plates
68.2 ......Speed responsive
68.3 .....With fluid damping
68.4 .....Interposed friction or braking element
68.41 ......With biasing means
68.5 ......Including bearing detail
68.6 .....Specified bushing
68.7 .....Axially spaced springs
68.8 .....Radially spaced springs
68.9 .....Spring detail
68.91 ......Non-coiled or non-metallic
68.92 ......With particular seat
63.1 ....And springs' centerlines spaced along shaft axis
67.1 ....Along curved centerline

65.1 ...Parallel to shaft
69 .Plural flexible links connected to circumferentially spaced axially directed pins on drive and driven members
70 .Element is annular liner within radially spaced pin-receiving opening
71 ..Axially directed pin
72 ...Plural axially spaced liners
73 .Element positioned between intermeshing teeth on driving and driven members
74 ..Teeth on radially overlapping surfaces
75 ...Element is a continuous annulus extending around rotational axis
76 ..Plurality of disparate elements
77 .Element is an open loop spring curved about rotational axis
78 .Element is tube with slot through wall to provide flexibility
79 .Element includes diverging wall portions defining annular groove completely surrounding rotational axis (e.g., bellows)
80 ..Nonmetallic
81 .Plural circumferentially spaced elements
82 ..Extending between radially overlapping surfaces on driving and driven members
83 ...Nonmetallic
84 ..Elements are bowed leaf springs
85 ...Nonmetallic
86 ...Axially extending torsion bars
87 .Nonmetallic element
88 ...Element is hollow sleeve surrounding rotational axis and connected at opposite ends to axially spaced torque transmitting surfaces on driving and driven members
89 ..Extending between radially overlapping surfaces on driving and driven members
90 ...Plural elements radially overlapping
91 ...Plural elements axially spaced along rotational axis

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92 ...Annular element between and coincident with drive and driven members
93 ...Including means to receive radially spaced axially extending projection on drive and driven members
94 ....Laminated element or plural elements abutting or spaced along rotational axis
95 .....With disparate spacer between plural separable elements
96 ...Laminated element or plural elements abutting or spaced along axis of rotation
97 .Element is a torsion bar having a longitudinal axis coincident with the rotational axis
98 .Element is plate with external edge completely surrounding rotational axis (e.g., disc)
99 .Plural axially spaced plates
100 .Element is leaf spring
101 .Bowed
102 SEPARATE COUPLING DEVICE MOVABLE RADIIALLY OF AXES OF TORQUE TRANSMITTING MEMBERS TO ACCOMMODATE PARALLEL, MISALIGNED AXES (E.G., OLDHAM COUPLING)
103 .Coupling device includes rolling body for transmitting torque
104 .Coupling device has aperture or groove for receiving complementarly driving projection on torque transmitting members
105 ...Projection-receiving slot extends completely through thickness dimension of coupler
106 COUPLING ACCOMMODATES DRIVE BETWEEN MEMBERS HAVING MISALIGNED OR ANGULARLY RELATED AXES
107 .Coupling between wheel and vertically oriented shaft (e.g., millstone)
108 .Wheel mounted on rolling body
109 .Coupling includes relatively movable gear segments
110 .Coupling transmits torque via semicylindrical segments separated by pivot pin (e.g., slipper bearing)
111 .Tripod coupling
112 .Coupling transmits torque via radially directed pin
113 ..With additional axially spaced torque-transmitting coupling which facilitates relative movement between members
114 ...Radially directed pin in each coupling
115 ....Pin slidable axially in slot
116 .....Axially spaced pin-carrying parts interconnected by pivotal head and socket centering joint
117 ....Plural pins in each coupling with pin ends spaced 90 degrees apart
118 .....Axially spaced pin-carrying parts interconnected by pivotal head and socket centering joint
119 ....Pins in sequential couplings oriented at right angles to each other
120 ..Pin slidable axially in slot
121 ...Pin carried by intermediate element and slidable axially in slots in both coupled members
122 ...Pin carries disparate sleeve engaged with slot walls
123 ....Sleeve rotatable about pin axis
124 .....Sleeve has spherical or semi-spherical bearing surface
125 ..Plural pins received in conforming apertures in ring
126 ...Split ring
127 ..With particular balancing means
128 ...With particular bearing cup surrounding pin end
129 ...Spherical or semi-spherical cup
130 ...And disparate device for securing cup to pin or receiver
131 ...And flexible seal
132 ..With particular bearing or bushing mounted on pin
133 ...With particular flexible seal
134 ..With particular yoke providing pin-receiving aperture
135 ...Split yoke
136 ..Plural pins carried by intermediate member with pin ends spaced 90 degrees apart

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137 .Coupling transmits torque via axially directed pin radially spaced from rotational axis
138 ..Particular pivotal mounting for pin
139 .Coupling transmits torque via radially spaced ball
140 ..With additional axially spaced torque-transmitting coupling which facilitates relative movement between members
141 ..Ball mounted in groove for relative axial movement with respect to coupled member
142 ...Mounted for relative axial movement with respect to both coupled members
143 ....Grooves formed in radially overlapping elements
144 ......Intersecting grooves
145 ......With intermediate positioning cage for ball
146 ........Bottom wall of groove in outer member is parallel to axial centerline of outer member (e.g., internally grooved cylinder)
147 .Torque transmitted via intermediate element
148 ..Element carries or receives hook on opposite ends for connection to drive and driven members (e.g., link chain)
149 ..Axially intermeshing teeth
150 ..Intermediate element located between overlapping surfaces on drive and driven members
151 ...Intermediate element is externally grooved or ribbed sphere
152 ...Plural circumferentially spaced intermediate elements
153 ..Intermediate element includes internal openings at opposite ends for receiving axially spaced ends on drive and driven members
154 ...Intermeshing teeth on element and members
155 ..Intermediate element includes external surface at opposite ends received in complementary openings in axially spaced ends of driving and driven members driven members
156 ...Intermeshing teeth on element and members
157 .Torque transmitted via intermeshing teeth on drive and driven members
158 ..Teeth on radially overlapping surfaces
159 ....Spherical or semispherical surfaces
COUPLING FACILITATES RELATIVE ROTARY DISPLACEMENT BETWEEN COUPLED MEMBERS
160 .Members coupled via axially movable, resiliently biased intermediate element
COUPLING FACILITATES RELATIVE AXIAL MOTION BETWEEN COUPLED MEMBERS
161 .Coupling between rotary drive table and axially movable drill string
162 ..Coupler includes endless belt or chain run engageable with drill string and moveable in direction of axial advance
163 ..Coupler includes antifriction rolling body engageable with drill string
164 ....With screw device for adjusting radial position of rolling body
165 ...With screw device for adjusting radial position of rolling body
166 .Coupler includes antifriction rolling body engageable with axially moveable member
167 ..Recirculating rolling bodies
168 ...Including spring to bias member in axial direction
HOUSING
169 .Rigid semispherical surface on one housing part slidably engaged with surface on mating housing part
170 ..Flexible housing
171 ..Helically coiled member
172 ..Corrugated structure
173 .Pivotally mounted housing supported for movement between open and closed positions
174 .Separably connected housings for separably connected shafts
175 .With rolling body supporting shaft in housing
SHAFTING

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180. Particular vibration dampening or balancing structure
181. Nonmetallic shaft or component
182. With disparate device for coupling shaft to additional shaft or rotary body
183. Hollow or layered shaft
184. GUDGEONS
185. MISCELLANEOUS

CROSS-REFERENCE ART COLLECTIONS

900. ELECTRICALLY INSULATIVE MEMBER
901. RAPID ATTACHMENT OR RELEASE
902. PARTICULAR MATERIAL
903. Nonmetal
904. HOMOKINETIC COUPLING
905. Torque transmitted via radially extending pin
906. Torque transmitted via radially spaced balls

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS