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| 1.5 | PACKING EXPANDER OR CONSTRICTOR | 104 | ..With supplementary spacing means intermediate ends of surface |
| 80 | SPRING PANEL | | |
| 81 | .Composite springs of diverse material, e.g., metal and non-metal | 105 | ..Stiffener or bracer for loading surface |
| 82 | ..Vented fluid chamber modifies action of metallic spring | 106 | ..Multiple sections span frame |
| 83 | ..Superposed layers; metal and non-metal | 107 | ..By inwardly bowed portion, i.e., "fishmouth" type |
| 84 | ...Metal layer is compressible coil spring | 108 | ...With coiled apex, i.e., "safety pin" type |
| 85 | .Multistage springs | 109 | ..By outwardly bowed portion |
| 86 | .Diverse types of superposed metallic springs | 110 | .Panel secured peripherally to supporting frame |
| 87 | ..Sinuous spring loading surface supported by other spring | 111 | ..Panel secured to tension frame inwardly |
| 88 | ..Compressible coil spring loading surface supported by other spring | 112 | ...Secured by resilient connectors |
| 89 | .With means to vary preliminary tension of spring | 2 | VEHICLE |
| 90 | .With means to dampen vibration of springs, e.g., sound deadening | 3 | .Railway |
| 91 | .Spring panel comprises vertically oriented compressible coil springs | 4 | ..Coil |
| 92 | ..Plural superposed coils | 5 | .Perambulator |
| 93 | ..Panel comprises spring of varying capacities | 6 | .Bolster |
| 94 | ..With padding protector on spring end | 7 | ..Leaf |
| 95 | ..Loading surface includes component other than coil spring | 183 | .Parallel depression (e.g., having stabilizer bar) |
| 96 | ..With resilient side or end, e.g., edge roll | 184 | ..Duplex |
| 97 | ..With reinforcement or extension for border wire | 185 | ...Single pivot |
| 98 | ..With diagonal surface-to-frame brace | 186 | ..Fluid stabilizer |
| 99 | ..Resiliently mounted on frame by tensile springs | 187 | ...Including torque bar or pump |
| 100 | ..Mounted on frame spanning strips | 188 | ..Torque bar or tube stabilizer |
| 101 | ..Spring rows supported by row separating stringers | 189 | ...And elastomeric member |
| 102 | .With cantilevered surface extension, i.e., "soft edge" | 190 | ...And coil spring |
| 103 | .Spring means spacing loading surface vertically from plane of supporting frame | 191 | ...And retarder |
| | | 192 | ..Leaf spring stabilizer |
| | | 193 | ...Leaf spring acting between pivoted links |
| | | 194 | ..Plural nontorsion coil springs |
| | | 195 | .Mechanical spring and nonresilient retarder (e.g., shock absorber) |
| | | 196 | ..Friction (e.g., "snubber") |
| | | 197 | ...Including flexible strap connector |
| | | 198 |Strap forms friction element |
| | | 199 |Flat spiral spring |
| | | 200 | ...Having lubricating feature |
| | | 201 | ...Elastomeric spring or friction element |
| | | 202 |And helical coil spring |
| | | 203 |Plural coil springs |
| | | 204 | ...Friction surface on helical spring |

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|-----|---|------|--|
| 205 | ...Including cam or wedge friction element or actuator therefor | 238 |Nested coils |
| 206 |Helical cam surface | 239 |Having leaf-end-connecting lever |
| 207 |Plural axially spaced expandable friction rings | 240 |Coil spring between lever and vehicle part |
| 208 |Including relatively rotating friction surfaces (e.g., drum type) | 241 | ...And fluid pressure spring |
| 209 |Including helical coil spring | 242 | ...Including adjustment for spring loading |
| 210 |Transversely oriented coil for biasing friction surfaces | 243 | ...And roller or bearing to accommodate deflection of spring |
| 211 |Plural laterally spaced coils (e.g., spring group) | 244 | ...Vertically spaced leaf springs (e.g., elliptic) |
| 212 |Nested coil springs | 245 | ...Having serially pivoted levers at end of spring |
| 213 |Inside friction shell | 246 | ..Transverse leaf spring |
| 214 | ...Friction surface formed on or biased by additional spring | 247 | ...Center acting or resiliently biased lever |
| 215 |Relatively rotating friction surfaces (e.g., drum type) | 248 | ..Coil spring |
| 216 | ...Coil spring for biasing vehicle parts and friction surfaces | 249 | ...Enclosed spring |
| 217 | ..Fluid retarder | 250 |Plural coaxial coils in enclosure |
| 218 | ..With separate pump or adjustment for spring loading | 251 | ...Plural nontorsion coil springs |
| 219 | ...Elastomeric spring | 252 |Coaxial |
| 220 | ...Mounted at end of retarder | 253 |Differentially deflected by lever |
| 221 | ...Helical coil spring | 254 | ...Quadrilateral suspension |
| 222 |Quadrilateral suspension | 255 | ...Including adjustment for spring loading |
| 223 |And rocking actuator arm or rotary fluid displacement member | 256 | ..Fluid spring |
| 224 |Plural mechanical springs for biasing vehicle parts | 257 | ..Elastomeric spring |
| 225 |Plural mechanical springs for biasing vehicle parts | 258 | ...Annular or spherical |
| 226 |Spring within coaxial fluid chamber | 259 | .Compound |
| 227 | ...Leaf spring | 23 | ..Leaf, coil, and fluid pressure |
| 228 | ..Lever and nontorsion spring | 24 | ..Leaf, fluid pressure and liquid |
| 229 | ..Leaf spring | 25 | ..Leaf and torsion |
| 230 | ...Quadrilateral suspension | 26 | ...Torsion coil |
| 231 | ...And coil spring | 27 |Leaf-end-connecting |
| 232 |And roller | 28 | ..Leaf and coil |
| 233 |And "overload" bumper | 29 | ...Leaf-end-connecting |
| 234 |Including adjustment for spring loading | 30 | ..Leaf and rubber type |
| 235 |Adjusting screw coaxial with coil spring | 31 | ..Leaf and fluid pressure |
| 236 |Plural coils between vertically spaced leaf springs | 32 | ...Leaf-end-connecting |
| 237 |Plural coaxial coils | 33 | ..Coil and rubber type |
| | | 34 | ..Coil and fluid pressure |
| | | 35 | ..Rubber type and fluid pressure |
| | | 36.1 | .Leaf |
| | | 37.1 | ..And covering |
| | | 37.2 | ...Spiral or elastic covering |
| | | 37.3 | ...Three serially arranged metallic segments |
| | | 37.4 | ...Having lubricant reservoir or pad |

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| 38 | ..Twin, axle interposed | 285 | ..Plural torsion spring |
| 39 | ..Side bar | 286 | .Coil |
| 40 | ..Longitudinal | 287 | ..Having stiffener |
| 41 | ..Cantilever | 288 | ..Conical |
| 42 | ..Elliptic | 289 | ..Plural coils |
| 43 | ..Elliptic and leaf | 290 | ...Nested |
| 44 | ..Semielliptic | 291 | ...Having guide rods extending through coils |
| 45 | ..Semielliptic and leaf | 292 | .Elastomeric |
| 46 | ...End-to-end connected | 293 | ..Including central guide rod or tube through spring |
| 47 | ..Structure | 294 | ..Having rigid spacer plate between plural elastomeric segments |
| 48 | ...Auxiliary tensioning elements | 64.11 | .Comprising compressible fluid |
| 49 | ...Antifriction | 64.12 | ..Having lockable strut |
| 50 | ...Lubrication | 64.13 | ..Including compressible liquid |
| 51 | ..Broken-spring supports | 64.14 | ..Including chamber at sub-atmospheric pressure |
| 52 | ..Intermediate supports | 64.15 | ..With retarder |
| 53 | ..Clips | 64.16 | ...Leveling device |
| 260 | ..Having specific end connection | 64.17 |Self-pumping |
| 261 | ...For elliptic spring | 64.18 |Having metering pin for varying spring rate |
| 262 | ...Sliding | 64.19 |Having flexible wall |
| 263 | ...Including spring for biasing pivotal connection | 64.21 |Including rolling lobe between telescoping members |
| 264 | ...Including threaded or grooved bearing surface | 64.22 | ...Having metering pin for varying spring rate |
| 265 | ...Including spring position adjustment or geared connection | 64.23 | ...Having flexible wall |
| 266 | ...Universal joint | 64.24 |Including rolling lobe between telescoping members |
| 267 | ..Having rolling antifriction elements (e.g., ball bearing) | 64.25 | ...Having plural compressible fluid springs |
| 268 | ..Having lubrication feature | 64.26 | ...Having telescoping cylinders |
| 269 | ...Including elastomeric material | 64.27 | ..Having flexible wall |
| 270 |Including tapered bushing or inner and outer sleeve for cylindrical bushing | 64.28 | ..Including means for charging or discharging spring |
| 271 | ...Including shackle pivoted to spring and to vehicle | 66 | .Braces |
| 272 | .Flat spiral | 67 | ..Yielding |
| 273 | .Torsion | 68 | ..Sliding |
| 274 | ..Quadrilateral suspension | 69 | ELASTIC EXTENSION DEVICES |
| 275 | ..Helical torsion coil | 70 | .Compression spring |
| 276 | ..And separate elastomeric member (e.g., bushing) | 71 | ..Single |
| 277 | ..And adjustment for varying spring loading | 72 | ...Drawbars inclosed |
| 278 | ...Screw threaded adjustment | 73 | .Tension spring |
| 279 | ..Elastomeric torsion spring | 74 | ..Single |
| 280 | ...Plural axially spaced elastomeric elements | 75 | RECIPROCATING-BED-CUSHIONING DEVICES |
| 281 | ...And attached inner and outer metallic sleeves | 113 | FLUID |
| 282 |Plural concentric elastomeric rings | 114 | .Time delay |
| 283 | ..Multilayer leaf | 115 | .Draft gear |
| 284 | ..And housing enclosing spring | 116 | .Bumper |
| | | 117 | .Cushion for person |

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| 118 | .Expansible-contractible chamber device | 141.4 |Annular flange or collar embedded in resilient element |
| 119 | ..Press cushion | 141.5 |Flanged or collared innermost member |
| 120 | ..Vehicle; for non-support or accessory support cushioning | 141.6 |Collapsible wall |
| 121 | ..Compound | 141.7 |Arcuate or tapered contact surface |
| 122 | ..Diaphragm or bellows | 142 | CUSHION FOR HUMAN COMFORT |
| 123 | ..For valve or throttle control | 143 | .Compound |
| 124 | ..Piston | 144 | .Zigzag |
| 125 | ...For use in well drilling or operating | 145 | .Rubber |
| 126 | ...System | 146 | .Fibrous pad |
| 127 |Trans-piston passage | 147 | COMPRESSED WIRE MESH |
| 128 | ..Rigid-material-spring impelled | 148 | FIBROUS |
| 129 | ...Seal | 149 | .Glass fiber |
| 130 | PRESS CUSHION | 150 | CENTERING DEVICE |
| 131 | SEAT SUPPORT | 151 | COMPOUND |
| 132 | .Velocipede or motorcycle | 152 | .Rubber |
| 133 | .Flexural | 153 | RUBBER |
| 134 | FRICITION SNUBBER | 154 | TORSION |
| 135 | .Snubbed coil spring or ring pack | 155 | .Coil |
| 136 | RESILIENT SHOCK OR VIBRATION ABSORBER | 156 | ..Volute |
| 137 | .Tool movement dampening | 157 | ..Also compressible or expansible |
| 138 | .Draft gear | 158 | BENDABLE ALONG FLAT SURFACE (E.G., LEAF SPRING) |
| 139 | .Bumper | 159 | .Snap spring |
| 140 | ..Rubber | 160 | .Flexural support |
| 140.11 | ..Including energy absorbing means or feature (e.g., supplemental vehicle equipment, such as motor mount, seat, etc., including additional fluid or friction energy absorber) | 161 | .Ring or annular spider |
| 140.12 | ..Having concentric coaxial spring between plural confining means for radial force | 162 | ..Pair or pack |
| 140.13 | ..Axial | 163 | .Including tang or spider |
| 140.14 | ..With electronic or magnetic control | 164 | .Bow spring or superposed spring elements |
| 140.15 | ..With electronic or magnetic control | 165 | ..Zigzag or plural |
| 140.2 | .Variably preloaded | 166 | COIL |
| 140.3 | .Having diverse resilient element | 166.1 | .Conical |
| 140.4 | ..Metallic and nonmetallic | 167 | .Circular |
| 140.5 | .Diverse resistance to vibration along different axes | 168 | .Plural, one within another |
| 141 | .Nonmetallic, resilient element | 169 | .Including internal brace |
| 141.1 | ..Plural resilient elements with rigid spacer | 170 | .Including end thrust member |
| 141.2 | ..Confined between coaxial, vibrating annular members | 171 | ..Equilibrium or over-center |
| 141.3 | ...Including radial contact surface, e.g., tapered or shouldered member | 172 | ..Including cam |
| | | 173 | ..Including lever |
| | | 174 | ..For dynamic or work environment |
| | | 175 | ...Adjustable |
| | | 176 | ...Reset |
| | | 177 | ..Adjustable |
| | | 178 | ..Support type |
| | | 179 | ..Particular end connection |
| | | 180 | .Irregular |
| | | 181 | FORAMINATED |
| | | 182 | MISCELLANEOUS |

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