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|-----|--|-----|--|
| 164 | <b>WITH POWERED MEANS FOR CREATING FLUID FORCE TO ATTRACT VEHICLE TO SURFACE OF TRAVEL</b>   | 169 | .Radiation, force, or waves reflected from external object or surface  |
| 116 | <b>SURFACE EFFECT VEHICLES (I.E., GROUND EFFECT MACHINES)</b>  | 170 | <b>WITH MEANS RESPONSIVE TO SPEED OF VEHICLE FOR MAINTAINING SPEED AT, OR PREVENTING IT FROM EXCEEDING, A PARTICULAR VALUE</b> |
| 117 | .Having propulsion or control means  | 171 | .Including device to signal to operator existence of unusual or unintended speed   |
| 118 | ..Responsive to instability condition  | 172 | .Including device responsive to centrifugal force  |
| 119 | ..Surface contacting control   | 173 | ..And means to prevent tampering or unauthorized use   |
| 120 | ..Integrated with working fluid  | 174 | ..Having electrical switch   |
| 121 | ...With plural cushions  | 175 | .Including fluid pressure actuated servomechanism  |
| 122 | ...With dynamic seal or fluid curtain  | 176 | ..And electrical quantities comparison means for development of input pressure   |
| 123 | .Spray deflector   | 177 | ..And one or more electrical components for establishing or regulating input pressure  |
| 124 | .Expansible chamber  | 178 | .Including electrically actuated servomechanism  |
| 125 | .Fluid bearing or fluid pad  | 179 | ..And electrical quantities comparison means for development of electrical input   |
| 126 | .Rigid side walls  | 180 | <b>SKI- OR SKATE-TYPE VEHICLE FOR IMPARTING MOVEMENT TO A PERSON STANDING THEREON</b>  |
| 127 | .Flexible skirt  | 181 | .With power means or a portion thereof affixed to or built into the ski or skate   |
| 128 | ..Having outlet for working fluid  | 182 | <b>INCLUDING ONE OR MORE SKI-LIKE OR RUNNER MEMBERS</b>  |
| 129 | .Dynamic seal or fluid curtain   | 183 | .Member substitutable for wheel type support structure   |
| 130 | ..Recirculating  | 184 | ..With propulsion element of endless track type  |
| 165 | <b>WITH FLUID OR MECHANICAL MEANS TO ACCUMULATE ENERGY (I) DERIVED FROM MOTION OF VEHICLE OR (II) OBTAINED FROM OPERATION OF VEHICLE MOTOR, AND GIVE UP THE ENERGY (1) WHEN NEEDED FOR VEHICLE ACCELERATION OR (2) TO POWER AN AUXILIARY SYSTEM OF THE VEHICLE</b> | 185 | ...Track comprises substitute for or addition to propulsion element of traction wheel type                                     |
| 166 | <b>WHEELED INFANT CARRIAGE OR CRIB WITH DRIVEN MEANS FOR RECIPROCATING IT LONGITUDINALLY</b>   | 186 | .With at least one surface-engaging propulsion element   |
| 2.1 | <b>MOTOR SUPPLIED WITH POWER FROM EXTERNAL SOURCE</b>  | 187 | ..Element shuffles along support surface   |
| 2.2 | .Source comprises or includes energy derived from force of nature (e.g., sun, wind)  | 188 | ..Spiral type element  |
| 167 | <b>WITH MEANS FOR CONTROLLING OPERATION RESPONSIVE TO ELECTROMAGNETIC RADIATION, MAGNETIC FORCE, OR SOUND WAVES RECEIVED FROM SOURCE, OR REFLECTED FROM OBJECT OR SURFACE, LOCATED APART FROM VEHICLE</b>  | 189 | ..Plural elements connected to and spaced along the plural throws of a common crankshaft                                       |
| 168 | .Having controlling means adapted to interact with stationary means which describes course of vehicle's travel   | 190 | ..Endless track type element   |
|     |  | 191 | ...Protruding from member  |

|      |  |                                 |  |
|------|--|---------------------------------|--|
| 192  | ...Plural tracks with interconnected drive or support means  | 6.48                            | .Independently operable drive motors   |
| 193  | ...With vertically movable track support located intermediate the forward and rearward extremities of the track                                  | 6.5<br>6.54<br>6.58             | ..Electrical<br>.Variable contact<br>.Controlled from rotatably mounted superstructure   |
| 194  | ..Plural discrete elements protruding from a wheel, hub, or shaft  | 6.6<br>6.62                     | ..Steering responsive to rotary movement of superstructure<br>.Combined  |
| 195  | ...Each element moves relative to wheel, hub, or shaft   | 6.64                            | .Swinging traction frame responsive to differential drive  |
| 196  | ..Element comprises traction wheel   | 6.66                            | .Reversing drive to traction element   |
| 197  | <b>WITH MEANS FOR DETECTING WHEEL SLIP DURING VEHICLE ACCELERATION AND CONTROLLING IT BY REDUCING APPLICATION OF POWER TO WHEEL</b>              | 6.7                             | .Endless flexible track  |
| 198  | <b>PORTABLE CARRIER SUPPORTS MOTOR VEHICLE IN TOTO AND IS PROPELLED THEREBY</b>  | 7.1<br>7.2<br>7.3<br>7.4<br>7.5 | <b>SPECIAL DRIVING DEVICE</b><br>.Spiral type element<br>.Reaction jet propulsion<br>.Propeller type<br>.Vehicle mounted winch for pulling vehicle |
| 199  | <b>WITH POWERED, GROUND-ENGAGING MEANS FOR PRODUCING, OR ASSISTING IN THE PRODUCTION OF, LATERAL MOVEMENT OF THE VEHICLE (E.G., FOR PARKING)</b> | 8.1<br>8.2                      | .Stepper<br>..Step or abutment ascending/desending type vehicle  |
| 200  | .Comprising rotatably driven auxiliary wheel or endless track  | 8.3<br>8.4                      | ..Wheel and stepper type<br>...Nonsupporting pusher type stepper   |
| 201  | ..Driven by frictional engagement with tire of vehicle traction wheel  | 8.5                             | ..With alternately lifted supporting base and leg  |
| 202  | ..Driven by auxiliary electric or fluid motor  | 8.6<br>8.7                      | ..With alternately lifted feet or skid<br>..Endless or rotary type   |
| 203  | .Comprising reciprocally driven stepper or rotatably driven cam  | 9<br>9.1<br>9.21                | .Portable track<br>..Endless, flexible<br>...Track substituted for drive wheel   |
| 204  | <b>WITH DEVICE FOR PROGRAMMABLY OPERATING VEHICLES STEERABLE WHEELS</b>  | 9.22<br>9.23<br>9.25            | ...Guided by walking attendant<br>...With attendant station<br>...Rider straddles vehicle (e.g., motorcycle)                                       |
| 6.2  | <b>STEERING BY DRIVING</b>   | 9.26                            | ...Convertible from wheel type   |
| 6.24 | .Combined with manual steering   | 9.28                            | ...Track remains with vehicle  |
| 6.26 | ..Interlocked  | 9.3                             | ....Wheel or track contacts ground   |
| 6.28 | ...Electrical  | 9.32                            | ...With auxiliary obstacle surmounting means   |
| 6.3  | ...Fluid   | 9.34                            | ...With ground wheel   |
| 6.32 | ...Lever and/or linkage  | 9.36                            | ...Opposite and laterally spaced   |
| 6.34 | ....With controller cam  | 9.38                            | ....Steering   |
| 6.36 | ....Lost motion type   | 9.4                             | ...With hitch  |
| 6.38 | ....Geared   | 9.42                            | ...Combined  |
| 6.4  | ....With flexible and/or yieldable link  | 9.44                            | ...With track-related steering means   |
| 6.44 | .Auxiliary steering motor  |                                 |  |

|       |  |       |   |
|-------|--|-------|---|
| 9.46  | ....Pivoted track frame  | 24.09 | ..With interaxle differential   |
| 9.48  | ...Laterally extendable track                                  | 24.1  | ..With drive interrupt means to either tandem drive wheel   |
| 9.5   | ...Track support mounted for vertical movement                 | 24.11 | ..Driven tandem wheels  |
| 9.52  | ....Adjustable   | 24.12 | ...One serially driven by other   |
| 9.54  | ....With spring  | 24.13 | ..Spring rocker beam  |
| 9.56  | .....Longitudinally extending coil spring                      | 205.1 | .Rider propulsion with additional source of power, e.g., combustion engine or electric motor(IPC) |
| 9.58  | .....Leaf or torsion spring                                    | 205.2 | ..Rider propelled cycle with auxiliary combustion engine(IPC)                                     |
| 9.6   | .....Transversely extending                                    | 205.3 | ...Control or actuating device therefore; Arrangement thereof(IPC)                                |
| 9.62  | ...Toothed wheel drive   | 205.4 | ...Power driven at crank shaft(IPC)   |
| 9.64  | ...Belt or chain driven  | 205.5 | ...Power driven at axle(IPC)  |
| 10    | ..Annular  | 205.6 | ...Power driven at endless flexible drive member, e.g., chain(IPC)                                |
| 11    | <b>MOTOR-CARRYING ATTACHMENTS</b>                              | 205.7 | ...Power driven by friction roller or gear engaging the ground wheel(IPC)                         |
| 12    | .Driven steering wheel type                                    | 206.1 | ..Rider propelled cycle with auxiliary electric motor(IPC)  |
| 13    | ..Single wheel   | 206.2 | ...Control or actuating device therefore(IPC)   |
| 14.1  | <b>VEHICLE TRAINS</b>  | 206.3 | ...Characterized by detector or sensor; Arrangement thereof(IPC)                                  |
| 14.2  | .Motorized trailer   | 206.4 | ...Power driven at crank shaft(IPC)   |
| 14.3  | ..All motors supplied from power plant of a single vehicle     | 206.5 | ...Power driven at axle(IPC)  |
| 14.4  | .Drive means between vehicles through coupling                 | 206.6 | ...With axle driving shaft arranged coaxially with motor output shaft(IPC)                        |
| 14.6  | .Tractor drive effort varied by pull exerted by trailer        | 206.7 | ...Power driven at endless flexible drive member, e.g., chain(IPC)                                |
| 14.7  | .Vehicle drive drives other vehicle wheel                      | 206.8 | ...Power driven by friction roller or gear engaging the ground wheel(IPC)                         |
| 14.5  | .Overload release  | 207.1 | ..Accessories; Arrangement thereof(IPC)   |
| 15    | <b>ADDITIONAL TRACTION WHEEL</b>                               | 207.2 | ...Solar cell; Arrangement thereof(IPC)   |
| 16    | <b>TRACTION WHEEL ATTACHMENTS</b>                              | 207.3 | ...Battery; Arrangement thereof(IPC)  |
| 19.1  | <b>STEERED BY WALKING ATTENDANT</b>                            | 208   | .Collapsible or knockdown for storage or transport  |
| 19.2  | .Who steerably controls steerable wheel                        |       |   |
| 19.3  | .Handle movement controls vehicle drive                        |       |   |
| 20    | <b>WITH ROLLERS</b>  |       |   |
| 21    | <b>SPECIAL WHEEL BASE</b>                                      |       |   |
| 22    | .Five or more wheels   |       |   |
| 23    | ..Driven steering wheel type                                   |       |   |
| 24    | ...Stub-axle type  |       |   |
| 24.01 | ..Having tandem steerable or translatable wheels or wheel sets |       |   |
| 24.02 | ..Displaceable wheel shifts or proportions load                |       |   |
| 24.03 | ..Independently rotatable side-by-side dual wheels             |       |   |
| 24.04 | ..With differential housing integrally fixed to vehicle frame  |       |   |
| 24.05 | ..Rocker beam houses drive means                               |       |   |
| 24.06 | ..Plural propelling motors                                     |       |   |
| 24.07 | ...Separate driving motor for each drive wheel                 |       |   |
| 24.08 | ..Each wheel positively driven                                 |       |   |

|     |  |     |  |
|-----|--|-----|--|
| 209 | .With means for changing number of supporting wheels, or for adjusting relative location thereof | 232 | <b>WITH MEANS FOR (1) PROTECTING MOTOR FROM IMPACT OF COLLISION, (2) UTILIZING MASS OF MOTOR TO ABSORB FORCE THEREOF, OR (3) PROTECTING OCCUPANT REGION OF VEHICLE FROM IMPACT-INDUCED SHIFTING OF MOTOR</b> |
| 210 | .Having only three wheels  |     |  |
| 211 | ..Including steerable and driven wheel   |     |  |
| 212 | ...All wheels motor driven   | 41  | <b>WITH LEVELING DEVICE</b>  |
| 213 | ...Having motor mounted to swing with steerable wheel  | 233 | <b>HAVING FOUR WHEELS DRIVEN</b>   |
| 214 | ...Electrical-type motor   | 234 | .With means for steering all driven wheels   |
| 215 | ..Including two wheels driven and having common axis of rotation                                 | 235 | ..Comprising articulated frame and means for pivoting one portion of frame relative to other portion about vertical axis located centrally of vehicle  |
| 216 | ...Electrical-type motor   |     |  |
| 217 | ..Including endless element for transmitting drive to wheels                                     |     |  |
| 218 | .Having only two wheels  |     |  |
| 219 | ..Arranged in tandem   | 236 | ..In a path of travel other than that produced by turning the front wheels and the rear wheels substantially equally and oppositely  |
| 220 | ...Electrical-type motor   |     |  |
| 221 | ...Including rotating element for frictionally engaging and driving a wheel                      | 237 | ..Comprising swingable, plural-wheel-carrying axles on individual, vertical axes of pivot  |
| 222 | ...And means for steering that wheel   |     |  |
| 223 | ..Including steerable and driven wheel   |     |  |
| 224 | ...Both wheels motor driven  | 238 | ...At least one axle being offset from its pivotable axis  |
| 225 | ..Having frame element or fender constituting also exhaust or fuel passageway or fuel reservoir  | 239 | ...Including longitudinally extending, endless element for transmitting drive to wheels  |
| 226 | ..Including longitudinally extending shaft for transmitting drive to wheel                       | 240 | ..Including rotatable shaft extending longitudinally from wheels at one end of vehicle to wheels at other end for transmitting steering force thereto  |
| 227 | ..Including resilient means for mounting driven wheel  |     |  |
| 228 | ..Including resilient means for mounting motor   | 241 | ..Including longitudinally extending, endless element for transmitting drive to wheels   |
| 229 | ...With means for cooling motor  |     |  |
| 230 | ...With change-speed means between motor and driven wheel  | 242 | .Including pump and fluid motor, or generator and electric motor, for driving one or more wheels   |
| 231 | ...Including endless element for transmitting drive and means for adjusting tension of element   | 243 | ..And another means for driving the remaining driven wheels  |
| 36  | <b>STEAM TRACTION ENGINES</b>  |     |  |
| 37  | .Driven steering wheel type  | 244 | .With means for braking either (1) one or more driven wheels or (2) structure transmitting drive to wheel  |
| 38  | ..Four wheels driven   |     |  |
| 39  | .With boiler leveler   |     |  |
| 40  | .Spring mounted on axle  | 245 | .Including separate mechanical assemblies for transmitting drive to each of two wheels at one end of vehicle   |

- 246 ..And assemblies for each of two wheels at other end, also
- 247 .With manually operated means for disengaging drive to one or more, but fewer than all, of the four wheels
- 248 .With differential means for driving two wheel sets at dissimilar speeds
- 249 ..And means for locking out the differential means
- 250 ..Manually operated type of lockout means
- 251 .Including longitudinally extending, endless element for transmitting drive to wheels
- 252 **HAVING AT LEAST ONE WHEEL BOTH DRIVEN AND STEERABLE**
- 253 .Steerable wheel has exclusive axis of pivot (i.e., stub-axle type)
- 254 ..Including flexible, axially rotatable means having one portion fixed to vehicle and another portion pivotable with wheel for transmitting drive thereto
- 255 ...Pivotable portion of means has additional structure of gearlike nature in driving engagement with corresponding structure on wheel
- 256 ...Means comprises rotatable shaft containing plural universal joints
- 257 ....Having at least one joint located on each side of axis of pivot
- 258 ...Pivotable portion of means includes ball or socket element of ball-and socket type universal joint
- 259 ....Joint includes intermediate ball, floating in groove, for positively engaging ball with socket
- 260 ...Pivotable portion of means includes gear element of intermeshing gear type universal joint
- 261 ....Joint includes at least one gear element rotatable on axis of pivot and intermeshing with gear element on pivotable portion
- 262 ....Joint also includes gear element on fixed portion engaging gear element on axis of pivot and vertically offset from gear element on pivotable portion
- 263 ..Having axis of pivot disposed between parallel planes defined by opposite sides of wheel
- 264 .With driven axle, mounting two or more wheels, swingable about axis of pivot, and motor mounted to swing therewith
- 265 ..Having axle offset longitudinally from axis of pivot
- 266 .With driven axle, mounting two or more wheels, swingable about axis of pivot, and swingable also about a horizontal axis
- 267 .With driven axle, mounting two or more wheels, swingable about axis of pivot, and shaft for transmitting drive coincident with axis
- 268 **WITH BELT OR HARNESS FOR RESTRAINING OCCUPANT, AND MEANS WHEREBY THE BELT OR HARNESS CONTROLS, OR IS CONTROLLED BY, THE FUNCTIONING OF A VEHICLE SYSTEM OR COMPONENT**
- 269 .System comprises transmission or element thereof
- 270 .System comprises ignition circuit or starter circuit or element of one or other
- 271 **WITH MEANS FOR PROMOTING SAFETY OF VEHICLE, ITS OCCUPANT OR LOAD, OR AN EXTERNAL OBJECT**
- 272 .Responsive to absence or inattention of operator, or negatively reactive to attempt to operate vehicle by person not qualified mentally or physically to do so
- 273 ..Utilizing weight, or lack thereof, of operator on seat or other support to determine presence or absence
- 274 .Responsive to engagement of portion of perimeter of vehicle with external object

|      |  |       |  |
|------|--|-------|--|
| 275  | ..And causing application of vehicle brake   | 53.5  | .Electric drive to other machine   |
| 276  | ...Brake comprises or includes element moved or deformed into engagement with ground   | 53.6  | .Drive to other machine by power take-off (PTO) driven by wheel or axle of motor vehicle   |
| 277  | ...And also interruption of at least one operational system of the vehicle or its motor  | 53.61 | ..PTO mounted directly on or engaging drive wheel to rotate therewith  |
| 278  | ...System comprises clutch   | 53.62 | ..PTO constantly driven with wheel selectively driven  |
| 279  | ..And causing interruption of an electrical system of the vehicle or its motor   | 53.7  | .Drive to other machine by power take-off (PTO) at front end of vehicle  |
| 280  | ..And causing operation of vehicle steering system   | 53.8  | .Other machine is vehicle accessory  |
| 281  | .Comprising either movable closure member or fastening device therefor responsive to forward or rearward movement, or variations therein, of vehicle | 54.1  | <b>POWER</b>   |
| 282  | .Responsive to sensing of acceleration, deceleration, or tilt of vehicle   | 54.2  | .With spring powered motor   |
| 283  | ..And causing interruption of ignition circuit   | 55    | .On lower running gear   |
| 284  | ...And also impeding flow of fuel  | 56    | ..Rear axle and body   |
| 285  | ..And causing disruption of drive train between motor and wheels   | 57    | ...Longitudinal shaft  |
| 286  | .Comprising vehicle system or component responsive either to position of movable closure member or to status of fastening device therefor            | 58    | ..Frame  |
| 287  | .By preventing unauthorized or unintended access or use  | 59    | ...Pivoted support on axle   |
| 288  | ..Reponsive to failure of taxicab operator to activate fare meter upon boarding of passenger   | 60    | ...Electric  |
| 289  | ..Comprising device, mechanism, or system for either repositioning a movable or removable closure member or operating a fastening device therefor    | 61    | ..Pivoted support on axle  |
| 290  | .Responsive to weight of cargo load transported by vehicle   | 62    | ..Rear axle  |
| 53.1 | <b>MOTOR AS SOURCE OF POWER FOR OTHER MACHINE</b>  | 63    | .Motor moved by axle   |
| 53.2 | .Other machine is creeper drive on motor vehicle   | 291   | .Having specific motor-to-body-frame relationship  |
| 53.3 | .Other machine is mounted by three point hitch (i.e., Ford-Ferguson hitch)   | 292   | ..Including change-speed gearing, or clutch, mounted in common with motor  |
| 53.4 | .Hydraulic drive to other machine  | 293   | ...With member or mechanism for controlling gearing or clutch, and means for minimizing transfer of movement, caused by operation of motor, to member or mechanism |
|      |  | 294   | ..With means enabling repositioning of motor and gearing or clutch   |
|      |  | 295   | ...With wheeled auxiliary frame, resiliently joined to body frame, for supporting motor and gearing or clutch  |
|      |  | 296   | ..Including means on body frame or motor for handling exhaust  |
|      |  | 297   | ..Having motor shaft parallel to rotational axis of driven wheel   |
|      |  | 298   | ..Including means enabling repositioning of motor  |
|      |  | 299   | ..Including auxiliary frame for motor and resilient means for connecting auxiliary frame to body frame   |

- 300 ..Including means of nonsupporting nature for minimizing operation-induced movement of motor
- 65.1 .Electric
- 65.21 ..Hybrid vehicle (IPC)
- 65.22 ...Specific vehicle architecture (IPC)
- 65.225 ....Series and parallel (IPC)
- 65.23 .....Switching type (IPC)
- 65.235 .....Differential gearing type (IPC)
- 65.24 .....Electrical distribution type (IPC)
- 65.245 ....Series (IPC)
- 65.25 ....Parallel (IPC)
- 65.26 .....Motor assist (IPC)
- 65.265 ...Control of multiple systems specific to hybrid operation
- 65.27 ...Control of external device in conjunction with specific hybrid function
- 65.275 ...Control of individual subunit specific to hybrid operation
- 65.28 ....Control of engine specific to hybrid operation
- 65.285 ....Control of motor or generator specific to hybrid operation
- 65.29 ....Control of battery specific to hybrid operation
- 65.31 ..With means on vehicle for generating power for the electric motor
- 65.51 ..With motor in or moveable with wheel
- 65.6 ..With gearing between electric motor and drive wheel
- 65.7 ...Gearing is a changeable ratio gearing
- 65.8 ..With electronic devices (logic gates, semi-conductors, vacuum tubes, etc.) in control circuit
- 301 .Including traction motor of turbine type driven by fluid product of combustion
- 302 .Including traction motor of kind driven by expansible fluid from source external of motor
- 303 ..Gas is product of treatment of a volatile fluid (e.g., gas is steam)
- 304 ..With means to condense gas discharged from motor
- 305 .Including traction motor of kind driven by noncompressible fluid received under pressure from a pump
- 306 ..Vehicle includes another system operated by same fluid
- 307 ..Having variable displacement type motor or pump
- 308 ..Having separate motor for each driven, surface-engaging member
- 309 .With means for handling motor exhaust
- 310 .With means to generate steam for a propulsion purpose
- 68.1 .With means to guide and/or control air for power plant cooling
- 68.2 ..With further means to utilize power plant cooling air for other purposes
- 68.3 .With means to guide and/or control combustion air for power plant
- 68.4 .Radiators and condensers, mounting
- 68.6 ..With protector for the radiator or condenser
- 68.5 .Battery mountings and holders
- 69.2 .Hoods
- 69.21 ..Pivoted about horizontal axis extending transversely of vehicle (e.g., alligator type or front end pivot)
- 69.22 ..With noise suppression means
- 69.23 ...Noise suppression means prevents hood from vibrating (i.e., anti rattlers)
- 69.24 ..With access openings having moveable or removeable closures
- 69.25 ..Water deflectors
- 69.3 .With means to increase idle speed of internal combustion engine to compensate for accessory load
- 69.4 .With fuel supply for internal combustion engine
- 69.5 ..Engine uses gaseous fuel
- 69.6 .Vehicle has plural power plants
- 69.1 .Underpans
- 337 **TRANSMISSION MECHANISM**
- 338 .Condition responsive (e.g., responsive to speed, load, etc.)

|     |   |     |  |
|-----|---|-----|--|
| 339 | .With temperature control,<br>lubrication or sealing  | 383 | .With particular drive coupling  |
| 340 | .With laterally movable wheel   | 384 | ..Relative axial movement  |
| 341 | .Wheel drives parallel wheel  | 385 | ..Drive connection to wheel  |
| 342 | .Tire directly driven   | 76  | <b>COMPENSATING DEVICES</b>  |
| 343 | ..With particular gear structure  | 314 | <b>WITH PLURAL FUEL TANKS</b>  |
| 344 | .Assembly feature   | 315 | <b>MANUALLY ACTUATED CONTROLLING<br/>DEVICES</b>                         |
| 345 | .Traction aid   | 316 | .By other than hand or foot of<br>operator                               |
| 346 | .With protective guard or casing  | 317 | .On mine car vehicle   |
| 347 | .Mechanical movement transmission   | 318 | .On delivery-type vehicle  |
| 348 | .Final drive axle movable   | 319 | .With rein means   |
| 349 | ..Rigid axle  | 320 | .With vehicle control extension  |
| 350 | ...Belt or chain drive  | 321 | .With plural control stations  |
| 351 | ...With tensioning means  | 322 | ..Side-by-side   |
| 352 | ..With lateral support between<br>the differential or axle<br>housing and the vehicle frame | 323 | ..For single control means   |
| 353 | ...With sprung differential   | 324 | ..With tool or equipment control   |
| 354 | ...And differential support<br>feature  | 325 | ..Braking controllable by<br>passenger                                   |
| 355 | ...And final gear drive   | 326 | .With movable control station or<br>seat position                        |
| 356 | ...And final gear drive   | 327 | ..Movable cab  |
| 357 | ..Belt or chain drive   | 328 | ...Tilting   |
| 358 | ..Swinging axle, single pivot   | 329 | ..Simultaneously movable seat and<br>control                             |
| 359 | ..With sprung differential  | 330 | ..Seat on seat portion movable to<br>alternate position                  |
| 360 | ...And differential support<br>feature  | 331 | ...With tool or equipment control  |
| 361 | ...And final gear drive   | 332 | .With tiller-type handle   |
| 362 | ...And transverse leaf spring<br>suspension   | 333 | .Multiple vehicle functions<br>controllable by single device             |
| 363 | ..And final gear drive  | 334 | .With adjustable operator<br>engageable control                          |
| 364 | .Variable speed or direction  | 335 | .With fuel or air throttle<br>control                                    |
| 365 | ..Plural  | 336 | .With transmission control   |
| 366 | ..Belt or chain   | 78  | .Steering shaft  |
| 367 | ..Fluid drive   | 400 | <b>STEERING GEAR</b>   |
| 368 | ..Friction drive  | 401 | .Steering by terrestrial guide   |
| 369 | ..Planetary   | 402 | .No mechanical connection between<br>steering shaft and steering<br>gear |
| 370 | .With brake   | 403 | ..Hydraulic  |
| 371 | .Final gear drive at each of two<br>parallel wheels   | 404 | .Power assist alarms or disablers  |
| 372 | ..Planetary   | 405 | .With alternate emergency power<br>means (e.g., pump, gearing,<br>etc.)  |
| 373 | ..Belt or chain   | 406 | ..With fluid backup  |
| 374 | .Gear transmission relationship<br>to frame or axle   | 407 | ..With electrical backup   |
| 375 | ..Transmission is differential  | 408 | .Each wheel steerable  |
| 376 | .Shaft relationship to frame or<br>shaft  | 409 | ..Occupant steered   |
| 377 | .Transmission support   | 410 | ...With condition modulated<br>steering                                  |
| 378 | ..Differential or axle housing  |     |  |
| 379 | ..Shaft   |     |  |
| 380 | ...With propeller shaft casing,<br>(e.g., torque tube)                                      |     |  |
| 381 | ..Vibration damping   |     |  |
| 382 | ..Flexible support  |     |  |



|     |   |   |   |
|-----|---|---|---|
| 411 | ..Independently controlled steerable wheels                                 | 447   | .With mechanical power assist   |
| 412 | ..With electric power assist  | 448   | ..Swinging axle   |
| 413 | ..With electric power assist to all wheels                                  | 449   | ..Bogie truck having more than one axle   |
| 414 | ..With fluid power assist   | 84  | <b>DUST GUARDS</b>  |
| 415 | ..With electrical control   | 89.1  | <b>BODIES</b>   |
| 416 | ..With mechanical power assist  | 89.11   | .With passenger compartment having article receiving or removing means                                    |
| 417 | .With fluid power assist  | 89.12   | .Tractor and similar vehicle cabs   |
| 418 | ..Between articulated wheeled vehicle sections                              | 89.13   | .Movable cab or operator's station  |
| 419 | ...Combined with another steering mode                                      | 89.14   | ..Tilting   |
| 420 | ...Reciprocating power assist   | 89.15   | ...Via power or power enhancing means   |
| 421 | ..With condition modulated steering   | 89.16   | ..Overmotor cab   |
| 422 | ..With electrical control   | 89.17   | .Movable body portion facilitating engine access  |
| 423 | ...Vehicle speed condition only   | 89.18   | ..Cab portion   |
| 424 | ..With swinging axle  | 89.19   | .Overmotor cab  |
| 425 | ..Including flexible power transmitting means                               | 89.2  | .With means for handling exhaust of a motor   |
| 426 | ..Steering column supported   | 90  | .Dashboards   |
| 427 | ...Including rack gear means  | 90.6  | .Footboards and pedal guards  |
| 428 | ..With rack and pinion gearing intermediate steering shaft and power assist | 311   | <b>FRAME</b>  |
| 429 | ..Having rotary working member  | 312   | .With structure adapted to receive or support a motor, change-speed gearing, or other power train element |
| 430 | ..Having flexible working member  | 313   | <b>MISCELLANEOUS</b>  |
| 431 | ..Steering linkage includes interengaging gear means                        |   |   |
| 432 | ..With plural working members   |   |   |
| 433 | ..Working member movement traverses vehicle path                            |   |   |
| 434 | ..Working member movement traverses vehicle path                            | <b><u>CROSS-REFERENCE ART COLLECTIONS</u></b> |   |
| 435 | ..Moves separate rod for each wheel steering arm                            | 900   | <b>ARGICULTURAL-TYPE TRACTORS</b>   |
| 436 | ..Working member part engages wheel steering arm                            | 901   | <b>DEVICES FOR TRAVERSING VERTICAL SURFACES</b>   |
| 437 | ..Working member part engages tie rod                                       | 902   | <b>SHOCK OR VIBRATION ABSORBING OR TRANSMITTING MEANS BETWEEN WHEEL SUSPENSION AND MOTOR</b>              |
| 438 | ..Movable working member engages wheel steering arm                         | 903   | <b>AIRSTREAM REACTIVE VEHICLE OR VEHICLE STRUCTURE</b>  |
| 439 | ..Movable working member is a moving cylinder                               | 904   | <b>TRACTION DOLLIES FOR AIRCRAFT (CROSS REFERENCE ART COLLECTION CREATED IN COMPANION PROJECT)</b>        |
| 440 | ..With linkage intermediate working member and wheel steering arm           | 905   | <b>AXLES</b>  |
| 441 | ..Device to control pressure (e.g., valve)                                  | 906   | <b>ADJUSTABLE AXLES</b>   |
| 442 | ..Hydraulic circuit   | 907   | <b>MOTORIZED WHEELCHAIRS</b>  |
| 443 | ..With electric power assist  | 908   | <b>MOTOR VEHICLES WITH SHORT WHEELBASE</b>  |
| 444 | ..Specific mechanical feature   |   |   |
| 445 | ..Controlling rear wheels   |   |   |
| 446 | ..Condition modulated   |   |   |

**FOREIGN ART COLLECTIONS**FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or nonpatent literature from subclasses that have been reclassified have been transferred directly to the FOR Collections listed below. These Collections contain ONLY foreign patents or nonpatent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

**POWER (180/54.1)**

.Electric (180/65.1)

FOR 100 ..Combined with nonelectric drive means (180/65.2)

FOR 101 ...Generating means is driven by a prime mover (180/65.4)