

# CPC COOPERATIVE PATENT CLASSIFICATION

## B62M RIDER PROPULSION OF WHEELED VEHICLES OR SLEDGES; POWERED PROPULSION OF SLEDGES OR {SINGLE-TRACK} CYCLES; TRANSMISSIONS SPECIALLY ADAPTED FOR SUCH VEHICLES (arrangements or mounting of transmissions in vehicles in general B60K; transmission elements per se F16)

### NOTE

In this subclass, the term "transmission" means all parts between the prime mover or the part to which a rider immediately applies propulsive effort, e.g. pedal cranks, and a driven ground wheel.

**Rider propulsion of wheeled vehicles** (propulsion by ground-engaging rods B62M 29/02)

**1/00 Rider propulsion of wheeled vehicles** (rider propulsion with additional source of power B62M 6/00; propulsion by ground-engaging rods B62M 29/02)

### NOTE

Groups B62M 1/12-B62M 1/34 correspond to IPC2013.01

- 1/10 . involving devices which enable the mechanical storing and releasing of energy occasionally, e.g. arrangement of flywheels
- 1/105 . . {using elastic elements}
- 1/12 . operated by both hand and foot power
- 1/14 . operated exclusively by hand power
- 1/16 . . by means of a to-and-fro movable handle-bar
- 1/18 . by movement of rider's saddle
- 1/20 . . with additional rider propulsion means
- 1/24 . with reciprocating levers, e.g. foot levers (levers with can be immobilised as foot rests B62M 5/00)
- 1/26 . . characterised by rotary cranks combined with reciprocating levers
- 1/28 . . characterised by the use of flexible drive members, e.g. chains
- 1/30 . . characterised by the use of intermediate gears
- 1/32 . . characterised by directly driving the wheel axle, e.g. by using a ratchet wheel
- 1/34 . by walking on an endless belt
- 1/36 . with rotary cranks, e.g. with pedal cranks (B62M 1/34 takes precedence; combined with reciprocating levers B62M 1/26; cranks which can be immobilised as foot rests B62M 5/00)
- 1/38 . . for directly driving the wheel axle

**3/00 Construction of cranks operated by hand or foot**

- 3/003 . {Combination of crank axles and bearings housed in the bottom bracket (bottom bracket frame details B62K 19/34)}
- 2003/006 . {Crank arrangements to overcome dead points}
- 3/02 . of adjustable length
- 3/04 . . automatically adjusting
- 3/06 . with elliptical or other non-circular rotary movement
- 3/08 . Pedals
- 3/083 . . {Toe clip}
- 3/086 . . {Attachments between shoe and pedal other than toe clips, e.g. cleats (shoes for cyclists A43B 5/14)}

- 3/10 . . All-metal pedals
- 3/12 . . with reflectors
- 3/14 . Hand-grips for hand-operated cranks
- 3/16 . Accessories

**5/00 Foot-driven levers as pedal cranks which can be immobilised as foot-rests** (immobilising against theft B62H 5/10)

**6/00 Rider propulsion of wheeled vehicles with additional source of power, e.g. combustion engine or electric motor**

### NOTE

In this main group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place

- 6/10 . Rider propelled cycles with auxiliary combustion engine
- 6/15 . . Control or actuating devices therefor
- 6/20 . . power-driven at crank shaft parts
- 6/25 . . power-driven at axle parts
- 6/30 . . power-driven at single endless flexible member, e.g. chain, between cycle crankshaft and wheel axle, the engine engaging the endless flexible member
- 6/35 . . power-driven by friction rollers or gears engaging the ground wheel
- 6/40 . Rider propelled cycles with auxiliary electric motor
- 6/45 . . Control or actuating devices therefor
- 6/50 . . . characterised by detectors or sensors, or arrangement thereof
- 6/55 . . power-driven at crank shafts parts
- 6/60 . . power-driven at axle parts
- 6/65 . . . with axle and driving shaft arranged coaxially
- 6/70 . . power-driven at single endless flexible member, e.g. chain, between cycle crankshaft and wheel axle, the motor engaging the endless flexible member
- 6/75 . . power-driven by friction rollers or gears engaging the ground wheel
- 6/80 . Accessories, e.g. power sources; Arrangements thereof
- 6/85 . . Solar cells
- 6/90 . . Batteries

- 7/00 Motorcycles characterised by position of motor or engine** (rider propulsion with addition source of power, e.g. auxiliary combustion engine or electric motor [B62M 6/00](#); frames characterised by position of engine [B62K 11/00](#))
- 2007/005 . {the cycle being equipped with a pneumatic motor}
  - 7/02 . with engine between front and rear wheels
  - 7/04 . . below the frame
  - 7/06 . . directly under the saddle or seat
  - 7/08 . with the engine over the rear wheel
  - 7/10 . with the engine over the front wheel
  - 7/12 . with the engine beside or within the driven wheel
  - 7/14 . with the engine on an auxiliary wheeled unit, e.g. trailer, sidecar ([trailers B60P, B62D](#); [sidecars B62K 27/00](#))
  - 7/16 . . {with wheel of unit driven by the engine}

**Transmissions** {(freewheels or freewheels clutches specially adapted for cycles [F16D 41/24](#))}

- 9/00 Transmissions characterised by use of an endless chain, belt, or the like** (cycle chain guards [B62J 13/00](#))
- NOTE**
- In this main group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.
- 2009/002 . {Non-circular chain rings or sprockets}
  - 2009/005 . {Details of transmission chains specially adapted for bicycles}
  - 2009/007 . {Guides to prevent chain from slipping off the sprocket}
  - 9/02 . of unchangeable ratio
  - 9/04 . of changeable ratio
  - 9/06 . . using a single chain, belt, or the like
  - 9/08 . . . involving eccentrically- mounted or elliptically-shaped driving or driven wheel; with expansible driving or driven wheel
  - 9/085 . . . . {involving eccentrically mounted driving or driven wheel}
  - 9/10 . . . involving different-sized wheels, {e.g. rear sprocket chain wheels} selectively engaged by the chain, belt, or the like {(bicycle hubs rotatably arranged on axle [B60B 27/023](#))}
  - 9/105 . . . . {involving front sprocket chain-wheels engaged by the chain, belt or the like}
  - 9/12 . . . . the chain, belt, or the like being laterally shiftable, {e.g. using a rear derailleur}
  - 9/121 . . . . . Rear derailleurs
  - 9/122 . . . . . electrically or fluid actuated; Controls thereof
  - 9/123 . . . . . changing gears automatically
  - 9/124 . . . . . Mechanisms for shifting laterally
  - 2009/12406 . . . . . {Rear derailleur comprising a rigid pivoting arm}
  - 2009/12413 . . . . . {Rear derailleur comprising telescoping mechanisms}
  - 9/1242 . . . . . characterised by the linkage mechanisms
  - 9/1244 . . . . . limiting or positioning the movement
  - 9/1246 . . . . . using cams or plates

- 9/1248 . . . . . characterised by the use of biasing means, e.g. springs; Arrangements thereof
- 9/125 . . . . . Mounting the derailleur on the frame
- 9/126 . . . . . Chain guides; Mounting thereof
- 9/127 . . . . . Mounting or guiding of cables
- 9/128 . . . . . Accessories, e.g. protectors
- 9/131 . . . . . Front derailleurs
- 9/132 . . . . . electrically or fluid actuated; Controls thereof
- 9/133 . . . . . changing gears automatically
- 9/134 . . . . . Mechanisms for shifting laterally
- 9/1342 . . . . . characterised by the linkage mechanisms
- 9/1344 . . . . . limiting or positioning the movement
- 9/1346 . . . . . using cams or plates
- 9/1348 . . . . . characterised by the use of biasing means, e.g. springs; Arrangements thereof
- 9/135 . . . . . Mounting the derailleur on the frame
- 9/136 . . . . . Chain guides; Mounting thereof
- 9/137 . . . . . Mounting or guiding of cables
- 9/138 . . . . . Accessories, e.g. protectors
- 9/14 . . . . the wheels being laterally shiftable
- 9/16 . Tensioning or adjusting equipment for chains, belts or the like
- 11/00 Transmissions characterised by the use of inter-engaging toothed wheels or frictionally-engaging wheels** (with roller engaging the periphery of ground wheel [B62M 13/00](#))
- 11/02 . of unchangeable ratio
- 11/04 . of changeable ratio
- 11/06 . . with spur gear wheels ([B62M 11/14](#) takes precedence)
- 11/08 . . . {with a radially-shiftable intermediate gear wheel}
- 11/10 . . with bevel gear wheels ([B62M 11/14](#) takes precedence)
- 11/12 . . with frictionally-engaging wheels ([B62M 11/14](#) takes precedence)
- 11/14 . . with planetary gears
- 11/145 . . . {built in, or adjacent to, the bottom bracket}
- 11/16 . . . built in, or adjacent to, the ground-wheel hub
- 11/18 . . . with a plurality of planetary gear units
- 13/00 Transmissions characterised by use of friction rollers engaging the periphery of the ground wheel** (for rider propelled cycles with additional source of power [B62M 6/35, B62M 6/75](#))
- 13/02 . with changeable ratio, e.g. with roller of varying diameter
- 13/04 . with means for moving roller into driving contact with ground wheel
- 15/00 Transmissions characterised by use of crank shafts and coupling rods**
- 17/00 Transmissions characterised by use of rotary shaft, e.g. cardan shaft**
- 19/00 Transmissions characterised by use of non-mechanical gearing, e.g. fluid gearing**
- 21/00 Transmissions characterised by use of resilient elements therein**

<b>23/00</b>	<b>Transmissions characterised by use of other elements; Other transmissions</b>	2701/003	. . Motorcycles or bicycles with engine besides or within driven wheel
23/02	. characterised by the use of two or more dissimilar sources of power, e.g. transmissions for hybrid motorcycles ( <a href="#">transmissions for wheeled vehicles using rider propulsion with additional source of power B62M 6/00</a> )	2701/0038	. . Motorcycles or bicycles with engine over the front or rear wheel
<b>25/00</b>	<b>Actuators for gearing speed-change mechanisms specially adapted for cycles (rider operated controls for cycles in general <a href="#">B62K 23/00</a>; gearing speed change mechanisms <a href="#">F16H</a>)</b>	2701/0046	. Gear change control and other for motorcycles or bicycles
2025/003	. {with gear indicating means, e.g. a display}	2701/0053	. . Control by means of a lever
2025/006	. {with auxiliary shift assisting means}	2701/0061	. . Control of pulleys in transmission
25/02	. with mechanical transmitting systems, e.g. cables, levers	2701/0069	. Engine control
25/04	. . hand actuated	2701/0076	. Chain and chainwheel
25/045	. . . {having single actuating means operating both front and rear derailleur}	2701/0084	. Clutch control by driver
25/06	. . foot actuated	2701/0092	. Clutch arrangement in the transmission
25/08	. with electrical or fluid transmitting systems	<b>2901/00</b>	<b>Rear derailleur supported by the chain-stay or rear fork of the bicycle</b>
<b>27/00</b>	<b>Propulsion devices for sledges or the like (pushed or pulled by persons or animals <a href="#">B62B</a>, <a href="#">B62C</a>; wind propulsion <a href="#">B62B 15/00</a>)</b>		
27/02	. power driven		
2027/021	. . {Snow bikes resembling conventional motorcycles}		
2027/022	. . {Snow drive conversions for cycles with wheels}		
2027/023	. . {Snow mobiles characterised by engine mounting arrangements}		
2027/025	. . {Snow mobiles characterised by the skis}		
2027/026	. . {Snow mobiles characterised by the suspension means}		
2027/027	. . {Snow mobiles characterised by the tracks}		
2027/028	. . {Snow mobiles characterised by chassis or bodywork}		
<b>29/00</b>	<b>Ground engaging propulsion devices for cycles, sledges, or rider-propelled wheeled vehicles, not otherwise provided for {(non-motorized scooters with skis or runners <a href="#">B62K 3/002</a>)}</b>		
29/02	. using ground-engaging rods		
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<b>2700/00</b>	<b>Rider propulsion of bicycles or vehicles having transmission mainly of unchangeable ratio</b>		
2700/001	. Propulsion of bicycles and vehicles using planetary gears transmission		
2700/003	. Propulsion of bicycles and vehicles using toothed wheels transmission		
2700/005	. Propulsion of bicycles and vehicles using bevel/conical wheels transmission		
2700/006	. Propulsion of bicycles and vehicles using cranks having reciprocating levers		
2700/008	. Propulsion of bicycles and vehicles using other means		
<b>2701/00</b>	<b>Transmissions for motorcycles or motorised bicycles characterised by position of engine or gear box</b>		
2701/0007	. Construction details of gear box for motorcycles		
2701/0015	. Transmissions and/or engine attachment to frame		
2701/0023	. Transmissions using belt, chain and friction wheel		