

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### TRANSPORTING

## B62 LAND VEHICLES FOR TRAVELLING OTHERWISE THAN ON RAILS

### 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.

#### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

**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 handlebar
  - 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, the first place priority rule is applied, i.e. 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  | 9/085      | . . . . {involving eccentrically mounted driving or driven wheel}   |
| 6/35     | . . power-driven by friction rollers or gears engaging the ground 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)} |
| 6/40     | . Rider propelled cycles with auxiliary electric motor  | 9/105      | . . . . {involving front sprocket chain-wheels engaged by the chain, belt or the like}  |
| 6/45     | . . Control or actuating devices therefor   | 9/12       | . . . . the chain, belt, or the like being laterally shiftable {, e.g. using a rear derailleur}   |
| 6/50     | . . . characterised by detectors or sensors, or arrangement thereof   | 9/121      | . . . . . Rear derailleurs  |
| 6/55     | . . power-driven at crank shafts parts  | 9/122      | . . . . . electrically or fluid actuated; Controls thereof  |
| 6/60     | . . power-driven at axle parts  | 9/123      | . . . . . changing gears automatically  |
| 6/65     | . . . with axle and driving shaft arranged coaxially  | 9/124      | . . . . . Mechanisms for shifting laterally   |
| 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   | 2009/12406 | . . . . . {Rear derailleur comprising a rigid pivoting arm}   |
| 6/75     | . . power-driven by friction rollers or gears engaging the ground wheel   | 2009/12413 | . . . . . {Rear derailleur comprising telescoping mechanisms}   |
| 6/80     | . Accessories, e.g. power sources; Arrangements thereof   | 9/1242     | . . . . . characterised by the linkage mechanisms   |
| 6/85     | . . Solar cells   | 9/1244     | . . . . . limiting or positioning the movement  |
| 6/90     | . . Batteries   | 9/1246     | . . . . . using cams or plates  |
| 7/00     | <b>Motorcycles characterised by position of motor or engine</b> (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) | 9/1248     | . . . . . characterised by the use of biasing means, e.g. springs; Arrangements thereof   |
| 2007/005 | . {the cycle being equipped with a pneumatic motor}   | 9/125      | . . . . . Mounting the derailleur on the frame  |
| 7/02     | . with engine between front and rear wheels   | 9/126      | . . . . . Chain guides; Mounting thereof  |
| 7/04     | . . below the frame   | 9/127      | . . . . . Mounting or guiding of cables   |
| 7/06     | . . directly under the saddle or seat   | 9/128      | . . . . . Accessories, e.g. protectors  |
| 7/08     | . with the engine over the rear wheel   | 9/131      | . . . . . Front derailleurs   |
| 7/10     | . with the engine over the front wheel  | 9/132      | . . . . . electrically or fluid actuated; Controls thereof  |
| 7/12     | . with the engine beside or within the driven wheel   | 9/133      | . . . . . changing gears automatically  |
| 7/14     | . with the engine on an auxiliary wheeled unit, e.g. trailer, sidecar (trailers B60P, B62D; sidecars B62K 27/00)  | 9/134      | . . . . . Mechanisms for shifting laterally   |
| 7/16     | . . {with wheel of unit driven by the engine}   | 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      | <b>Transmissions characterised by the use of interengaging toothed wheels or frictionally-engaging wheels</b> (with roller engaging the periphery of ground wheel B62M 13/00)         |
| 2009/002 | . {Non-circular chain rings or sprockets}   | 11/02      | . of unchangeable ratio   |
| 2009/005 | . {Details of transmission chains specially adapted for bicycles}   | 11/04      | . of changeable ratio   |
| 2009/007 | . {Guides to prevent chain from slipping off the sprocket}  | 11/06      | . . with spur gear wheels (B62M 11/14 takes precedence)   |
| 9/02     | . of unchangeable ratio   | 11/08      | . . . {with a radially-shiftable intermediate gear wheel}   |
| 9/04     | . of changeable ratio   | 11/10      | . . with bevel gear wheels (B62M 11/14 takes precedence)  |
| 9/06     | . . using a single chain, belt, or the like   | 11/12      | . . with frictionally-engaging wheels (B62M 11/14 takes precedence)   |
| 9/08     | . . . involving eccentrically- mounted or elliptically-shaped driving or driven wheel; with expansible driving or driven wheel  |            |   |

**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, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

|              |  |       |                              |
|--------------|--|-------|------------------------------|
| 11/14        | . . with planetary gears   | 29/02 | . using ground-engaging rods |
| 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   |       |                              |
| <b>13/00</b> | <b>Transmissions characterised by use of friction rollers engaging the periphery of the ground wheel (for rider propelled cycles with additional source of power <a href="#">B62M 6/35</a>, <a href="#">B62M 6/75</a>)</b>                               |       |                              |
| 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  |       |                              |
| <b>15/00</b> | <b>Transmissions characterised by use of crank shafts and coupling rods</b>  |       |                              |
| <b>17/00</b> | <b>Transmissions characterised by use of rotary shaft, e.g. cardan shaft</b>   |       |                              |
| <b>19/00</b> | <b>Transmissions characterised by use of non-mechanical gearing, e.g. fluid gearing</b>  |       |                              |
| <b>21/00</b> | <b>Transmissions characterised by use of resilient elements therein</b>  |       |                              |
| <b>23/00</b> | <b>Transmissions characterised by use of other elements; Other transmissions</b>   |       |                              |
| 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 <a href="#">B62M 6/00</a></a> ) |       |                              |
| <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>                                       |       |                              |
| 2025/003     | . {with gear indicating means, e.g. a display}   |       |                              |
| 2025/006     | . {with auxiliary shift assisting means}   |       |                              |
| 25/02        | . with mechanical transmitting systems, e.g. cables, levers  |       |                              |
| 25/04        | . . hand actuated  |       |                              |
| 25/045       | . . . {having single actuating means operating both front and rear derailleur}   |       |                              |
| 25/06        | . . foot actuated  |       |                              |
| 25/08        | . with electrical or fluid transmitting systems  |       |                              |
| <b>27/00</b> | <b>Propulsion devices for sledges or the like (<a href="#">pushed or pulled by persons or animals <a href="#">B62B</a>, <a href="#">B62C</a></a>; wind propulsion <a href="#">B62B 15/00</a>)</b>  |       |                              |
| 27/02        | . power driven   |       |                              |
| 2027/021     | . . { <a href="#">Snow bikes resembling conventional motorcycles</a> }   |       |                              |
| 2027/022     | . . { <a href="#">Snow drive conversions for cycles with wheels</a> }  |       |                              |
| 2027/023     | . . { <a href="#">Snow mobiles characterised by engine mounting arrangements</a> }   |       |                              |
| 2027/025     | . . { <a href="#">Snow mobiles characterised by the skis</a> }   |       |                              |
| 2027/026     | . . { <a href="#">Snow mobiles characterised by the suspension means</a> }   |       |                              |
| 2027/027     | . . { <a href="#">Snow mobiles characterised by the tracks</a> }   |       |                              |
| 2027/028     | . . { <a href="#">Snow mobiles characterised by chassis or bodywork</a> }  |       |                              |
| <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>  |       |                              |