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 (propulsion by ground-engaging rods B62M 29/02) (NOTES omitted)

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

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

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
3/16 . 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
Rider propulsion of wheeled vehicles

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, 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.

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

9/12406 . . . [Rear derailleur comprising a rigid pivoting arm]

9/12413 . . . [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 interengaging 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

23/00 Transmissions characterised by use of other elements; Other transmissions
23/02 . . . characterised by the use of two or more dissimilar sources of power, e.g. transmissions for hybrid motorcycles (transmissions for wheeled vehicles using rider propulsion with additional source of power B62M 6/00)

25/00 Actuators for gearing speed-change mechanisms specially adapted for cycles (rider operated controls for cycles in general B62K 23/00; gearing speed change mechanisms F16H)
25/003 . . . {with gear indicating means, e.g. a display}
25/006 . . . {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

27/00 Propulsion devices for sledges or the like (pushed or pulled by persons or animals B62B, B62C; wind propulsion B62B 15/00)
27/02 . . . power driven
27/021 . . . {Snow bikes resembling conventional motorcycles}
27/022 . . . {Snow drive conversions for cycles with wheels}
27/023 . . . {Snow mobiles characterised by engine mounting arrangements}
27/025 . . . {Snow mobiles characterised by the skis}
27/026 . . . {Snow mobiles characterised by the suspension means}
27/027 . . . {Snow mobiles characterised by the tracks}
27/028 . . . {Snow mobiles characterised by chassis or bodywork}

29/00 Ground engaging propulsion devices for cycles, sledges, or rider-propelled wheeled vehicles, not otherwise provided for {non-motorized scooters with skis or runners B62K 3/002}