

**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](#))

**B62M 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

**B62M 1/10**

- . involving devices which enable the mechanical storing and releasing of energy occasionally, e.g. arrangement of flywheels

**B62M 1/105**

- . . {using elastic elements}

**B62M 1/12**

- . operated by both hand and foot power

**B62M 1/14**

- . operated exclusively by hand power

**B62M 1/16**

- . . by means of a to-and-fro movable handle-bar

**B62M 1/18**

- . by movement of rider`s saddle

**B62M 1/20**

- . . with additional rider propulsion means

**B62M 1/24**

- . with reciprocating levers, e.g. foot levers (levers with can be immobilised as foot rests [B62M 5/00](#))

**B62M 1/26**

- . . characterised by rotary cranks combined with reciprocating levers

**B62M 1/28**

- . . characterised by the use of flexible drive members, e.g. chains

**B62M 1/30**

- . . characterised by the use of intermediate gears

**B62M 1/32**

- . . characterised by directly driving the wheel axle, e.g. by using a ratchet wheel

**B62M 1/34**

- . by walking on an endless belt

**B62M 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](#))

**B62M 1/38**

- . . for directly driving the wheel axle

**B62M 3/00**

**Construction of cranks operated by hand or foot**

- B62M 3/003 . {Combination of crank axles and bearings housed in the bottom bracket (bottom bracket frame details [B62K 19/34](#))}
- B62M 2003/006 . {Crank arrangements to overcome dead points}
- B62M 3/02 . of adjustable length
- B62M 3/04 . . automatically adjusting
- B62M 3/06 . with elliptical or other non-circular rotary movement
- B62M 3/08 . Pedals
- B62M 3/083 . . {Toe clip}
- B62M 3/086 . . {Attachments between shoe and pedal other than toe clips, e.g. cleats (shoes for cyclists [A43B 5/14](#))}
- B62M 3/10 . . All-metal pedals
- B62M 3/12 . . with reflectors
- B62M 3/14 . Hand-grips for hand-operated cranks
- B62M 3/16 . Accessories

**B62M 5/00** **Foot-driven levers as pedal cranks which can be immobilised as foot-rests**  
(immobilising against theft [B62H 5/10](#))

**B62M 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

- B62M 6/10 . Rider propelled cycles with auxiliary combustion engine
- B62M 6/15 . . Control or actuating devices therefor
- B62M 6/20 . . power-driven at crank shaft parts
- B62M 6/25 . . power-driven at axle parts
- B62M 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
- B62M 6/35 . . power-driven by friction rollers or gears engaging the ground wheel
- B62M 6/40 . Rider propelled cycles with auxiliary electric motor
- B62M 6/45 . . Control or actuating devices therefor
- B62M 6/50 . . . characterised by detectors or sensors, or arrangement thereof
- B62M 6/55 . . power-driven at crank shafts parts
- B62M 6/60 . . power-driven at axle parts
- B62M 6/65 . . . with axle and driving shaft arranged coaxially
- B62M 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
- B62M 6/75 . . power-driven by friction rollers or gears engaging the ground wheel
- B62M 6/80 . Accessories, e.g. power sources; Arrangements thereof
- B62M 6/85 . . Solar cells

B62M 6/90 . . Batteries

**B62M 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](#))

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

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

**B62M 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.

- B62M 2009/002 . {Non-circular chain rings or sprockets}
- B62M 2009/005 . {Details of transmission chains specially adapted for bicycles}
- B62M 2009/007 . {Guides to prevent chain from slipping off the sprocket}
- B62M 9/02 . of unchangeable ratio
- B62M 9/04 . of changeable ratio
- B62M 9/06 . . using a single chain, belt, or the like
- B62M 9/08 . . . involving eccentrically- mounted or elliptically-shaped driving or driven wheel; with expansible driving or driven wheel
- B62M 9/085 . . . . {involving eccentrically mounted driving or driven wheel}
- B62M 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](#))}
- B62M 9/105 . . . . {involving front sprocket chain-wheels engaged by the chain, belt or the like}
- B62M 9/12 . . . . the chain, belt, or the like being laterally shiftable, {e.g. using a rear derailleur}
- B62M 9/121 . . . . . Rear derailleurs
- B62M 9/122 . . . . . electrically or fluid actuated; Controls thereof
- B62M 9/123 . . . . . changing gears automatically
- B62M 9/124 . . . . . Mechanisms for shifting laterally

B62M 2009/12406	.....	{Rear derailleur comprising a rigid pivoting arm}
B62M 2009/12413	.....	{Rear derailleur comprising telescoping mechanisms}
B62M 9/1242	.....	characterised by the linkage mechanisms
B62M 9/1244	.....	limiting or positioning the movement
B62M 9/1246	.....	using cams or plates
B62M 9/1248	.....	characterised by the use of biasing means, e.g. springs; Arrangements thereof
B62M 9/125	.....	Mounting the derailleur on the frame
B62M 9/126	.....	Chain guides; Mounting thereof
B62M 9/127	.....	Mounting or guiding of cables
B62M 9/128	.....	Accessories, e.g. protectors
B62M 9/131	.....	Front derailleurs
B62M 9/132	.....	electrically or fluid actuated; Controls thereof
B62M 9/133	.....	changing gears automatically
B62M 9/134	.....	Mechanisms for shifting laterally
B62M 9/1342	.....	characterised by the linkage mechanisms
B62M 9/1344	.....	limiting or positioning the movement
B62M 9/1346	.....	using cams or plates
B62M 9/1348	.....	characterised by the use of biasing means, e.g. springs; Arrangements thereof
B62M 9/135	.....	Mounting the derailleur on the frame
B62M 9/136	.....	Chain guides; Mounting thereof
B62M 9/137	.....	Mounting or guiding of cables
B62M 9/138	.....	Accessories, e.g. protectors
B62M 9/14	....	the wheels being laterally shiftable
B62M 9/16	.	Tensioning or adjusting equipment for chains, belts or the like
<b>B62M 11/00</b>		<b>Transmissions characterised by the use of inter-engaging toothed wheels or frictionally-engaging wheels</b> (with roller engaging the periphery of ground wheel <a href="#">B62M 13/00</a> )
B62M 11/02	.	of unchangeable ratio
B62M 11/04	.	of changeable ratio
B62M 11/06	..	with spur gear wheels ( <a href="#">B62M 11/14</a> takes precedence)
B62M 11/08	...	with a radially-shiftable intermediate gear wheel
B62M 11/10	..	with bevel gear wheels ( <a href="#">B62M 11/14</a> takes precedence)
B62M 11/12	..	with frictionally-engaging wheels ( <a href="#">B62M 11/14</a> takes precedence)
B62M 11/14	..	with planetary gears
B62M 11/145	...	{built in, or adjacent to, the bottom bracket}
B62M 11/16	...	built in, or adjacent to, the ground-wheel hub
B62M 11/18	...	with a plurality of planetary gear units

<b>B62M 13/00</b>	<b>Transmissions characterised by use of friction rollers engaging the periphery of the ground wheel</b> (for rider propelled cycles with additional source of power <a href="#">B62M 6/35</a> , <a href="#">B62M 6/75</a> )
B62M 13/02	. with changeable ratio, e.g. with roller of varying diameter
B62M 13/04	. with means for moving roller into driving contact with ground wheel
<b>B62M 15/00</b>	<b>Transmissions characterised by use of crank shafts and coupling rods</b>
<b>B62M 17/00</b>	<b>Transmissions characterised by use of rotary shaft, e.g. cardan shaft</b>
<b>B62M 19/00</b>	<b>Transmissions characterised by use of non-mechanical gearing, e.g. fluid gearing</b>
<b>B62M 21/00</b>	<b>Transmissions characterised by use of resilient elements therein</b>
<b>B62M 23/00</b>	<b>Transmissions characterised by use of other elements; Other transmissions</b>
B62M 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 <a href="#">B62M 6/00</a> )
<b>B62M 25/00</b>	<b>Actuators for gearing speed-change mechanisms specially adapted for cycles</b> (rider operated controls for cycles in general <a href="#">B62K 23/00</a> ; gearing speed change mechanisms <a href="#">F16H</a> )
B62M 2025/003	. {with gear indicating means, e.g. a display}
B62M 2025/006	. {with auxiliary shift assisting means}
B62M 25/02	. with mechanical transmitting systems, e.g. cables, levers
B62M 25/04	.. hand actuated
B62M 25/045	... {having single actuating means operating both front and rear derailleur}
B62M 25/06	.. foot actuated
B62M 25/08	. with electrical or fluid transmitting systems
<b>B62M 27/00</b>	<b>Propulsion devices for sledges or the like</b> (pushed or pulled by persons or animals <a href="#">B62B</a> , <a href="#">B62C</a> ; wind propulsion <a href="#">B62B 15/00</a> )
B62M 27/02	. power driven
B62M 2027/021	.. {Snow bikes resembling conventional motorcycles}
B62M 2027/022	.. {Snow drive conversions for cycles with wheels}
B62M 2027/023	.. {Snow mobiles characterised by engine mounting arrangements}
B62M 2027/025	.. {Snow mobiles characterised by the skis}
B62M 2027/026	.. {Snow mobiles characterised by the suspension means}
B62M 2027/027	.. {Snow mobiles characterised by the tracks}
B62M 2027/028	.. {Snow mobiles characterised by chassis or bodywork}
<b>B62M 29/00</b>	<b>Ground engaging propulsion devices for cycles, sledges, or rider-propelled wheeled vehicles, not otherwise provided for</b> {(non-motorized scooters with skis or runners <a href="#">B62K 3/002</a> )}

B62M 29/02 . using ground-engaging rods

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**B62M 2700/00 Rider propulsion of bicycles or vehicles having transmission mainly of unchangeable ratio**

- B62M 2700/001 . Propulsion of bicycles and vehicles using planetary gears transmission
- B62M 2700/003 . Propulsion of bicycles and vehicles using toothed wheels transmission
- B62M 2700/005 . Propulsion of bicycles and vehicles using bevel/conical wheels transmission
- B62M 2700/006 . Propulsion of bicycles and vehicles using cranks having reciprocating levers
- B62M 2700/008 . Propulsion of bicycles and vehicles using other means

**B62M 2701/00 Transmissions for motorcycles or motorised bicycles characterised by position of engine or gear box**

- B62M 2701/0007 . Construction details of gear box for motorcycles
- B62M 2701/0015 . Transmissions and/or engine attachment to frame
- B62M 2701/0023 . Transmissions using belt, chain and friction wheel
- B62M 2701/003 . . . Motorcycles or bicycles with engine besides or within driven wheel
- B62M 2701/0038 . . . Motorcycles or bicycles with engine over the front or rear wheel
- B62M 2701/0046 . Gear change control and other for motorcycles or bicycles
- B62M 2701/0053 . . . Control by means of a lever
- B62M 2701/0061 . . . Control of pulleys in transmission
- B62M 2701/0069 . Engine control
- B62M 2701/0076 . Chain and chainwheel
- B62M 2701/0084 . Clutch control by driver
- B62M 2701/0092 . Clutch arrangement in the transmission

**B62M 2901/00 Rear derailleur supported by the chain-stay or rear fork of the bicycle**