

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.>

Guidance heading: **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 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 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
- Guidance heading: **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 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 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
B62M 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)
B62M 11/02	.	of unchangeable ratio
B62M 11/04	.	of changeable ratio
B62M 11/06	..	with spur gear wheels (B62M 11/14 takes precedence)
B62M 11/08	...	with a radially-shiftable intermediate gear wheel
B62M 11/10	..	with bevel gear wheels (B62M 11/14 takes precedence)
B62M 11/12	..	with frictionally-engaging wheels (B62M 11/14 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

- B62M 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](#))

- 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

- B62M 15/00** **Transmissions characterised by use of crank shafts and coupling rods**

- B62M 17/00** **Transmissions characterised by use of rotary shaft, e.g. cardan shaft**

- B62M 19/00** **Transmissions characterised by use of non-mechanical gearing, e.g. fluid gearing**

- B62M 21/00** **Transmissions characterised by use of resilient elements therein**

- B62M 23/00** **Transmissions characterised by use of other elements; Other transmissions**

- 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 [B62M 6/00](#))

- B62M 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](#))

- 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

- B62M 27/00** **Propulsion devices for sledges or the like** (pushed or pulled by persons or animals [B62B](#) , [B62C](#) ; wind propulsion [B62B 15/00](#))

- B62M 27/02 . . power driven

- B62M 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](#)) }

- [B62M 29/02](#) . using ground-engaging rods
- B62M 2003/00 Construction of cranks operated by hand or foot**
- [B62M 2003/006](#) . Crank arrangements to overcome dead points
- B62M 2007/00 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 2009/00 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 2009/04](#) . of changeable ratio
- [B62M 2009/06](#) .. using a single chain, belt, or the like
- [B62M 2009/10](#) ... 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 2009/12](#) the chain, belt, or the like being laterally shiftable, {e.g. using a rear derailleur }
- [B62M 2009/121](#) Rear derailleurs
- [B62M 2009/124](#) Mechanisms for shifting laterally
- [B62M 2009/12406](#) Rear derailleur comprising a rigid pivoting arm
- [B62M 2009/12413](#) Rear derailleur comprising telescoping mechanisms
- B62M 2025/00 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](#))
- [B62M 2025/003](#) . with gear indicating means, e.g. a display
- [B62M 2025/006](#) . with auxiliary shift assisting means
- B62M 2027/00 Propulsion devices for sledges or the like** (pushed or pulled by persons or animals [B62B](#) , [B62C](#) ; wind propulsion [B62B 15/00](#))

- B62M 2027/02 . 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

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