

CPC**COOPERATIVE PATENT CLASSIFICATION****B60B**

VEHICLE WHEELS (making wheels or wheel parts by rolling [B21H 1/00](#), by forging, hammering or pressing [B21K 1/28](#)); **CASTORS; AXLES FOR WHEELS OR CASTORS; INCREASING WHEEL ADHESION**

NOTE

Attention is drawn to the Explanatory Note following the class title ([B60](#))

Wheels (wheels for roller skates [A63C 17/22](#); making wheels or wheel parts [B21D 53/26](#); by rolling [B21H 1/00](#); by forging, hammering, or pressing [B21K 1/28](#))

B60B 1/00

Spoked wheels; Spokes thereof (non-metallic [B60B 5/00](#); spoked wheels comprising rail-engaging elements [B60B 17/001](#); making wheel spokes [B21F 39/00](#))

- B60B 1/003 . {specially adapted for bicycles ([B60B 1/041](#) takes precedence)}
- B60B 1/006 . {specially adapted for light-weight wheels, e.g. of strollers or wheel-chairs ([B60B 1/003](#) takes precedence)}
- B60B 1/02 . Wheels with wire or other tension spokes
- B60B 1/0207 .. {characterised by non-standard number of spokes, i.e. less than 12 or more than 32 spokes}
- B60B 1/0215 .. {characterised by specific grouping of spokes}
- B60B 1/0223 ... {the dominant aspect being the spoke arrangement pattern}
- B60B 1/023 {multiple exclusively parallel spokes arranged in a group}
- B60B 1/0238 ... {the dominant aspect being the number of spokes per group}
- B60B 1/0246 .. {characterised by cross-section of the spoke, e.g. polygon or elliptic shape}
- B60B 1/0253 .. {the spoke being hollow}
- B60B 1/0261 .. {characterised by spoke form}
- B60B 1/0269 ... {the spoke being curved or deformed over substantial part of length}
- B60B 1/0276 ... {the spoke being crooked in the middle and having double length}
- B60B 1/0284 ... {the spoke being threaded at both ends}
- B60B 1/0292 ... {the spoke being bent at both ends}
- B60B 1/04 .. Attaching spokes to rim or hub
- B60B 1/041 ... {of bicycle wheels (bicycle rims characterised by means for attaching spokes [B60B 21/062](#))}
- B60B 1/042 ... {Attaching spokes to hub}
- B60B 1/043 ... {Attaching spokes to rim}
- B60B 1/044 {by the use of spoke nipples}
- B60B 1/045 {characterised by their specific shape}
- B60B 1/046 {characterised by adaptations of the nipple for tightening tools}
- B60B 1/047 {the nipple comprising sealing means}

- B60B 1/048 {by the use of screws}
- B60B 1/06 . Wheels with compression spokes (wheels of high resiliency [B60B 9/00](#))
- B60B 1/08 . . formed by casting
- B60B 1/10 . . fabricated by sheet metal ([B60B 1/12](#), [B60B 3/08](#) take precedence)
- B60B 1/12 . . with tubular spokes ([B60B 1/08](#) takes precedence)
- B60B 1/14 . . Attaching spokes to rim or hub

- B60B 3/00** **Disc wheels, i.e. wheels with load-supporting disc body** (non-metallic [B60B 5/00](#); wheel cover discs [B60B 7/00](#); disc wheels comprising rail-engaging elements [B60B 17/0006](#))
- B60B 3/001 . {Lightweight wheels, e.g. for strollers or toys}
- B60B 3/002 . {characterised by the shape of the disc}
- B60B 3/004 . . {in the hub section}
- B60B 3/005 . . {in the section adjacent to rim}
- B60B 3/007 . . {in the intermediate section}
- B60B 3/008 . {by the form of wheel bolt mounting section}
- B60B 3/02 . with a single disc body integral with rim
- B60B 3/04 . with a single disc body not integral with rim, { i.e. disc body and rim being manufactured independently and then permanently attached to each other in a second step, e.g. by welding}
- B60B 3/041 . . {characterised by the attachment of rim to wheel disc}
- B60B 3/042 . . . {characterised by circumferential position of attachment means}
- B60B 3/044 . . . {characterised by cross-sectional details of the attachment, e.g. the profile}
- B60B 3/045 . . . characterised by the attachment portions
- B60B 3/047 comprising specific torque transmitting means
- B60B 3/048 . . the rim being rotatably mounted to the wheel disc
- B60B 3/06 . formed by casting
- B60B 3/08 . with disc body formed by two or more axially spaced discs {(comprising rail-engaging elements formed by two or more axially spaced discs [B60B 17/0013](#))}
- B60B 3/082 . . {especially for light-weight wheels}
- B60B 3/085 . . {Discs having no mutual contact}
- B60B 3/087 . . {Discs having several mutual contact regions}
- B60B 3/10 . apertured to simulate spoked wheels
- B60B 3/12 . Means of reinforcing disc bodies
- B60B 3/14 . Attaching disc body to hub (resiliently [B60B 9/00](#); attaching rim to wheel body [B60B 23/00](#)) {Wheel adapters}
- B60B 3/142 . . {by central locking nut}
- B60B 3/145 . . {using washers or distance bushes}
- B60B 3/147 . . {using wheel adapters}
- B60B 3/16 . . by bolts or the like
- B60B 3/165 . . . {with locking devices for the fixing means, e.g. screw or nut covers}
- B60B 3/18 . . by circlips or the like

B60B 5/00	Wheels, spokes, disc bodies, rims, hubs, wholly or predominantly made of non-metallic material (wheel cover discs B60B 7/00 ; wheels of high resiliency B60B 9/00 ; wheel bodies comprising rail-engaging elements characterised by use of non-metallic material B60B 17/0003)
B60B 5/02	. made of synthetic material
B60B 5/04	. made of wood
B60B 7/00	Wheel cover discs, rings, or the like, for ornamenting, protecting, {venting,} or obscuring, wholly or in part, the wheel body, rim, hub, or tyre sidewall {e.g. wheel cover discs, wheel cover discs with cooling fins (wheels with cooling fins not provided on the wheel cover disc B60B 19/10 ; apparatus or tools for removing or attaching cover discs hub caps or the like B60B 31/06)
B60B 7/0006	. {for cycle wheels or similar}
B60B 7/0013	. {Hub caps}
B60B 7/002	.. {being of the ventilated type}
B60B 7/0026	. {characterised by the surface}
B60B 7/0033	.. {the dominant aspect being the surface appearance}
B60B 7/004	... {the surface being painted}
B60B 7/0046	... {the surface being plated or coated}
B60B 7/0053	... {the surface being decorated}
B60B 7/006	... {the surface being reflective or including lighting}
B60B 7/0066	.. {the dominant aspect being the surface structure}
B60B 7/0073	... {being completely closed, i.e. having no cooling openings for the brakes}
B60B 7/008	... {having decorative holes or openings, i.e. openings going beyond mere cooling openings}
B60B 7/0086	... {having cooling fins}
B60B 7/0093	. {being reinforced against thermal deformation}
B60B 7/01	. Rings specially adapted for covering only the wheel rim or the tyre sidewall, e.g. removable tyre sidewall trim rings
B60B 7/02	. made essentially in one part (B60B 7/0006 , B60B 7/01 take precedence)
B60B 7/04	. built-up of several main parts (B60B 7/01 , B60B 7/20 take precedence)
B60B 7/06	. Fastening arrangements therefor (B60B 7/01 , B60B 7/20 take precedence)
B60B 7/061	.. {characterised by the part of the wheels to which the discs, rings or the like are mounted}
B60B 7/063	... {to the rim}
B60B 7/065	... {to the disc}
B60B 7/066	... {to the hub}
B60B 7/068	... {to the wheel bolts or wheel nuts}
B60B 7/08	.. having gripping elements consisting of formations integral with the cover
B60B 7/10	.. comprising a plurality of spaced spring clips individually mounted on the cover, e.g. riveted, welded or readily releasable
B60B 7/105	... {the spring clip mounted on the rim}

- B60B 7/12
 - .. comprising an annular spring or gripping element mounted on the cover ([B60B 7/08](#) takes precedence)
- B60B 7/14
 - .. comprising screw-threaded means
- B60B 7/16
 - . Anti-theft devices
- B60B 7/18
 - . simulating spoked or wire wheel
- B60B 7/20
 - . having an element mounted for rotation independently of wheel rotation

- B60B 9/00**
Wheels of high resiliency {, e.g. with conical interacting pressure-surfaces (resilient wheels comprising rail-engaging elements [B60B 17/0027](#))}
- B60B 9/005
 - . {Comprising a resilient hub (hubs per se [B60B 27/00](#))}
- B60B 9/02
 - . using springs {resiliently mounted bicycle rims} (wheels comprising resilient spokes [B60B 9/26](#))
- B60B 9/04
 - .. in leaf form
- B60B 9/06
 - .. in helical form
- B60B 9/08
 - .. in flat coiled form
- B60B 9/10
 - .. of rubber or the like
- B60B 9/12
 - ... in the form of sleeves or rings concentric with the wheel axis
- B60B 9/14
 - ... with means limiting relative lateral movements between hub and remainder of wheel
- B60B 9/16
 - ... modified to ensure electric conductivity
- B60B 9/18
 - . using fluid (within spokes [B60B 9/26](#))
- B60B 9/20
 - .. in rings concentric with wheel axis
- B60B 9/22
 - ... inflatable
- B60B 9/24
 - .. with pistons and cylinders
- B60B 9/26
 - . comprising resilient spokes
- B60B 9/28
 - .. with telescopic action

- B60B 11/00**
Units comprising multiple wheels arranged side by side; Wheels having more than one rim or capable of carrying more than one tyre
- B60B 11/02
 - . Units of separate wheels mounted for independent or coupled rotation
- B60B 11/04
 - . Wheels with a rim capable of carrying more than one tyre
- B60B 11/06
 - . Wheels with more than one rim mounted on a single wheel body
- B60B 11/08
 - . Arrangements of balancing mechanisms enabling a uniform distribution of load to tyres
- B60B 11/10
 - . Emergency wheels (collapsible tyres [B60C 3/08](#); tyres characterised by means enabling restricted operation in damaged or deflated condition [B60C 17/00](#))

- B60B 15/00**
Wheels or wheel attachments designed for increasing traction (vehicle tires [B60C](#); non-skid devices temporarily attachable to resilient tires or resiliently-tired wheels [B60C](#))
- B60B 15/02
 - . Wheels with spade lugs
- B60B 15/021
 - .. {made of resilient material}
- B60B 15/023
 - .. {being of the broad form type}
- B60B 15/025
 - ... {with non-cylindrical shape}

- B60B 15/026 . . {characterised by mud deposit prevention}
- B60B 15/028 . . {characterised by active rotation of the lugs}
- B60B 15/04 . . with resiliently-mounted spade lugs
- B60B 15/06 . . with pivotally-mounted spade lugs
- B60B 15/08 . . with spade lugs axially displaced relatively to the tread surface of the tire
- B60B 15/10 . . with radially-adjustable spade lugs; Control mechanisms therefor
- B60B 15/12 . . . involving cams or eccentric hoops
- B60B 15/14 . . . involving an axially-displaceable cone
- B60B 15/16 . . . involving gearing, e.g. gear pinions acting upon threaded shafts on the spade lugs
- B60B 15/18 . Wheels with ground-engaging plate-like shoes
- B60B 15/20 . . with resiliently-mounted shoes, e.g. on a spider
- B60B 15/22 . . connected by links to the hub
- B60B 15/24 . Tread bands or rings for fairing lugs when travelling on the road
- B60B 15/26 . Auxiliary wheels or rings with traction-increasing surface attachable to the main wheel body
- B60B 15/263 . . {Traction increasing surface being located axially beside tire}
- B60B 15/266 . . {Traction increasing surface being located radially outside tire circumferential surface}
- B60B 15/28 . Wheel-ballasting weights; Their attachment
- B60B 17/00** **Wheels characterised by rail-engaging elements** ({wheel-axle combinations [B60B 37/00;](#) of model railways [A63H 19/22](#))
- B60B 17/0003 . {Wheel bodies characterised by use of non-metallic material ([B60B 17/0034](#) takes precedence)}
- B60B 17/0006 . {Construction of wheel bodies, e.g. disc wheels ([B60B 17/0003](#) takes precedence)}
- B60B 17/001 . . {Spoked wheels; Spokes thereof}
- B60B 17/0013 . . {formed by two or more axially spaced discs}
- B60B 17/0017 . . . {with insonorisation means}
- B60B 17/002 . . {with counter-balance}
- B60B 17/0024 . . {with noise reducing means ([B60B 17/0017](#) takes precedence)}
- B60B 17/0027 . {Resilient wheels, e.g. resilient hubs ([B60B 17/02](#) takes precedence)}
- B60B 17/0031 . . {using springs}
- B60B 17/0034 . . . {of rubber or other non-metallic material}
- B60B 17/0037 {of circular or elliptical cross section}
- B60B 17/0041 {of substantially rectangular cross section}
- B60B 17/0044 {single element arranged in V-form}
- B60B 17/0048 {pair of elements arranged in V-form}
- B60B 17/0051 . . {using fluid}
- B60B 17/0055 . {with non-elastic tyres (e.g. of particular profile or composition)}
- B60B 17/0058 . . {characterised by their fixing to wheel bodies}
- B60B 17/0062 . . {having teeth or protrusions on the circumference of the wheel}

- B60B 17/0065 . {Flange details}
- B60B 17/0068 . . {the flange being provided on a single side}
- B60B 17/0072 . . {the flange being provided on both sides}
- B60B 17/0075 . . {the flange being movable, for adaptation to variable rail or track widths}
- B60B 17/0079 . {the flange having a guide wheel}
- B60B 17/0082 . {Wheels designed to interact with a particular rail profile}
- B60B 17/0086 . . {H-type rail profiles, i.e. the wheels are arranged between upper and lower rail extensions}
- B60B 17/0089 . . {Circular rail profiles}
- B60B 17/0093 . . {Rectangular rail profiles}
- B60B 17/0096 . . {Triangular rail profiles}
- B60B 17/02 . with elastic tyres

B60B 19/00 **Wheels not otherwise provided for or having characteristics specified in one of the sub-groups of this group**

- B60B 19/003 . {Multidirectional wheels}
- B60B 19/006 . {Magnetic wheels}
- B60B 19/02 . convertible, e.g. from road wheel to rail wheel; Wheels specially designed for alternative use on road and rail
- B60B 19/04 . expansible
- B60B 19/06 . with compartments for fluid, packing or loading material; Buoyant wheels
- B60B 19/08 . with lubricating passages, channels, or reservoirs
- B60B 19/10 . with cooling fins
- B60B 19/12 . Roller-type wheels ([B60B 19/06](#) takes precedence)
- B60B 19/125 . . {with helical projections on radial outer surface translating rotation of wheel into movement along the direction of the wheel axle}
- B60B 19/14 . Ball-type wheels ([B60B 19/06](#) takes precedence)

Rims; Hubs

B60B 21/00 **Rims** (non-metallic [B60B 5/00](#); of high resiliency [B60B 9/00](#); capable of carrying more than one tyre [B60B 11/04](#); multiple rims on a single wheel body [B60B 11/06](#); of multi-part type [B60B 25/00](#); metal tyres [B60C](#))

- B60B 21/02 . characterised by transverse section
- B60B 21/021 . . {with inwardly directed flanges, i.e. the tyre-seat being reversed}
- B60B 21/023 . . {the transverse section being non-symmetrical}
- B60B 21/025 . . {the transverse section being hollow}
- B60B 21/026 . . {the shape of rim well}
- B60B 21/028 . . {the shape of hump}
- B60B 21/04 . . with substantially radial flanges (with rail-engaging flanges [B60B 17/00](#)) { ([B60B 21/021](#) takes precedence)}
- B60B 21/06 . characterised by means for attaching spokes {, i.e. spoke seats}
- B60B 21/062 . . {for bicycles}

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