SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B60 VEHICLES IN GENERAL

B60B VEHICLE WHEELS (making wheels or wheel parts by rolling B21H 1/00, by forging, hammering or pressing B21K 1/28); CASTORS; AXLES; INCREASING WHEEL ADHESION

Note(s)

Attention is drawn to the Note following the title of class B60.

Subclass index

WHEELS
- General structure....1/00, 3/00
- Characterised by the material....5/00
- Ornamental characteristics....7/00
- Particular structures: highly- resilient; multiple or multi-tyred; adhesion-increasing; rail-engaging....9/00, 11/00, 15/00, 17/00
- Component parts
  - spokes; rims....1/00, 21/00, 23/00, 25/00
  - hubs....27/00
- Other wheels....19/00

AXLES; WHEEL-AXLE COMBINATIONS....35/00, 37/00
INCREASING WHEEL ADHESION, OTHERWISE THAN BY WHEEL STRUCTURE....39/00
MOUNTING, HOLDING OR ASSEMBLING WHEELS....29/00, 30/00, 31/00
CASTORS IN GENERAL....33/00

Wheels

1/00 Spoked wheels; Spokes thereof (non-metallic B60B 5/00) **[2]**

1/02 • Wheels with wire or other tension spokes
1/04 • • Attaching spokes to rim or hub
1/06 • Wheels with compression spokes (wheels of high resiliency B60B 9/00)
1/08 • • formed by casting
1/10 • • fabricated from sheet metal (B60B 1/12, B60B 3/08 take precedence)
1/12 • • with tubular spokes (B60B 1/08 takes precedence)
1/14 • • Attaching spokes to rim or hub

3/00 Disc wheels, i.e. wheels with load-supporting disc body (non-metallic B60B 5/00; wheel cover discs B60B 7/00)

3/02 • with a single disc body integral with rim
3/04 • with a single disc body not integral with rim
3/06 • formed by casting
3/08 • with disc body formed by two or more axially-spaced discs
3/10 • apertured to simulate spoked wheels
3/12 • Means of reinforcing disc bodies
3/14 • Attaching disc body to hub (resiliently B60B 9/00; attaching rim to wheel body B60B 23/00)
3/16 • • by bolts or the like
3/18 • • by circlips or the like

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)

5/02 • made of synthetic material
5/04 • made of wood

7/00 Wheel cover discs, rings, or the like, for ornamenting, protecting, or obscuring, wholly or in part, the wheel body, rim, hub, or tyre sidewall [2, 5]

7/01 • Rings specially adapted for covering only the wheel rim or the tyre sidewall, e.g. removable tyre sidewall trim rings **[5]**
7/02 • made essentially in one part (B60B 7/01 takes precedence) **[5]**
7/04 • built-up of several main parts (B60B 7/01, B60B 7/20 take precedence) **[5]**
7/06 • Fastening arrangements therefor (B60B 7/01, B60B 7/16 take precedence) **[5]**
7/08 • • having gripping elements consisting of formations integral with the cover **[5]**
7/10 • • comprising a plurality of spaced spring clips individually mounted on the cover, e.g. riveted, welded or readily releasable **[5]**
7/12 • • comprising an annular spring or gripping element mounted on the cover (B60B 7/08 takes precedence) **[5]**
7/14 • • comprising screw-threaded means **[5]**
7/16 • Anti-theft devices **[5]**
7/18 • simulating spoked or wire wheel **[5]**

7/20 • having an element mounted for rotation independently of wheel rotation **[5]**

9/00 Wheels of high resiliency

9/02 • using springs (wheels comprising resilient spokes B60B 9/26)
9/04 • • in leaf form
9/06 • • in helical form
9/08 • • in flat coiled form
9/10 • • of rubber or the like
9/12 • • • in the form of sleeves or rings concentric with wheel axis
9/14 • • • with means limiting relative lateral movements between hub and remainder of wheel
9/16 • • • modified to ensure electric conductivity
9/18 • using fluid (within spokes B60B 9/26)
9/20 • • in rings concentric with wheel axis
9/22 • • • inflatable
9/24 • • with pistons and cylinders
9/26 • comprising resilient spokes
9/28 • • with telescopic action

11/00 Units comprising multiple wheels arranged side by side; Wheels having more than one rim or capable of carrying more than one tyre

11/02 • Units of separate wheels mounted for independent or coupled rotation
11/04 • Wheels with a rim capable of carrying more than one tyre
11/06 • Wheels with more than one rim mounted on a single wheel body
11/08 • Arrangements of balancing mechanisms enabling a uniform distribution of load to the tyres
11/10 • Emergency wheels (tyres collapsible into storage or non-use condition B60C 3/08; tyres characterised by means enabling restricted operation in damaged or deflated condition B60C 17/00) **[5]**

15/00 Wheels or wheel attachments designed for increasing traction (vehicle tyres B60C; non-skid devices temporarily attachable to resilient tyres or resiliently-tyred wheels B60C 27/00)

15/02 • Wheels with spade lugs
15/04 • • with resiliently-mounted spade lugs
15/06 • • with pivotally-mounted spade lugs
15/08 • • with spade lugs axially displaced relatively to the tread surface of the tyre
15/10 • • with radially-adjustable spade lugs; Control mechanisms therefor
15/12 • • • involving cams or eccentric hoops
15/14 • • • involving an axially-displaceable cone
15/16 • • • involving gearing, e.g. gear pinions acting upon threaded shafts on the spade lugs
15/18 • Wheels with ground-engaging plate-like shoes
15/20 • • with resiliently-mounted shoes, e.g. on a spider
15/22 • • connected by links to the hub
15/24 • Tread bands or rings for fairing lugs when travelling on the road
15/26 • Auxiliary wheels or rings with traction-increasing surface attachable to the main wheel body
15/28 • Wheel-ballasting weights; Their attachment

17/00 Wheels characterised by rail-engaging elements (of model railways A63H 19/22) **[2]**

17/02 • with elastic tyres

19/00 Wheels not otherwise provided for or having characteristics specified in one of the subgroups of this group

19/02 • convertible, e.g. from road wheel to rail wheel; Wheels specially designed for alternative use on road and rail
19/04 • expansible
19/06 • with compartments for fluid, packing, or loading material; Buoyant wheels
19/08 • with lubricating passages, channels, or reservoirs
19/10 • with cooling fins
19/12 • Roller-type wheels (B60B 19/06 takes precedence)
19/14 • Ball-type wheels (B60B 19/06 takes precedence)

Rims; Hubs

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 single wheel body B60B 11/06; of multi-part type B60B 25/00; metal tyres B60C)

21/02 • characterised by transverse section
21/04 • • with substantially-radial flanges (with rail-engaging flanges B60B 17/00)
21/06 • characterised by means for attaching spokes
21/08 • characterised by having braking surfaces
21/10 • characterised by the form of tyre-seat or flange, e.g. corrugated (B60B 21/02 takes precedence)
21/12 • Accessories, e.g. lining bands

23/00 Attaching rim to wheel body (attaching spokes to rim B60B 1/04, B60B 1/14; attaching rims resiliently to wheel body B60B 9/00)

Note(s)

Group B60B 23/12 takes precedence over groups B60B 23/02-B60B 23/06.

23/02 • by split or other expansible ring devices
23/04 • by bayonet-joint, screw-thread, or like attachments
23/06 • by screws, bolts, pins, or clips
23/08 • • arranged radially
23/10 • • arranged axially
23/12 • by devices arranged to permit variation of axial position of rim relative to wheel body for track-width adjustment

25/00 Rims built-up of several main parts (tools for assembling divided rims B60B 31/04)

25/02 • Segmented rims, e.g. with segments arranged in sections; Connecting equipment, e.g. hinges; Insertable flange rings therefor
25/04 • Rims with dismountable flange rings, seat rings, or lock rings
25/06 • • Split flange rings, e.g. transversely split; Connecting equipment for overlapping the slot
25/08 • • Continuous flange rings; Arrangement of recesses enabling the flange ring to be slipped over the rim body
25/10 • • Seat rings for the tyre bead part, e.g. split
25/12 • • • with integral flange part
25/14 • • Locking means for flange rings or seat rings
25/16 • • • Arrangement of bayonet catches
25/18 • • • Arrangement of split rings
25/20 • • • Arrangement of screw, bolts, or shouldered pins
25/22 • Other accessories, e.g. for sealing the component parts enabling the use of tubeless tyres

27/00 **Hubs** (non-metallic B60B 5/00; of high resiliency B60B 9/00)
27/02 • adapted to be rotatably arranged on axle
27/04 • • housing driving means, e.g. sprockets
27/06 • adapted to be fixed on axle

Apparatus or tools for mounting, holding or assembling wheels

29/00 **Apparatus or tools for mounting or dismounting wheels** (characterised by the means for holding the wheels B60B 30/00) **[5]**

30/00 **Means for holding wheels or parts thereof** (spare wheel stowing, holding or mounting arrangements on vehicles B62D 43/00) **[5]**
30/02 • engaging the tyre, e.g. the tyre being mounted on the wheel rim **[5]**
30/04 • • the tyre not being mounted on a rim, i.e. holders or supports for tyres alone **[5]**
30/06 • engaging the wheel body, e.g. the rim **[5]**
30/08 • • the central part of the wheel body **[5]**
30/10 • characterised by being provided on a dolly **[5]**

31/00 **Apparatus or tools for assembling or disassembling wheels**
31/02 • for tightening or straightening wire spokes in situ; for extracting spokes from wheels
31/04 • for assembling divided rims
31/06 • for removing or attaching cover discs, hub caps, or the like **[2]**

33/00 **Castors in general** (castors for large containers B65D 90/18)
33/02 • with disengageable swivel action
33/04 • adjustable
33/06 • • mounted retractably
33/08 • Ball castors

35/00 **Axle units; Parts thereof** (resilient suspension of a rigid axle or axle housing B60G 9/00; steerable vehicle stub-axles B62D)
35/02 • Dead axles, i.e. not transmitting torque (axle housings for torque transmitting elements B60B 35/16)
35/04 • • straight
35/06 • • cranked
35/08 • • of closed hollow section
35/10 • • adjustable for varying track
35/12 • Torque-transmitting axles
35/14 • • composite or split, e.g. half-axles; Couplings between axle parts or sections (B60G 3/24 takes precedence)
35/16 • • characterised by the axle housings for the torque transmitting elements, e.g. for shafts
35/18 • • characterised by the arrangement of the bearings for the torque transmitting elements in the axle housings

37/00 **Wheel-axle combinations, e.g. wheel sets** (units comprising multiple wheels arranged side by side B60B 11/00; rail-vehicle axle-boxes B61F)
37/02 • the wheels being integral with solid axles
37/04 • the wheels being rigidly attached to solid axles
37/06 • the wheels being integral with, or rigidly attached to, hollow axles
37/08 • • the hollow axles being rotatable around fixed axles
37/10 • the wheels being individually rotatable around the axles
37/12 • Axles with a fixed wheel and a loose wheel

39/00 **Increasing wheel adhesion** (wheels or wheel attachments designed for increasing traction B60B 15/00; vehicle tyres B60C; non-skid devices temporarily attachable to resilient tyres or resiliently-tyred wheels B60C 27/00; road surface conditioning to prevent slipperiness E01C)
39/02 • Vehicle fittings for scattering or dispensing material in front of its wheels
39/04 • • the material being granular, e.g. sand (combined control of sanding apparatus and brakes of rail vehicles B61H)
39/06 • • • the dispensing being effected by mechanical means
39/08 • • • the dispensing being effected by fluid means
39/10 • • • the dispensing being controlled electrically or electromagnetically
39/12 • • the material being sheet-like or web-like