SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B61 RAILWAYS

B61F RAIL VEHICLE SUSPENSIONS, e.g. UNDERFRAMES, BOGIES, ARRANGEMENTS OF WHEEL AXLES; RAIL VEHICLES FOR USE ON TRACKS OF DIFFERENT WIDTH; PREVENTING DERAILING; WHEELS GUARDS; OBSTRUCTION REMOVERS OR THE LIKE (for vehicles in general B60; axles, wheels B60B; vehicle tyres B60C)

Subclass index

FRAMES, RUNNING GEAR
Underframes, bogies, connections therebetween....1/00, 3/00, 5/00
For different gauges....7/00
For preventing derailment....9/00
Track-engaging means other than wheels....11/00
WHEEL ARRANGEMENTS....13/00
AXLE-BOXES; FORM, MOUNTING; LUBRICATION THEREOF....15/00, 5/00, 17/00
WHEEL GUARDS, BUMPERS, OBSTRUCTION REMOVERS....19/00
SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS....99/00

1/00 **Underframes** (making railway vehicle underframes by forging or pressing B21K 7/12)
1/02 • with a single central sill
1/04 • of triangulated type
1/06 • specially adapted for locomotives or motor-driven railcars
1/08 • Details
1/10 • • End constructions
1/12 • • Cross bearers
1/14 • • Attaching or supporting vehicle body structure

3/00 **Types of bogies** (B61F 5/00 takes precedence)
3/02 • with more than one axle
3/04 • • with driven axles or wheels
3/06 • • • with three or more axles
3/08 • • without driven axles or wheels
3/10 • • • with three or more axles
3/12 • specially modified for carrying adjacent vehicle bodies of articulated trains
3/14 • specially modified for reducing air resistance
3/16 • with a separate axle for each wheel

5/00 **Constructional details of bogies; Connections between bogies and vehicle underframes; Arrangements or devices for adjusting or allowing self-adjustment of wheel axles or bogies when rounding curves**
5/02 • Arrangements permitting limited transverse relative movements between vehicle underframe or bolster and bogie; Connections between underframes and bogies
5/04 • • Bolster supports or mountings (side bearings B61F 5/14)
5/06 • • • incorporating metal springs
5/08 • • • incorporating rubber springs
5/10 • • • incorporating fluid springs
5/12 • • • incorporating dampers
5/14 • • Side bearings
5/16 • • Centre bearings or other swivel connections between underframes and bolsters or bogies
5/18 • • • King-bolts
5/20 • • • with springs allowing transverse movements
5/22 • • Guiding of the vehicle underframes with respect to the bogies
5/24 • • • Means for damping or minimising the canting, skewing, pitching, or plunging movements of the underframes
5/26 • Mounting or securing axle-boxes in vehicle or bogie underframes
5/28 • • Axle-boxes integral with, or directly secured to, vehicle or bogie underframes
5/30 • • Axle-boxes mounted for movement under spring control in vehicle or bogie underframes
5/32 • • • Guides, e.g. plates, for axle-boxes
5/34 • • • • Wedge mechanisms for adjusting clearance between underframes and axles
5/36 • • • Arrangements for equalising or adjusting the load on wheels or springs, e.g. yokes
5/38 • Arrangements or devices for adjusting or allowing self-adjustment of wheel axles or bogies when rounding curves, e.g. sliding axles, swinging axles
5/40 • • Bogies with side frames mounted for longitudinal relative movements
5/42 • • Adjustment controlled by buffer or coupling gear
5/44 • • Adjustment controlled by movements of vehicle body
5/46 • • Adjustment controlled by a sliding axle under the same vehicle underframe
5/48 • • Trailing or leading bogies for locomotives or motor-driven railcars (B61F 5/40 takes precedence) **[2]**
5/50 • Other details
5/52 • • Bogie frames

7/00 **Rail vehicles equipped for use on tracks of different width**

9/00 **Rail vehicles characterised by means for preventing derailing, e.g. by use of guide wheels**

11/00 **Rail vehicles characterised by rail-engaging elements other than wheels, e.g. balls**

13/00 **Rail vehicles characterised by wheel arrangements, not otherwise provided for**

15/00 **Axle-boxes** (mounting or securing axle-boxes B61F 5/26; lubrication B61F 17/00; bearings in general F16C)

15/02 • with journal bearings
15/04 • • for locomotives
15/06 • • for cars
15/08 • • the axle being slidable or tiltable in the bearings
15/10 • • • and having springs opposing such movements
15/12 • with roller, needle, or ball bearings
15/14 • • constructed for taking-up axial pressure
15/16 • • the axle being slidable or tiltable in the bearings
15/18 • • • and having springs opposing such movements
15/20 • Details
15/22 • • Sealing means preventing entrance of dust or leakage of oil
15/24 • • • preventing oil leakage when vehicle is tilted or inverted
15/26 • • Covers; Sealing thereof
15/28 • • Axle-boxes modified to ensure electrical conductivity

17/00 **Lubrication specially adapted for axle-boxes of rail vehicles** (lubrication in general F16N)

17/02 • with oil
17/04 • • Lubrication by stationary devices
17/06 • • • by means of a wick or the like
17/08 • • • • Devices for pressing the wick or the like against the rotating axle
17/10 • • • by means of an oil bath
17/12 • • • by gravity
17/14 • • Rotating lubricating devices
17/16 • • • with rings
17/18 • • • with chains
17/20 • • • with scoops or the like attached to, or coupled with, the axle
17/22 • • • with discs, rollers, or belts engaging the axle
17/24 • • by built-in lubricating pumps
17/26 • • by external feeding means, e.g. pneumatic devices
17/28 • • Applications of oil cleaners not otherwise provided for
17/30 • with grease
17/32 • • by manually-operated lubricators, e.g. screw cups
17/34 • • by automatic means, e.g. with spring action
17/36 • with other, e.g. mixed, lubricating agents

19/00 **Wheel guards; Bumpers; Obstruction removers or the like** (for vehicles in general B60R 19/00)

19/02 • Wheel guards
19/04 • Bumpers or like collision guards
19/06 • Nets, catchers, or the like for catching obstacles or removing them from the track (mailbag catchers B61K 1/02)
19/08 • • of the drop-down type
19/10 • • • automatically operated by engagement with obstacle

99/00 **Subject matter not provided for in other groups of this subclass [2006.01]**