

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B61 RAILWAYS

(NOTE omitted)

B61D BODY DETAILS OR KINDS OF RAILWAY VEHICLES (vehicles in general [B60](#); adaptation of vehicles to special systems [B61B](#); underframes [B61F](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Kinds of railway or tramway vehicles

1/00 Carriages for ordinary railway passenger traffic (mine cars [B61D 11/00](#); tramcars [B61D 13/00](#))

- 1/02 . General arrangements in sleeping or couchette carriages ([B61D 1/08](#) takes precedence)
- 1/04 . General arrangements of seats ([B61D 1/06](#) takes precedence; seats per se [B61D 33/00](#))
- 1/06 . with multiple deck arrangement
- 1/08 . . of sleeping carriages

3/00 Wagons or vans (tank wagons [B61D 5/00](#); hopper wagons [B61D 7/00](#); tipping wagons [B61D 9/00](#); mine cars [B61D 11/00](#); vehicles specially adapted for animal transportation [B60P 3/04](#); {container traffic [B65G](#)})

- 3/005 . {convertible ([B61D 3/04](#), [B61D 3/06](#), [B61D 15/04](#) take precedence)}
- 3/02 . with multiple deck arrangements (for carrying vehicles [B61D 3/18](#))
- 3/04 . with movable floors, e.g. rotatable or floors which can be raised or lowered
- 3/06 . Flat-bottomed cars convertible into hoppers
- 3/08 . Flat wagons including posts or standards ({open loading compartments for load-carrying vehicles, in general [B62D 33/02](#); movable or detachable racks or stanchions [B62D 33/0207](#)})
- 3/10 . Articulated vehicles
- 3/12 . . comprising running gear interconnected by loads
- 3/14 . . comprising running gear interconnected by load supports facilitating low-level load transport
- 3/16 . adapted for carrying special loads
- 3/163 . . {for carrying animals}
- 3/166 . . {for carrying very heavy loads}
- 3/18 . . for vehicles ({vehicles adapted to carry other vehicles, in general, [B60P 3/06](#)})
- 3/181 . . . {with special accommodation for the motor vehicle driver or passengers ([B61D 1/06](#) takes precedence)}
- 3/182 . . . {specially adapted for heavy vehicles, e.g. public work vehicles, trucks, trailers}
- 3/184 {the heavy vehicles being of the trailer or semi-trailer type}
- 3/185 {Railway vehicles}

3/187 . . . {Details, e.g. bridges for floor connections}

3/188 {Wheel guides for the vehicles being carried}

3/20 . . for forwarding containers

5/00 Tank wagons for carrying fluent materials

- 5/002 . {for particulate or powder materials}
- 5/004 . . {with loading and unloading means using fluids or vacuum}
- 5/006 . . . {with porous walls}
- 5/008 . {Trackside means for assisting charge or discharge (for hopper cars [B61D 7/32](#))}
- 5/02 . having more than one tank
- 5/04 . {with means for cooling, heating, or insulating}
- 5/06 . Mounting of tanks; Integral bodies and frames
- 5/08 . {Covers or access openings; Arrangements thereof}

7/00 Hopper cars (flat bottomed cars convertible into hoppers [B61D 3/06](#))

- 7/02 . with discharge openings in the bottoms (with body in two halves and discharge by tipping the halves [B61D 9/00](#))
- 7/04 . . the openings being above axle level during discharge
- 7/06 . with openings capable of discharging both between and outside the wheels
- 7/08 . with openings capable of discharging only outside the wheels
- 7/10 . . the discharge being assisted by tipping the bottom
- 7/12 . the hoppers being movable ([B61D 9/00](#) takes precedence)
- 7/14 . Adaptations of hopper elements to railways
- 7/16 . . Closure elements for discharge openings
- 7/18 . . . pivoted
- 7/20 . . . sliding
- 7/22 . . . Sealing means thereof
- 7/24 . . . Opening or closing means
- 7/26 mechanical
- 7/28 hydraulic or pneumatic
- 7/30 controlled by means external to cars
- 7/32 . . Means for assisting charge or discharge

9/00 Tipping wagons

- 9/02 . characterised by operating means for tipping

- 9/04 . Adaptations of rail vehicle elements to tipping wagons
- 9/06 . . Bodies
- 9/08 . . Frames; Supporting or guiding means for the bodies
- 9/10 . . Devices preventing overturning when tipping
- 9/12 . . Body fittings or devices facilitating or controlling outflow on discharge
- 9/14 . Tipping systems controlled by trackside means
- 11/00 Mine cars ([B61D 5/00](#) - [B61D 9/00](#) take precedence)**
- 11/02 . Body construction
- 13/00 Tramway vehicles**
- 13/02 . Double-deckers
- 15/00 Other railway vehicles, e.g. scaffold cars; Adaptations of vehicles for use on railways ([conveyor frames mounted for movement on rail tracks \[B65G 41/02\]\(#\); wheeled machines used in permanent way construction or maintenance \[E01B\]\(#\)](#))**
- 15/02 . Breakdown cranes ([crane gear \[B66C\]\(#\)](#))
- 15/04 . convertible into other non-vehicular apparatus, e.g. exhibition stands
- 15/06 . Buffer cars; Arrangements or construction of railway vehicles for protecting them in case of collisions ([buffers \[B61G 11/00\]\(#\)](#))
- 15/08 . Railway inspection trolleys
- 15/10 . . hand or foot propelled
- 15/105 . . . {[for cableways](#)}
- 15/12 . . power propelled
- 15/125 . . . {[for cableways](#)}
- 17/06 . . End walls
- 17/08 . . Sides
- 17/10 . . Floors
- 17/12 . . Roofs ([movable or foldable roofs, covers or tarpaulins \[B61D 39/00\]\(#\)](#))
- 17/14 . . . with gangways
- 17/16 . . . Hatches in roofs
- 17/18 . . Internal lining, e.g. insulating
- 17/185 . . . {[for sound insulating \(arrangement of engine rooms \[B61C 17/04\]\(#\); sound insulating elements for road vehicles \[B60R 13/08\]\(#\)\)](#)}
- 17/20 . . Communication passages between coaches; Adaptation of coach ends therefor
- 17/22 . . . flexible, e.g. bellows
- 17/24 . with body structures of wood
- 17/26 . with body structures of concrete
- 19/00 Door arrangements specially adapted for rail vehicles (locks for vehicles [E05B 77/00](#) - [E05B 85/00](#); door-operating mechanisms [E05F](#))**
- 19/001 . {[for wagons or vans \(closure elements for hopper car discharge openings \[B61D 7/16\]\(#\); doors convertible into loading and unloading ramps \[B61D 47/00\]\(#\); \[B61D 19/003\]\(#\) takes precedence\)](#)}
- 19/002 . . {[specially adapted for grain cars](#)}
- 19/003 . {[characterised by the movements of the door](#)}
- 19/004 . . {[swinging \(\[B61D 19/008\]\(#\) takes precedence\)](#)}
- 19/005 . . {[sliding \(\[B61D 19/008\]\(#\), \[B61D 19/009\]\(#\) take precedence\)](#)}
- 19/006 . . . {[vertically \(\[B61D 19/006\]\(#\) takes precedence\)](#)}
- 19/007 . . . {[The doors being wall panels enabling complete opening of the wagon sides, e.g. for quick loading or unloading](#)}
- 19/008 . . {[both swinging and sliding](#)}
- 19/009 . . {[both sliding and plugging, \(e.g. for refrigerator cars\)](#)}
- 19/02 . for carriages ([B61D 19/003](#) takes precedence)
- 19/023 . . {[Emergency exits](#)}
- 19/026 . . {[Safety devices for preventing passengers from being injured by movements of doors or variations in air pressure \(safety devices in passenger lifts for preventing trapping of passengers between closing doors \[B66B 13/26\]\(#\); acting on power-operated mechanisms for wings \[E05F 15/00\]\(#\)\)](#)}
- 23/00 Construction of steps for railway vehicles (ladders in general [E06C](#))**
- 23/02 . Folding steps for railway vehicles {, e.g. hand or mechanically actuated}
- 23/025 . . {[electrically or fluid actuated](#)}
- 25/00 Window arrangements peculiar to rail vehicles (vehicle window arrangements in general [B60J](#); cleaning vehicle windows [B60S](#); heating arrangements specially adapted for transparent or reflecting areas [H05B 3/84](#))**

Body details of railway or tramway vehicles

- 17/00 Construction details of vehicle bodies (for tank wagons [B61D 5/00](#); for hopper cars [B61D 7/00](#); body details specially adapted for tipping wagons [B61D 9/06](#); for mine cars [B61D 11/00](#))**
- 17/005 . {[with bodies characterised by use of plastics materials \(\[B61D 17/005\]\(#\) takes precedence; bogie frames comprising parts made from fibre reinforced matrix material \[B61F 5/523\]\(#\)\)](#)}
- 17/02 . reducing air resistance by modifying contour {; [Constructional features for fast vehicles sustaining sudden variations of atmospheric pressure, e.g. when crossing in tunnels](#)}
- 17/04 . with bodies of metal; with composite, e.g. metal and wood body structures
- 17/041 . . {[with bodies characterised by use of light metal, e.g. aluminium \(\[B61D 17/045\]\(#\) takes precedence\)](#)}
- 17/043 . . {[connections between superstructure sub-units \(for road vehicles \[B62D 27/00\]\(#\)\)](#)}
- 17/045 . . . {[The sub-units being construction modules \(modular super-structures for vehicles carrying a large number of passengers \[B62D 31/025\]\(#\)\)](#)}
- 17/046 . . . {[readily releasable, i.e. dismountable or collapsible sub-units, e.g. for shipping \(convertible wagons \[B61D 3/005\]\(#\)\)](#)}

NOTE

[B61D 17/005](#) takes precedence over
[B61D 17/048](#)-[B61D 17/16](#)

- 17/048 . . {[Interior walls, e.g. separation walls between compartments \(\[B61D 17/06\]\(#\), \[B61D 17/08\]\(#\), \[B61D 17/18\]\(#\) take precedence\)](#)}

Heating, cooling, ventilating, lighting, or air-conditioning, peculiar to rail vehicles (for vehicles in general [B60](#))

- 27/00 Heating, cooling, ventilating, or air-conditioning** {(heating, cooling or ventilating devices for vehicles in general [B60H 1/00](#); devices for moistening air in vehicles [B60H 3/02](#); devices for filtering air in vehicles [B60H 3/06](#))}
- 27/0009 . {Means for controlling or equalizing air pressure shocks in trains, e.g. when passing or crossing in tunnels}
- 27/0018 . {Air-conditioning means, i.e. combining at least two of the following ways of treating or supplying air, namely heating, cooling or ventilating ([air-conditioning in general F24F](#))}
- 27/0027 . . {for freight cars; Isothermic wagons}
- 27/0036 . {Means for heating only ([heating in general F24](#))}
- 27/0045 . . {Electric heating (for vehicles in general [B60H 1/2215](#); supplying electric power to electric heating circuits of electrically-propelled vehicles [B60L 1/02](#))}
- 27/0054 . . {combined with heating means using recuperated energy from other sources, e.g. from the brakes}
- 27/0063 . . {the heat being derived from independent means, i.e. autonomous devices, e.g. stoves}
- 27/0072 . {Means for cooling only ([cooling in general F25](#))}
- 27/0081 . . {of wagons for transporting refrigerated goods (vehicles for transporting refrigerated goods [B60P 3/20](#))}
- 27/009 . {Means for ventilating only ([ventilation in general F24F](#))}

29/00 Lighting**Furniture or furnishings peculiar to rail vehicles** (for vehicles in general [B60](#))

- 31/00 Sleeping accommodation**
- 33/00 Seats**
- 33/0007 . {Details; Accessories}
- 33/0014 . . {Seat frames ([B61D 33/0092](#) takes precedence)}
- 33/0021 . . . {for adjustable or reclining seats}
- 33/0028 . . . {for reversible seats}
- 33/0035 . . {Cushions or the like; Covers}
- 33/0042 . . . {Spring cushions}
- 33/005 . . {Head, arm or footrests}
- 33/0057 . {characterised by their mounting in vehicles ([B61D 33/0028](#) and [B61D 33/0092](#) take precedence)}
- 33/0064 . . {not adjustably mounted; supports therefor}
- 33/0071 . . . {Removable seats}
- 33/0078 . . {adjustably mounted}
- 33/0085 . . . {rotatably}
- 33/0092 . {Safety seats, e.g. comprising safety locking means; Seats for children}
- 35/00 Sanitation**
- 35/002 . {Washing facilities}
- 35/005 . {Toilet facilities}
- 35/007 . . {comprising toilet waste receiving, treatment, storage, disposal or removal devices}
- 37/00 Other furniture or furnishings**

- 37/003 . {luggage rack and umbrella-stand for rail vehicles (luggage racks within vehicle bodies in general, e.g. busses [B60R 5/003](#))}
- 37/006 . {for restaurant cars or the like}

Other details peculiar to rail vehicles (for vehicles in general [B60](#))

- 39/00 Wagon or like covers; Tarpaulins; Movable or foldable roofs**
- 39/001 . {Tiltable roofs}
- 39/002 . {Sliding or folding roofs}
- 39/003 . . {telescopic}
- 39/005 . . {for articulated wagons}
- 39/006 . {Opening and closing means}
- 39/007 . . {Controlled by trackside means (systems for tipping wagons controlled by trackside means [B61D 9/14](#))}
- 39/008 . {Sealing means}
- 41/00 Indicators for reserved seats; Warning or like signs; Devices or arrangements in connection with tickets, e.g. ticket holders; Holders for cargo tickets or the like**
- 41/02 . Holders or devices for cargo tickets or the like
- 41/04 . Indicators for reserved seats
- 41/06 . Holders for fare tickets
- 43/00 Devices for using the energy of the movements of the vehicles**
- 45/00 Means or devices for securing or supporting the cargo, including protection against shocks (for vehicles in general [B60P 7/00](#))**
- 45/001 . {Devices for fixing to walls or floors}
- 45/002 . . {Fixing sheet metal, boxes, or the like}
- 45/003 . . {Fixing of logs, beams, barrels, pipes, or the like}
- 45/004 . . {Fixing semi-trailers (wagons for transporting semi-trailers [B61D 3/184](#))}
- 45/005 . . . {by using fifth wheel locks}
- 45/006 . {Fixing by movable walls}
- 45/007 . {Fixing containers (vehicles for transporting containers [B61D 3/20](#))}
- 45/008 . {Shock absorbing devices}
- 47/00 Loading or unloading devices combined with vehicles, e.g. loading platforms, {doors convertible into loading and unloading ramps} (combined with vehicles in general [B60P](#))**
- 47/005 . {Loading or unloading devices combined with road vehicles carrying wagons, e.g. ramps, turntables, lifting means (wagons for carrying road vehicles in general: [B61D 3/18](#))}
- 49/00 Other details**