

**CPC****COOPERATIVE PATENT CLASSIFICATION****B61D**

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

**Guidance heading:** Kinds of railway or tramway vehicles

**B61D 1/00**

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

## B61D 1/02

- . General arrangements in sleeping or couchette carriages ([B61D 1/08](#) takes precedence)

## B61D 1/04

- . General arrangements of seats ([B61D 1/06](#) takes precedence; seats per se [B61D 33/00](#))

## B61D 1/06

- . with multiple deck arrangement

## B61D 1/08

- . . of sleeping carriages

**B61D 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](#) } )

## B61D 3/005

- . { convertible ([B61D 3/04](#), [B61D 3/06](#), [B61D 15/04](#) take precedence) }

## B61D 3/02

- . with multiple deck arrangements (for carrying vehicles [B61D 3/18](#))

## B61D 3/04

- . with movable floors, e.g. rotatable or floors which can be raised or lowered

## B61D 3/06

- . Flat-bottomed cars convertible into hoppers

## B61D 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](#) ) }

## B61D 3/10

- . Articulated vehicles

## B61D 3/12

- . . comprising running gear interconnected by loads

## B61D 3/14

- . . comprising running gear interconnected by load supports facilitating low-level load transport

## B61D 3/16

- . adapted for carrying special loads

## B61D 3/163

- . . {for carrying animals }

## B61D 3/166

- . . {for carrying very heavy loads }

## B61D 3/18

- . . for vehicles { (Vehicles adapted to carry other vehicles, in general, [B60P 3/06](#) ) }

## B61D 3/181

- . . . {with special accommodation for the motor vehicle driver or passengers ([B61D 1/06](#) takes precedence) }

## B61D 3/182

- . . . {specially adapted for heavy vehicles e.g. public work vehicles, trucks, trailers }

- B61D 3/184 . . . . {the heavy vehicles being of the trailer or semi-trailer type }
- B61D 3/185 . . . . {Railway vehicles }
- B61D 3/187 . . . {Details, e.g. bridges for floor connections }
- B61D 3/188 . . . . {Wheel guides for the vehicles being carried }
- B61D 3/20 . . for forwarding containers

#### **B61D 5/00 Tank wagons for carrying fluent materials**

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

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

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

#### **B61D 9/00 Tipping wagons**

- B61D 9/02 . characterised by operating means for tipping
- B61D 9/04 . Adaptations of rail vehicle elements to tipping wagons
- B61D 9/06 . . Bodies
- B61D 9/08 . . Frames; Supporting or guiding means for the bodies
- B61D 9/10 . . Devices preventing overturning when tipping
- B61D 9/12 . . Body fitments or devices facilitating or controlling outflow on discharge
- B61D 9/14 . Tipping systems controlled by trackside means

**B61D 11/00** **Mine cars** ([B61D 5/00](#) to [B61D 9/00](#) take precedence)

- B61D 11/02 . Body construction

**B61D 13/00** **Tramway vehicles**

- B61D 13/02 . Double-deckers

**B61D 15/00** **Other railway vehicles, e.g. scaffold cars; Adaptations of vehicles for use on railways** (conveyer frames mounted for movement on rail tracks [B65G 41/02](#); wheeled machines used in permanent way construction or maintenance [E01B](#) )

- B61D 15/02 . Breakdown cranes (crane gear [B66C](#) )
- B61D 15/04 . convertible into other non-vehicular apparatus, e.g. exhibition stands
- B61D 15/06 . Buffer cars; Arrangements or construction of railway vehicles for protecting them in case of collisions ([buffers B61G 11/00](#))
- B61D 15/08 . Railway inspection trolleys
- B61D 15/10 . . hand or foot propelled
- B61D 15/105 . . . {for cableways }
- B61D 15/12 . . power propelled
- B61D 15/125 . . . {for cableways }

**Guidance heading:** **Body details of railway or tramway vehicles**

**B61D 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](#))

- B61D 17/005 . {with bodies characterised by use of plastics materials ([B61D 17/00C](#) takes precedence) (bogie frames comprising parts made from fibre einforced matrix material [B61F 5/523](#)) }
- B61D 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 }

- B61D 17/04 . with bodies of metal; with composite, e.g. metal and wood body structures
- B61D 17/041 .. {with bodies characterised by use of light metal, e.g. aluminium ([B61D 17/045](#) takes precedence) }
- B61D 17/043 .. {connections between superstructure sub-units (for road vehicles [B62D 27/00](#)) }
- B61D 17/045 ... {The sub-units being construction modules (modular super-structures for vehicles carrying a large number of passengers [B62D 31/025](#)) }
- B61D 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](#)

- B61D 17/048 .. {Interior walls, e.g. separation walls between compartments ([B61D 17/06](#), [B61D 17/08](#), [B61D 17/18](#) take precedence) }
- B61D 17/06 .. End walls
- B61D 17/08 .. Sides
- B61D 17/10 .. Floors
- B61D 17/12 .. Roofs (movable or foldable roofs, covers or tarpaulins [B61D 39/00](#))
- B61D 17/14 ... with gangways
- B61D 17/16 ... Hatches in roofs
- B61D 17/18 .. Internal lining, e.g. insulating
- B61D 17/185 ... {for sound insulating (arrangement of engine rooms [B61C 17/04](#); sound insulating elements for road vehicles [B60R 13/08](#)) }
- B61D 17/20 .. Communication passages between coaches; Adaptation of coach ends therefor
- B61D 17/22 ... flexible, e.g. bellows
- B61D 17/24 . with body structures of wood
- B61D 17/26 . with body structures of concrete

#### **B61D 19/00 Door arrangements peculiar to rail vehicles** (vehicle door arrangements in general [B60J](#) ; vehicle locks [E05B 65/12](#); door-operating mechanisms [E05F](#) )

- B61D 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) }
- B61D 19/002 .. {specially adapted for grain cars }
- B61D 19/003 . {characterised by the movements of the door }
- B61D 19/004 .. {swinging ([B61D 19/008](#) takes precedence) }
- B61D 19/005 .. {sliding ([B61D 19/008](#), [B61D 19/009](#) take precedence) }
- B61D 19/006 ... { vertically ([B61D 19/006](#) takes precedence) }
- B61D 19/007 ... {The doors being wall panels enabling complete opening of the wagon sides, e.g. for quick loading or unloading }
- B61D 19/008 .. {both swinging and sliding }
- B61D 19/009 .. {both sliding and plugging, (e.g. for refrigerator cars) }

- B61D 19/02 . for carriages ([B61D 19/003](#) takes precedence)
- B61D 19/023 . . {Emergency exits }
- B61D 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](#)) }

**B61D 23/00 Construction of steps for railway vehicles** (ladders in general [E06C](#) )

- B61D 23/02 . Folding steps for railway vehicles, {e.g. hand or mechanically actuated }
- B61D 23/025 . . {electrically or fluid actuated }

**B61D 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](#))

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

**B61D 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](#)) }

- B61D 27/0009 . {Means for controlling or equalizing air pressure shocks in trains, e.g. when passing or crossing in tunnels }
- B61D 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](#) ) }
- B61D 27/0027 . . {for freight cars; Isothermic wagons }
- B61D 27/0036 . {Means for heating only (heating in general [F24](#) ) }
- B61D 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](#)) }
- B61D 27/0054 . . {combined with heating means using recuperated energy from other sources, e.g. from the brakes }
- B61D 27/0063 . . {the heat being derived from independent means, i.e. autonomous devices, e.g. stoves }
- B61D 27/0072 . {Means for cooling only (cooling in general [F25](#) ) }
- B61D 27/0081 . . {of wagons for transporting refrigerated goods (vehicles for transporting refrigerated goods [B60P 3/20](#)) }
- B61D 27/009 . {Means for ventilating only (ventilation in general [F24F](#) ) }

**B61D 29/00 Lighting**

**Guidance heading:** Furniture or furnishings peculiar to rail vehicles (for vehicles in general [B60](#) )

**B61D 31/00**      **Sleeping accomodation****B61D 33/00**      **Seats**

- B61D 33/0007 . {Details; Accessories }
- B61D 33/0014 .. {Seat frames ([B61D 33/0092](#) takes precedence) }
- B61D 33/0021 ... {for adjustable or reclining seats }
- B61D 33/0028 ... {for reversible seats }
- B61D 33/0035 .. {Cushions or the like; Covers }
- B61D 33/0042 ... {Spring cushions }
- B61D 33/005 .. {Head, arm or footrests }
  
- B61D 33/0057 . {characterised by their mounting in vehicles ([B61D 33/0028](#) and [B61D 33/0092](#) take precedence) }
- B61D 33/0064 .. {not adjustably mounted; supports therefor }
- B61D 33/0071 ... {Removable seats }
- B61D 33/0078 .. {adjustably mounted }
- B61D 33/0085 ... {rotatably }
  
- B61D 33/0092 . {Safety seats, e.g. comprising safety locking means; Seats for children }

**B61D 35/00**      **Sanitation**

- B61D 35/002 . {Washing facilities }
  
- B61D 35/005 . {Toilet facilities }
- B61D 35/007 .. {comprising toilet waste receiving, treatment, storage, disposal or removal devices }

**B61D 37/00**      **Other furniture or furnishings**

- B61D 37/003 . {luggage rack and umbrella-stand for rail vehicles (luggage racks within vehicle bodies in general, e.g. busses [B60R 5/003](#)) }
  
- B61D 37/006 . {for restaurant cars or the like }

**Guidance heading:** Other details peculiar to rail vehicles (for vehicles in general [B60](#) )

**B61D 39/00**      **Wagon or like covers; Tarpaulins; Movable or foldable roofs**

- B61D 39/001 . {Tiltable roofs }
  
- B61D 39/002 . {Sliding or folding roofs }
- B61D 39/003 .. {telescopic }

B61D 39/005	. . {for articulated wagons }
B61D 39/006	. {Opening and closing means }
B61D 39/007	. . {Controlled by trackside means (Systems for tipping wagons controlled by trackside means <a href="#">B61D 9/14</a> ) }
B61D 39/008	. {Sealing means }
<b>B61D 41/00</b>	<b>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</b>
B61D 41/02	. Holders or devices for cargo tickets or the like
B61D 41/04	. Indicators for reserved seats
B61D 41/06	. Holders for fare tickets
<b>B61D 43/00</b>	<b>Devices for using the energy of the movements of the vehicles</b>
<b>B61D 45/00</b>	<b>Means or devices for securing or supporting the cargo, including protection against shocks (for vehicles in general <a href="#">B60P 7/00</a>)</b>
B61D 45/001	. {Devices for fixing to walls or floors }
B61D 45/002	. . {Fixing sheet metal, boxes, or the like }
B61D 45/003	. . {Fixing of logs, beams, barrels, pipes, or the like }
B61D 45/004	. . {Fixing semi-trailers (wagons for transporting semi-trailers <a href="#">B61D 3/184</a> ) }
B61D 45/005	. . . {by using fifth wheel locks }
B61D 45/006	. {Fixing by movable walls }
B61D 45/007	. {Fixing containers (vehicles for transporting containers <a href="#">B61D 3/20</a> ) }
B61D 45/008	. {Shock absorbing devices }
<b>B61D 47/00</b>	<b>Loading or unloading devices combined with vehicles, e.g. loading platforms, {doors convertible into loading and unloading ramps } (combined with vehicles in general <a href="#">B60P</a> )</b>
B61D 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: <a href="#">B61D 3/18</a> ) }
<b>B61D 49/00</b>	<b>Other details</b>