

# CPC COOPERATIVE PATENT CLASSIFICATION

## E FIXED CONSTRUCTIONS

### BUILDING

#### E01 CONSTRUCTION OF ROADS, RAILWAYS, OR BRIDGES

#### E01B PERMANENT WAY; PERMANENT-WAY TOOLS; MACHINES FOR MAKING RAILWAYS OF ALL KINDS ([derailing or rereiling blocks on track, track brakes or retarders B61K](#))

##### 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.

##### Structure of the permanent way for railways or tramways

- |             |  |             |  |
|-------------|--|-------------|--|
| <b>1/00</b> | <b>Ballastway; Other means for supporting the sleepers or the track; Drainage of the ballastway</b> ( <a href="#">draining by trenches, culverts, or conduits E01F 5/00</a> )  | 3/24        | . . Slabs; Blocks; Pot sleepers; Fastening tie-rods to them  |
| 1/001       | . {Track with ballast}   | 3/26        | . . combined with inserts of wood artificial stone or other material   |
| 1/002       | . {Ballastless track, e.g. concrete slab trackway, or with asphalt layers}   | 3/28        | . made from concrete or from natural or artificial stone ( <a href="#">manufacture B28</a> )   |
| 1/004       | . . {with prefabricated elements embedded in fresh concrete or asphalt}  | 3/30        | . . Hollow sleepers  |
| 1/005       | . . {with sleeper shoes}   | 3/32        | . . with armouring or reinforcement ( <a href="#">hollow sleepers E01B 3/30</a> )  |
| 1/007       | . . {with interlocking means to withstand horizontal forces}   | 3/34        | . . . with pre-tensioned armouring or reinforcement ( <a href="#">pre-tensioned armouring or reinforcing elements E04C 5/00</a> )  |
| 1/008       | . {Drainage of track}  | 3/36        | . . Composite sleepers   |
| <b>2/00</b> | <b>General structure of permanent way</b> ( <a href="#">railway networks B61B 1/00; foundations for pavings E01C 3/00; foundations in general E02D</a> )                       | 3/38        | . . Longitudinal sleepers; Longitudinal sleepers integral or combined with tie-rods; Combined longitudinal and transverse sleepers; Layers of concrete supporting both rails |
| 2/003       | . {Arrangement of tracks on bridges or in tunnels}   | 3/40        | . . Slabs; Blocks; Pot sleepers; Fastening tie-rods to them  |
| 2/006       | . {Deep foundation of tracks}  | 3/42        | . . combined with inserts of wood or other material  |
| <b>3/00</b> | <b>Transverse or longitudinal sleepers</b> ( <a href="#">for switches or crossings E01B 7/22</a> ); <b>Other means resting directly on the ballastway for supporting rails</b> | 3/44        | . made from other materials only if the material is essential  |
| 3/02        | . made from wood ( <a href="#">drying or impregnating B27K</a> )   | 3/46        | . made from different materials ( <a href="#">E01B 3/26, E01B 3/42 take precedence</a> )   |
| 3/04        | . . Means for preventing cleaving  | 3/48        | . Distance keepers or tie-rods for sleepers  |
| 3/06        | . . . Anti-cracking dogs   | <b>5/00</b> | <b>Rails; Guard rails</b> ( <a href="#">manufacture of rails B21B</a> ); <b>Distance-keeping means for them</b>  |
| 3/08        | . . . Straps or bands for hooping or encircling sleepers ( <a href="#">apparatus for hooping wooden railway sleepers on the spot E01B 31/28</a> )                              | 5/02        | . Rails  |
| 3/10        | . . Composite sleepers   | 5/04        | . . Grooved rails  |
| 3/12        | . . Longitudinal sleepers; Longitudinal sleepers integral or combined with tie-rods; Combined longitudinal and transverse sleepers   | 5/06        | . . Reversible or invertible rails   |
| 3/14        | . . Slabs; Blocks; Fastening tie-rods to them  | 5/08        | . . Composite rails; Compound rails with dismountable or non-dismountable parts  |
| 3/16        | . made from steel  | 5/10        | . . . Composite grooved rails; Inserts for grooved rails   |
| 3/18        | . . Composite sleepers   | 5/12        | . . Rails with a foot serving as a sleeper   |
| 3/20        | . . Sleeper construction for special purposes, e.g. with openings for ballast working ( <a href="#">sleepers for shiftable track for heavy loads E01B 23/12</a> )              | 5/14        | . . Rails for special parts of the track, e.g. for curves  |
| 3/22        | . . Longitudinal sleepers; Longitudinal sleepers integral or combined with tie-rods; Combined longitudinal and transverse sleepers   | 5/16        | . Distance keepers   |
|             |  | 5/18        | . Guard rails; Connecting, fastening or adjusting means therefor   |
|             |  | <b>7/00</b> | <b>Switches; Crossings</b> ( <a href="#">operating mechanisms B61L</a> )   |
|             |  | 7/02        | . Tongues; Associated constructions  |

- 7/04 . . Constructions with tongues turning about a vertical pivot at the end
- 7/06 . . Constructions with flexible tongues or flexible fishplates
- 7/08 . . Other constructions of tongues, e.g. tilting about an axis parallel to the rail, movable tongue blocks or rails
- 7/10 . Frogs
- 7/12 . . Fixed frogs made of one part or composite
- 7/14 . . with movable parts
- 7/16 . . Jump-over frogs
- 7/18 . Combinations of switches and crossings
- 7/20 . Safety means for switches, e.g. switch point protectors, auxiliary or guiding rail members
- 7/22 . Special sleepers for switches or crossings; Fastening means therefor
- 7/24 . Heating of switches
- 7/26 . Lubricating of switches ([lubricating of rails B61K 3/00](#))
- 7/28 . Crossings
- 7/30 . . Jump-over crossings
- 9/00 Fastening rails on sleepers, or the like ([fastening rails to bridges E01D 19/12](#))**
- 9/02 . Fastening rails, tie-plates, or chairs directly on sleepers or foundations; Means therefor
- 9/04 . . Fastening on wooden or concrete sleepers or on masonry without clamp members
- 9/06 . . . Railways spikes ([nails in general F16B](#))
- 9/08 . . . Elastic spikes
- 9/10 . . . Screws or bolts for sleepers ([screws or bolts in general F16B](#))
- 9/12 . . . Retaining or locking devices for spikes or screws
- 9/14 . . . Plugs, sleeves, thread linings, or other inserts for holes in sleepers ([inserting plugs or sleeves E01B 31/26](#))
- 9/16 . . . . for wooden sleepers
- 9/18 . . . . for concrete sleepers
- 9/20 . . . by keys
- 9/22 . . Fastening on steel sleepers without clamp members
- 9/24 . . . by keys
- 9/26 . . . Welded fastenings
- 9/28 . . Fastening on wooden or concrete sleepers or on masonry with clamp members
- 9/30 . . . by resilient steel clips
- 9/303 . . . . {the clip being a shaped bar}
- 9/306 . . . . {the clip being a shaped plate}
- 9/32 . . Fastening on steel sleepers with clamp members
- 9/34 . . . by resilient steel clips
- 9/36 . . Metal sole-plates for rails which rails are directly fastened to sleepers
- 9/38 . Indirect fastening of rails by using tie-plates or chairs; Fastening of rails on the tie-plates or in the chairs
- 9/40 . . Tie-plates for flat-bottom rails ([manufacture B21](#))
- 9/42 . . . of two or more parts
- 9/44 . . Fastening the rail on the tie-plate
- 9/46 . . . by clamps
- 9/48 . . . . by resilient steel clips
- 9/483 . . . . . {the clip being a shaped bar}
- 9/486 . . . . . {the clip being a shaped plate}
- 9/50 . . . by keys
- 9/52 . . . . by resilient keys
- 9/54 . . Rail chairs
- 9/56 . . . for rails with two or more treads
- 9/58 . . Fastening the rail in the chair
- 9/60 . Rail fastenings making use of clamps or braces supporting the side of the rail
- 9/62 . Rail fastenings incorporating resilient supports
- 9/64 . Rail fastenings gripping or encircling the sleeper
- 9/66 . Rail fastenings allowing the adjustment of the position of the rails, so far as not included in the preceding groups
- 9/68 . Pads or the like, e.g. of wood, rubber, placed under the rail, tie-plate, or chair
- NOTE**  
If the subject to be classified has more than one characteristic, classification is made in group [E01B 9/68](#) and indexing codes for the different characteristics are given
- 9/681 . . {characterised by the material}
- 9/683 . . . {layered or composite}
- 9/685 . . {characterised by their shape}
- 9/686 . . . {with textured surface}
- 9/688 . . . {with internal cavities}
- 11/00 Rail joints ([electrical connection of the rail B60M 5/00](#))**
- 11/02 . Dismountable rail joints
- 11/04 . . Flat fishplates
- 11/06 . . . with keys or pins
- 11/08 . . Angle fishplates
- 11/10 . . Fishplates with parts supporting or surrounding the rail foot
- 11/12 . . Fishplates engaging only the rail foot
- 11/14 . . Rail foot flange clips in one piece
- 11/16 . . Fishplates for joining rails of different sections
- 11/18 . . Fishplates for temporarily repairing broken rails
- 11/20 . . with gap-bridging
- 11/22 . . . by parts of the rails
- 11/24 . . . . with oblique or overlapping rail ends
- 11/26 . . . . with interlocking rail ends
- 11/28 . . . by parts of the joining members
- 11/30 . . . . Fishplates with integral tread parts lying in the cross-section of the rail head
- 11/32 . . . by separate parts, Inserts bridging both rail heads
- 11/34 . . . . Auxiliary rail beside gap
- 11/36 . . Fastening means for fishplates
- 11/38 . . . Locking arrangements for fastening means ([locking means for nuts or bolts in general F16B](#))
- 11/40 . . Dismountable rail joints combined with welded parts
- 11/42 . Joint constructions for relatively movable rails, e.g. rails on turntables, traversers, or swing bridges
- 11/44 . Non-dismountable rail joints; Welded joints ([welding methods B23K](#))
- 11/46 . . General methods for making gapless tracks
- 11/48 . . Joints made by flame welding
- 11/50 . . Joints made by electric welding
- 11/52 . . Joints made by alumino-thermal welding
- 11/54 . Electrically-insulating rail joints

11/56	<ul style="list-style-type: none"> <li>Special arrangements for supporting rail ends (<a href="#">foot supports E01B 11/08 - E01B 11/14</a>)</li> </ul>	25/24	<ul style="list-style-type: none"> <li>Supporting rails; Auxiliary balancing rails; Supports or connections for rails</li> </ul>
11/58	<ul style="list-style-type: none"> <li>Bridge plates</li> </ul>	25/26	<ul style="list-style-type: none"> <li>Switches; Crossings</li> </ul>
11/60	<ul style="list-style-type: none"> <li>with wedges</li> </ul>	25/28	<ul style="list-style-type: none"> <li>Rail tracks for guiding vehicles when running on road or similar surface (<a href="#">wheel tracks on roads E01C 9/02</a>)</li> </ul>
11/62	<ul style="list-style-type: none"> <li>Bridge chairs (<a href="#">chairs E01B 9/54 - E01B 9/58</a>)</li> </ul>	25/30	<ul style="list-style-type: none"> <li>Tracks for magnetic suspension or levitation vehicles</li> </ul>
<b>13/00</b>	<b>Arrangements preventing shifting of the track</b>	25/305	<ul style="list-style-type: none"> <li>{<a href="#">Rails or supporting constructions</a>}</li> </ul>
13/02	<ul style="list-style-type: none"> <li>Rail anchors</li> </ul>	25/32	<ul style="list-style-type: none"> <li>Stators, guide rails or slide rails</li> </ul>
<b>15/00</b>	<b>Guards for preventing a person's foot being trapped in grooved rails</b>	25/34	<ul style="list-style-type: none"> <li>Switches; Frogs; Crossings</li> </ul>
<b>17/00</b>	<b>Cattle guards connected to the permanent way (<a href="#">grids in general for preventing cattle from straying A01K 3/00</a>)</b>	<b>26/00</b>	<b>Tracks or track components not covered by any one of the preceding groups</b>
<b>19/00</b>	<b>Protection of permanent way against development of dust or against the effect of wind, sun, frost, or corrosion; Means to reduce development of noise (<a href="#">snow fences E01F 7/02</a>, <a href="#">snow-ploughs E01H 8/02</a>, <a href="#">watering E01H 11/00</a>)</b>	26/005	<ul style="list-style-type: none"> <li>{<a href="#">Means for fixing posts, barriers, fences or the like to rails</a>}</li> </ul>
19/003	<ul style="list-style-type: none"> <li>{<a href="#">Means for reducing the development or propagation of noise</a>}</li> </ul>	<b><u>Making, maintaining, renewing, or taking-up the ballastway or the track; Tools or machines specially designed therefor (<a href="#">derailing or rerailling of machines B61K 5/00</a>; removal of foreign matter from the permanent way, vegetation control applying liquids E01H)</u></b>	
19/006	<ul style="list-style-type: none"> <li>{<a href="#">Means for protecting the underground against spillage</a>}</li> </ul>	<b>27/00</b>	<b>Placing, renewing, working, cleaning, or taking-up the ballast, with or without concurrent work on the track; Devices therefor; Packing sleepers</b>
<b>21/00</b>	<b>Track superstructure adapted for tramways in paved streets (<a href="#">paving E01C 9/04</a>, <a href="#">E01C 9/06</a>)</b>	27/02	<ul style="list-style-type: none"> <li>Placing the ballast; Making ballastway; Redistributing ballasting material; Machines or devices therefor; Levelling means</li> </ul>
21/02	<ul style="list-style-type: none"> <li>Special supporting means; Draining of rails</li> </ul>	27/021	<ul style="list-style-type: none"> <li>{<a href="#">by devices moving underneath the track, e.g. ballast sleighs</a>}</li> </ul>
21/04	<ul style="list-style-type: none"> <li>Special fastenings, joint constructions, or tie-rods</li> </ul>	27/022	<ul style="list-style-type: none"> <li>{<a href="#">by devices moving on the track with or without spreading or levelling</a>}</li> </ul>
<b>23/00</b>	<b>Easily dismountable or movable tracks, e.g. temporary railways; Details specially adapted therefor</b>	27/023	<ul style="list-style-type: none"> <li>{<a href="#">Spreading, levelling or redistributing ballast already placed</a>}</li> </ul>
23/02	<ul style="list-style-type: none"> <li>Tracks for light railways, e.g. for field, colliery, or mine use</li> </ul>	27/025	<ul style="list-style-type: none"> <li>{<a href="#">by means of non-driven tools</a>}</li> </ul>
23/04	<ul style="list-style-type: none"> <li>Fastening or joining means</li> </ul>	27/026	<ul style="list-style-type: none"> <li>{<a href="#">by means of driven tools, e.g. rotating brooms or digging devices</a>}</li> </ul>
23/06	<ul style="list-style-type: none"> <li>Switches (<a href="#">turntables B60S</a>, <a href="#">B61J</a>); Portable switches; Turnouts</li> </ul>	27/027	<ul style="list-style-type: none"> <li>{<a href="#">Loosening ballasting material</a>}</li> </ul>
23/08	<ul style="list-style-type: none"> <li>Temporary tracks for use while repairing tramways</li> </ul>	27/028	<ul style="list-style-type: none"> <li>{<a href="#">Compacting ballasting material; Performing ballast cores or seats for sleepers</a>}</li> </ul>
23/10	<ul style="list-style-type: none"> <li>Shiftable tracks for heavy loads, e.g. carrying excavators</li> </ul>	27/04	<ul style="list-style-type: none"> <li>Removing the ballast; Machines therefor, whether or not additionally adapted for taking-up ballast (<a href="#">E01B 27/06</a>, <a href="#">E01B 27/12 takes precedence</a>; <a href="#">redistributing ballasting material E01B 27/02</a>)</li> </ul>
23/12	<ul style="list-style-type: none"> <li>Sleepers</li> </ul>	27/06	<ul style="list-style-type: none"> <li>Renewing or cleaning the ballast <a href="#">in situ</a>, with or without concurrent work on the track</li> </ul>
23/14	<ul style="list-style-type: none"> <li>Fastening or joining means (<a href="#">fastening of rails by keys E01B 9/24</a>)</li> </ul>	27/08	<ul style="list-style-type: none"> <li>the track having been taken-up (<a href="#">E01B 27/11 takes precedence</a>)</li> </ul>
23/16	<ul style="list-style-type: none"> <li>Switches</li> </ul>	27/10	<ul style="list-style-type: none"> <li>without taking-up track (<a href="#">E01B 27/11 takes precedence</a>)</li> </ul>
<b>25/00</b>	<b>Tracks for special kinds of railways (<a href="#">systems B61B</a>; <a href="#">wheel tracks on roads E01C 9/02</a>)</b>	27/102	<ul style="list-style-type: none"> <li>{<a href="#">Removing unwanted material without removing the ballast</a>}</li> </ul>
25/02	<ul style="list-style-type: none"> <li>Tracks for rack railways</li> </ul>	27/105	<ul style="list-style-type: none"> <li>{<a href="#">the track having been lifted</a>}</li> </ul>
25/04	<ul style="list-style-type: none"> <li>Rack rails; Supports or connections for rack rails</li> </ul>	27/107	<ul style="list-style-type: none"> <li>{<a href="#">along between the tracks only</a>}</li> </ul>
25/06	<ul style="list-style-type: none"> <li>Switches; Frogs; Crossings</li> </ul>	27/11	<ul style="list-style-type: none"> <li>combined with concurrent renewal of track components</li> </ul>
25/08	<ul style="list-style-type: none"> <li>Tracks for mono-rails with centre of gravity of vehicle above the load-bearing rail</li> </ul>	27/12	<ul style="list-style-type: none"> <li>Packing sleepers, with or without concurrent work on the track; Compacting track-carrying ballast</li> </ul>
25/10	<ul style="list-style-type: none"> <li>Mono-rails; Auxiliary balancing rails; Supports or connections for rails</li> </ul>	27/13	<ul style="list-style-type: none"> <li>Packing sleepers, with or without concurrent work on the track (<a href="#">preforming ballast cores or seats for sleepers E01B 27/02</a>)</li> </ul>
25/12	<ul style="list-style-type: none"> <li>Switches; Crossings</li> </ul>	27/14	<ul style="list-style-type: none"> <li>Manual tools or hand-held power tools therefor</li> </ul>
25/14	<ul style="list-style-type: none"> <li>Tracks for cable-drawn railway vehicles</li> </ul>	27/16	<ul style="list-style-type: none"> <li>Sleeper-tamping machines</li> </ul>
25/15	<ul style="list-style-type: none"> <li>Switches; Crossings</li> </ul>	27/17	<ul style="list-style-type: none"> <li>combined with means for lifting, levelling or slewing the track</li> </ul>
25/16	<ul style="list-style-type: none"> <li>Tracks for aerial rope railways with a stationary rope</li> </ul>		
25/18	<ul style="list-style-type: none"> <li>Ropes; Supports, fastening or straining means for ropes (<a href="#">ropes in general D07B</a>; <a href="#">masts E04H 12/00</a>; <a href="#">ropes sockets F16G</a>)</li> </ul>		
25/20	<ul style="list-style-type: none"> <li>Switches; Crossings</li> </ul>		
25/22	<ul style="list-style-type: none"> <li>Tracks for railways with the vehicle suspended from rigid supporting rails</li> </ul>		

- 27/18 . . . . by introducing additional fresh material under the sleepers, e.g. by the measured-shovel method, by the blowing method
- 27/20 . . Compacting the material of the track-carrying ballastway, e.g. by vibrating the track, by surface vibrators (of trackless ballastway [E01B 27/02](#); for packing sleepers [E01B 27/12](#))
- 29/00 Laying, rebuilding, or taking-up tracks; Tools or machines therefor ([E01B 27/00](#), [E01B 31/00](#) take precedence)**
- 29/005 . {Making of concrete parts of the track [in situ](#)}
- 29/02 . Transporting, laying, removing, or renewing lengths of assembled track, assembled switches, or assembled crossings ([E01B 29/04](#) takes precedence)
- 29/04 . Lifting or levelling of tracks (lifting devices in general [B66F](#))
- 29/05 . Transporting, laying, removing, or renewing both rails and sleepers (as assembled units [E01B 29/02](#))
- 29/06 . Transporting, laying, removing or renewing sleepers ([E01B 29/05](#) takes precedence; carrying devices [B65G 7/12](#))
- 29/09 . . under, or from under, installed rails
- 29/10 . . . for inserting or removing sleepers
- 29/11 . . . . Removal involving destruction of the sleeper, e.g. the sectioning thereof
- 29/13 . . . for moving sleepers in a direction parallel to the rails, e.g. for spacing or aligning them ([E01B 29/10](#) takes precedence)
- 29/14 . . . for lifting sleepers up to the rails (lifting devices in general [B66F](#))
- 29/16 . Transporting, laying, removing, or replacing rails; Moving rails placed on sleepers in the track ([E01B 29/05](#) takes precedence; moving or tilting heavy loads in general [B65G 7/00](#))
- 29/17 . . Lengths of rails assembled into strings, e.g. welded together
- 29/20 . . Moving rails placed on installed sleepers in the plane track
- 29/22 . . Raising rails from sleepers, e.g. for inserting sole-plates (lifting devices in general [B66F](#))
- 29/24 . Fixing or removing detachable fastening means or accessories thereof; Pre-assembling track components by detachable fastening means ([E01B 29/02](#), [E01B 31/26](#) take precedence)
- 29/26 . . the fastening means being spikes ([E01B 29/16](#) takes precedence; hand-held tools for nail or staple driving or extracting [B25C](#))
- 29/28 . . the fastening means being of screw-and-nut type (portable apparatus for fixing or removing screws or the like [B25B](#)); Apparatus therefor, adapted to additionally drilling holes
- 29/29 . . . for horizontally-arranged fastening elements, e.g. fish-bolts
- 29/32 . Installing or removing track components, not covered by the preceding groups, e.g. sole-plates, rail anchors ([E01B 31/26](#) takes precedence)
- 29/40 . Means or arrangements for temporarily supporting laid tracks, or rails or sleepers in the track (temporary fishplates [E01B 11/18](#))
- 29/42 . Undetachably joining or fastening track components in or on the track, e.g. by welding, by gluing; Pre-assembling track components by gluing; Sealing joints with filling components ([E01B 31/26](#) takes precedence; independent heating means [E01B 31/18](#); welding in general [B23K](#); gluing metal parts in general [F16B 11/00](#))
- 29/44 . . Methods for effecting joining of rails in the track, e.g. taking account of ambient temperature
- 29/46 . . Devices for holding, positioning, or urging together the rail ends (adjusting the joint by moving rails [E01B 29/20](#))
- 31/00 Working rails, sleepers, baseplates, or the like, in or on the line; Machines, tools, or auxiliary devices specially designed therefor (characterised by features independent of use on assembled track [B21](#), [B23](#) - [B25](#), [B27](#))**
- 31/02 . Working rail or other metal track components on the spot
- 31/04 . . Sectioning or slitting, e.g. by sawing, shearing, flame-cutting
- 31/06 . . Making holes, e.g. by drilling, punching, flame-cutting
- 31/08 . . Bending, e.g. for straightening rails or rail joints (for aligning rail ends to be welded [E01B 29/46](#))
- 31/12 . . Removing metal from rails, rail joints, or baseplates, e.g. for deburring welds, reconditioning worn rails
- 31/13 . . . by milling
- 31/15 . . . by planing or filing
- 31/17 . . . by grinding
- 31/175 . . . . {using grinding belts}
- 31/18 . . Reconditioning or repairing worn or damaged parts on the spot, e.g. applying inlays, building-up rails by welding ([E01B 31/04](#) - [E01B 31/12](#) take precedence); Heating or cooling of parts on the spot, e.g. for reducing joint gaps, for hardening rails
- 31/20 . Working or treating non-metal sleepers in or on the line, e.g. marking, creosoting (working metal sleepers [E01B 31/02](#))
- 31/22 . . Cutting or grinding wooden sleepers, e.g. for forming rail seats ([E01B 31/24](#) takes precedence)
- 31/23 . . . Sectioning (combined with removal of segments from track [E01B 29/11](#))
- 31/24 . . Forming, treating, reconditioning, or cleaning holes in sleepers; Drilling-templates ([E01B 29/28](#), [E01B 31/26](#) take precedence)
- 31/26 . . Inserting or removing inserts or fillings for holes in sleepers, e.g. plugs, sleeves
- 31/28 . . Applying or removing anti-splitting or like reinforcing means ([E01B 31/26](#) takes precedence; straps or bands therefor [E01B 3/08](#))
- 33/00 Machines or devices for shifting tracks, with or without lifting, e.g. for aligning track, for shifting excavator track (combined with sleeper packing machines [E01B 27/17](#))**
- 33/02 . for slewing, i.e. transversely shifting, in steps
- 33/04 . . Manual tools; Devices not mounted on vehicles
- 33/06 . for slewing in a continuous operation, e.g. for tracks which carry excavators
- 33/08 . . Boom track-slewing machines
- 33/10 . . Bridge track-slewing machines



33/12	. . Combined boom and bridge track-slewing machines	2203/021	. . Blowing
33/18	. . Details not peculiar to a particular type of machine	2203/022	. . Horizontal chain
33/21	. . . Arrangement or construction of rollers moving the rails	2203/024	. . Inclined chain
35/00	<b>Applications of measuring apparatus or devices for track-building purposes (apparatus on locomotives or cars to indicate or record bad track sections B61K 9/00; measuring angles, linear dimensions, or irregularities in general G01B, G01C)</b>	2203/025	. . Suction
35/02	. for spacing, for cross levelling; for laying-out curves	2203/027	. . Sweeping
35/04	. . Wheeled apparatus	2203/028	. . Alternative ways
35/06	. for measuring irregularities in longitudinal direction	2203/03	. Displacing or storing ballast
35/08	. . for levelling	2203/032	. . with special use or configuration of conveyor belts
35/10	. . for aligning	2203/034	. . using storing containers
35/12	. for measuring movement of the track or of the components thereof under rolling loads, e.g. depression of sleepers, increase of gauge	2203/036	. . . fixed to vehicle
37/00	<b>Making, maintaining, renewing, or taking-up the ballastway or the track, not provided for in a single one of groups E01B 27/00 - E01B 35/00</b>	2203/038	. . . detachable from the vehicle
		2203/04	. Cleaning or reconditioning ballast or ground beneath
		2203/042	. . <i>in situ</i> , e.g. vacuum-cleaners
		2203/045	. . the ballast having been taken up
		2203/047	. . Adding material, e.g. tar, glue, protective layers
		2203/06	. Placing ballast
		2203/062	. . New ballast
		2203/065	. . Re-use of ballast
		2203/067	. . Special methods for posing or quantifying ballast
		2203/08	. Levelling ballast or ground beneath
		2203/083	. . Ploughs
		2203/086	. . Rotating brooms
		2203/10	. Track-lifting or-lining devices or methods
		2203/12	. Tamping devices
		2203/122	. . for straight track
		2203/125	. . adapted for switches or crossings
		2203/127	. . vibrating the track surface
		2203/14	. Way of locomotion or support
		2203/141	. . on the track to be treated
		2203/143	. . on a side-track
		2203/145	. . on the ballast
		2203/146	. . using other means than driven wheels as propulsion means
		2203/148	. . having wheelsets that can be displaced horizontally or vertically
		2203/15	. Reducing impact of devices on environment
		2203/16	. Guiding or measuring means, e.g. for alignment, canting, stepwise propagation
		2203/17	. continually advancing
		2204/00	<b>Characteristics of the track and its foundations</b>
		2204/01	. Elastic layers other than rail-pads, e.g. sleeper-shoes, bituconcrete
		2204/02	. Ballast bags
		2204/03	. Injecting, mixing or spraying additives into or onto ballast or underground
		2204/04	. Direct mechanical or chemical fixing of sleepers onto underground
		2204/05	. Use of geotextiles
		2204/06	. Height or lateral adjustment means or positioning means for slabs, sleepers or rails
		2204/07	. Drainage
		2204/08	. Deep or vertical foundation
		2204/09	. Ballastless systems
		2204/10	. Making longitudinal or transverse sleepers or slabs <i>in situ</i> or embedding them
		2204/11	. Embedded tracks, using prefab elements or injecting or pouring a curable material
		2204/12	. Floating rails or sleepers
		2204/13	. Dowels for slabs, sleepers or rail-fixings
		2204/14	. Vegetation on or around railway-tracks
2201/00	<b>Fastening or restraining methods</b>		
2201/02	. by wedging action		
2201/04	. by bolting, nailing or the like		
2201/06	. by eccentric or levering action		
2201/08	. by plastic or elastic deformation of fastener		
2201/10	. in alternative ways, e.g. glueing, welding, form-fits		
	<b>Making, maintaining, renewing, or taking-up the ballastway or the track; Tools or machines specially designed therefor (derailing or rerailing of machines B61K 5/00; removal of foreign matter from the permanent way, vegetation control applying liquids E01H)</b>		
2202/00	<b>Characteristics of moving parts of rail systems, e.g. switches, special frogs, tongues</b>		
2202/02	. Nature of the movement		
2202/021	. . Turning or tilting or elastically bending		
2202/022	. . . about horizontal axis		
2202/024	. . . about vertical axis		
2202/025	. . Pure translation		
2202/027	. . Including a component perpendicular to the plane of the rails		
2202/028	. . . Movement along an inclined surface		
2202/04	. Nature of the support or bearing		
2202/042	. . Sliding		
2202/044	. . Rolling		
2202/046	. . . with rolls on fixed part		
2202/048	. . . with rolls on moving part		
2202/06	. . Use of friction-reducing surfaces		
2202/08	. Locking devices or mechanisms for inhibiting movement		
2203/00	<b>Devices for working the railway-superstructure</b>		
2203/01	. with track		
2203/012	. . present, i.e. in its normal position		
2203/015	. . present but lifted		
2203/017	. . removed or not present yet		
2203/02	. Removing or re-contouring ballast		

Making, maintaining, renewing, or taking-up the ballastway or the track; Tools or machines specially designed therefor

**E01B**

2204/15 . Layout or geometry of the track

2204/16 . Specific granulometry of the ballast

**2205/00 Electrical insulation of railway track parts**