

CPC**COOPERATIVE PATENT CLASSIFICATION****B66B**

ELEVATORS; ESCALATORS OR MOVING WALKWAYS ({apparatus for raising or lowering persons on theatrical stages or the like [A63J 5/12](#) ; funicular railbound systems with rigid ground-supported tracks and cable traction, e.g. cliff railways, [B61B 9/00](#) ; arrangements of ammunition handlers in vessels [B63G 3/00](#) ; hoists, lifts, or conveyers for loading or unloading in general [B65G](#); braking or detent devices controlling normal movements of winding drums or barrels [B66D](#); ship-lifting devices [E02C](#); garages for many vehicles with mechanical means for lifting vehicles [E04H 6/12](#) ; hoists for feeding ammunition or projectiles to launching apparatus or to loading mechanisms [F41A 9/00](#))

NOTE

In this subclass, the following term is used with the meaning indicated:

- "elevator" covers the term "lift", and the two terms are interchangeable

Common features of elevators

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| B66B 1/00 | Control systems of elevators in general (safety devices B66B 5/00 ; controlling door or gate operation B66B 13/00 ; systems of general application G05) |
| B66B 1/02 | . Control systems without regulation, i.e. without retroactive action |
| B66B 1/04 | .. hydraulic |
| B66B 1/06 | .. electric |
| B66B 1/08 | ... with devices, e.g. handles or levers, in the cars or cages for direct control of movements |
| B66B 1/10 | specially adapted for mining hoists |
| B66B 1/12 | ... with devices, e.g. handles or levers, located at a control station for direct control movements, e.g. electric mining-hoist control systems |
| B66B 1/14 | ... with devices, e.g. push-buttons, for indirect control of movements |
| B66B 1/16 | with means for storing pulses controlling the movements of a single car or cage {(B66B 1/2433 takes precedence)} |
| B66B 1/18 | with means for storing pulses controlling the movements of several cars or cages {(B66B 1/2458 takes precedence)} |
| B66B 1/20 | and for varying the manner of operation to suit particular traffic conditions, e.g. "one-way rush-hour traffic", {(B66B 1/2466 takes precedence)} |
| B66B 1/22 | with means for taking account of delayed calls |
| B66B 1/24 | . Control systems with regulation, i.e. with retroactive action, for influencing travelling speed, acceleration, or deceleration |
| B66B 1/2408 | .. {where the allocation of a call to an elevator car is of importance, i.e. by means of a supervisory or group controller} |
| B66B 1/2416 | ... {For single car elevator systems} |
| B66B 2001/2425 | {Zone definition for two cars in the same hatchway} |

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| B66B 1/2433 | ... | {For elevator systems with a single shaft and multiple cars} |
| B66B 2001/2441 | | {with the use of a speed pattern generator} |
| B66B 2001/245 | .... | {for high-speed elevators which do not attain the maximum speed during shorts runs} |
| B66B 1/2458 | ... | {For elevator systems with multiple shafts and a single car per shaft} |
| B66B 1/2466 | ... | {For elevator systems with multiple shafts and multiple cars per shaft} |
| B66B 2001/2475 | .... | {by using cost function computing} |
| B66B 2001/2483 | .... | {by predicting the traffic, e.g. with statistical or learning procedures} |
| B66B 1/2491 | ... | {For elevator systems with lateral transfers of cars or cabins between hoistways} |
| B66B 1/26 | .. | mechanical |
| B66B 1/28 | .. | electrical (detecting excessive speed B66B 5/04); {(control of electrical motor H02P)} |
| B66B 1/285 | ... | {with the use of a speed pattern generator} |

WARNING

This group is not complete due to reorganisation in progress, see also [B66B 1/28](#)

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| B66B 1/30 | ... | effective on driving gear, {e.g. acting on power electronics, on inverter or rectifier controlled motor} |
| B66B 1/302 | .... | {for energy saving} |
| B66B 1/304 | .... | {with starting torque control} |
| B66B 1/306 | .... | {with DC powered elevator drive} |
| B66B 1/308 | .... | {with AC powered elevator drive} |
| B66B 1/32 | ... | effective on braking devices, {e.g. acting on electrically controlled brakes (brake control H02P , lift brakes per se B66B 5/02)} |
| B66B 1/34 | . | Details, {e.g. call counting devices, data transmission from car to control system, devices giving information to the control system} |
| B66B 1/3407 | .. | {Setting or modification of parameters of the control system} |
| B66B 1/3415 | .. | {Control system configuration and the data transmission or communication within the control system} |
| B66B 1/3423 | ... | {Control system configuration, i.e. lay-out} |
| B66B 1/343 | .... | {Fault-tolerant or redundant control system configuration} |
| B66B 1/3438 | .... | {Master-slave control system configuration} |
| B66B 1/3446 | ... | {Data transmission or communication within the control system} |
| B66B 1/3453 | .... | {Procedure or protocol for the data transmission or communication} |
| B66B 1/3461 | .... | {between the elevator control system and remote or mobile stations} |
| B66B 1/3469 | .. | {mechanical} |
| B66B 1/3476 | .. | {Load weighing or car passenger counting devices (B66B 5/14 takes precedence)} |
| B66B 1/3484 | ... | {using load cells} |
| B66B 1/3492 | .. | {Position or motion detectors or driving means for the detector (B66B 1/40 , B66B 1/50 take precedence; length measuring G01B ; speed measuring G01P)} |

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| B66B 1/36 | .. | Means for stopping the cars, cages, or skips at predetermined levels |
| B66B 1/365 | ... | {mechanical} |
| B66B 1/38 | ... | and for returning the controlling handle or lever to its neutral position |
| B66B 1/40 | ... | and for correct levelling at landings |
| B66B 1/405 | .... | {for hydraulically actuated elevators} |
| B66B 1/42 | .... | separate from the main drive |
| B66B 1/425 | ..... | {adapted for multi-deck cars in a single car frame} |
| B66B 1/44 | ... | and for taking account of disturbance factors, e.g. variation of load weight |
| B66B 1/46 | .. | Adaptations of switches or switchgear (switches or switchgear in general, applications of switches or switchgear for floor-levelling purpose H01H ; panels for boards or switching arrangements H02B 1/015) |
| B66B 1/461 | ... | {characterised by their shape or profile} |
| B66B 1/462 | .... | {Mechanical or piezoelectric input devices} |
| B66B 1/463 | .... | {Touch sensitive input devices} |
| B66B 1/465 | .... | {being resistant to damage} |
| B66B 1/466 | .... | {facilitating maintenance, installation, removal, replacement or repair} |
| B66B 1/467 | ... | {characterised by their mounting position} |
| B66B 1/468 | ... | {Call registering systems} |
| B66B 1/48 | ... | Adaptations of mechanically-operated limit switches (for cranes B66C 13/50 ; for winding mechanisms B66D 1/56) |
| B66B 1/50 | ... | with operating or control mechanisms mounted in the car or cage or in the lift well or hoistway |
| B66B 1/52 | ... | Floor selectors |
| B66B 3/00 | | Applications of devices for indicating or signalling operating conditions of elevators |
| B66B 3/002 | . | {Indicators} |
| B66B 3/004 | .. | {Mechanical devices that can be illuminated} |
| B66B 3/006 | .. | {for guiding passengers to their assigned elevator car} |
| B66B 3/008 | .. | {Displaying information not related to the elevator, e.g. weather, publicity, internet or TV} |
| B66B 3/02 | . | Position or depth indicators |
| B66B 3/023 | .. | {characterised by their mounting position} |
| B66B 3/026 | .. | {Mechanical devices that can be illuminated} |
| B66B 5/00 | | Application of checking, fault-correcting, or safety devices in elevators |
| B66B 5/0006 | . | {Monitoring devices or performance analysers (B66B 5/02 takes precedence)} |
| B66B 5/0012 | .. | {Devices monitoring the users of the elevator system} |
| B66B 5/0018 | .. | {Devices monitoring the operating condition of the elevator system} |
| B66B 5/0025 | ... | {for maintenance or repair} |
| B66B 5/0031 | ... | {for safety reasons} |
| B66B 5/0037 | .. | {Performance analysers} |

- B66B 5/0043 . {Devices enhancing safety during maintenance}
- B66B 5/005 .. {Safety of maintenance personnel}
- B66B 5/0056 ... {by preventing crushing}
- B66B 5/0062 {by devices, being operable or not, mounted on the elevator car}
- B66B 5/0068 {by activating the safety brakes when the elevator car exceeds a certain upper or lower position in the elevator shaft}
- B66B 5/0075 {by anchoring the elevator car or counterweight}
- B66B 5/0081 ... {by preventing falling by means of safety fences or handrails, being operable or not, mounted on top of the elevator car}
- B66B 5/0087 . {Devices facilitating maintenance, repair or inspection tasks (devices incorporated in the buffer [B66B 5/288](#) ; railings on top of the car [B66B 11/0226](#))}
- B66B 5/0093 .. {Testing of safety devices}
- B66B 5/02 . responsive to abnormal operating conditions
- B66B 5/021 .. {the abnormal operating conditions being independent of the system (alarm systems in general [G08B](#))}
- B66B 5/022 ... {where the abnormal operating condition is caused by a natural event, e.g. earthquake}
- B66B 5/024 ... {where the abnormal operating condition is caused by an accident, e.g. fire}
- B66B 5/025 ... {where the abnormal operating condition is caused by human behaviour or misbehaviour, e.g. forcing the doors}
- B66B 5/027 .. {to permit passengers to leave an elevator car in case of failure, e.g. moving the car to a reference floor or unlocking the door}
- B66B 5/028 .. {Safety devices separate from control system in case of power failure, for hydraulic lifts, e.g. braking the hydraulic jack ([B66B 5/16](#) takes precedence)}
- B66B 5/04 .. for detecting excessive speed
- B66B 5/042 ... {with characteristic location of the governor cable}
- B66B 5/044 ... {Overspeed governors}
- B66B 5/046 {of the pendulum or rocker arm type}
- B66B 5/048 ... {Testing of overspeed governor}
- B66B 5/06 ... electrical
- B66B 5/08 .. for preventing overwinding
- B66B 5/10 ... electrical
- B66B 5/12 .. in case of rope or cable slack
- B66B 5/125 ... {electrical}
- B66B 5/14 .. in case of excessive loads
- B66B 5/145 ... {electrical}
- B66B 5/16 .. Braking or catch devices operating between cars, cages, or skips and fixed guide elements or surfaces in hoistway or well
- B66B 5/18 ... and applying frictional retarding forces
- B66B 5/185 {by acting on main ropes or main cables}
- B66B 5/20 by means of rotatable eccentrically-mounted members ([B66B 5/24](#) takes precedence)
- B66B 5/22 by means of linearly-movable wedges ([B66B 5/24](#) takes precedence)

- B66B 5/24 by acting on guide ropes or cables
- B66B 5/26 . . . Positively-acting devices, e.g. latches, knives
- B66B 5/28 . Buffer-stops for cars, cages, or skips
- B66B 5/282 . . {Structure thereof}
- B66B 5/284 . . {mounted on cars or counterweights}
- B66B 5/286 . . . {between two cars or two counterweights}
- B66B 5/288 . . {with maintenance features (if not incorporated in the buffer [B66B 5/0087](#))}

B66B 7/00**Other common features of elevators**

- B66B 7/02 . Guideways; Guides ([arrangements in mine shafts E21D 7/02](#))
- B66B 7/021 . . {with a particular position in the shaft}
- B66B 7/022 . . {with a special shape}
- B66B 7/023 . . {Mounting means therefor}
- B66B 7/024 . . . {Lateral supports}
- B66B 7/025 . . . {End supports, i.e. at top or bottom}
- B66B 7/026 . . . {Interconnections}
- B66B 7/027 . . . {for mounting auxiliary devices}
- B66B 7/028 . . {with earthquake protection devices}
- B66B 7/04 . . {Riding means, e.g.} Shoes, Rollers, {between car and guiding means, e.g. rails, ropes (rollers adapted to match the shape of a special guiding means [B66B 7/02](#) ; vibration attenuation systems acting between car and its supporting frame [B66B 11/026](#))}
- B66B 7/041 . . . {including active attenuation system for shocks, vibrations}
- B66B 7/042 {with rollers, shoes}
- B66B 7/043 {using learning}
- B66B 7/044 {with magnetic or electromagnetic means}
- B66B 7/045 {using learning}
- B66B 7/046 . . . {Rollers}
- B66B 7/047 . . . {Shoes, sliders}
- B66B 7/048 . . . {including passive attenuation system for shocks, vibrations}
- B66B 7/06 . Arrangements of ropes or cables
- B66B 7/062 . . {Belts}
- B66B 7/064 . . {Power supply or signal cables}
- B66B 7/066 . . {Chains}
- B66B 7/068 . . {Cable weight compensating devices}
- B66B 7/08 . . for connection to the cars or cages, e.g. couplings
- B66B 7/085 . . . {Belt termination devices}
- B66B 7/10 . . for equalising rope or cable tension
- B66B 7/12 . . Checking, lubricating, or cleaning means for ropes, cables or guides
- B66B 7/1207 . . {Checking means}
- B66B 7/1215 . . . {specially adapted for ropes or cables}

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|-------------|------|---|
| B66B 7/1223 | | {by analysing electric variables} |
| B66B 7/123 | | {by analysing magnetic variables} |
| B66B 7/1238 | .... | {by optical techniques} |
| B66B 7/1246 | ... | {specially adapted for guides} |
| B66B 7/1253 | .. | {Lubricating means} |
| B66B 7/1261 | ... | {specially adapted for ropes or cables} |
| B66B 7/1269 | ... | {specially adapted for guides} |
| B66B 7/1276 | .. | {Cleaning means} |
| B66B 7/1284 | ... | {specially adapted for ropes or cables} |
| B66B 7/1292 | ... | {specially adapted for guides} |

Lifts in, or associated with, buildings

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|------------------|---|--|
| B66B 9/00 | Kinds or types of lifts in, or associated with, buildings or other structures (characterised by control systems B66B 1/00 ; apparatus for raising or lowering persons on stages of theatres A63J 5/12) | |
| B66B 9/003 | . | {for lateral transfer of car or frame, e.g. between vertical hoistways or to/from a parking position} |
| B66B 2009/006 | . | {Ganged elevator} |
| B66B 9/02 | . | actuated mechanically otherwise than by rope or cable |
| B66B 9/022 | .. | {by rack and pinion drives} |
| B66B 9/025 | .. | {by screw-nut drives} |
| B66B 9/027 | .. | {by rope climbing devices} |
| B66B 9/04 | . | actuated pneumatically or hydraulically (platforms for lifting or lowering through short distances B66F 7/00) |
| B66B 9/06 | . | inclined, e.g. serving blast furnaces |
| B66B 9/08 | .. | associated with stairways, e.g. for transporting disabled persons {(facilitating access of invalids to vehicles A61G 3/02)} |
| B66B 9/0807 | ... | {Driving mechanisms} |
| B66B 9/0815 | .... | {Rack and pinion, friction rollers} |
| B66B 9/0823 | .... | {Screw and nut} |
| B66B 9/083 | .... | {Pull cable, pull chain} |
| B66B 9/0838 | ... | {Levelling gears} |
| B66B 9/0846 | ... | {Guide rail (B66B 9/0807 takes precedence)} |
| B66B 9/0853 | ... | {Lifting platforms, e.g. constructional features} |
| B66B 9/0861 | ... | {Hanging lifts, e.g. rope suspended seat or platform} |
| B66B 9/0869 | ... | {Collapsible stairways, e.g. operable between a lower level and an upper level} |
| B66B 2009/0876 | ... | {Details} |
| B66B 2009/0884 | .... | {Control systems} |
| B66B 2009/0892 | .... | {Seats` constructional features} |
| B66B 9/10 | . | Paternoster type (with devices for transferring goods into, or out of, the compartments B65G 17/00) |

- B66B 9/16
 - . Mobile or transportable lifts specially adapted to be shifted from one part of a building or other structure to another part or to another building or structure ([devices for lifting or lowering bulky or heavy goods for loading or unloading purposes B66F 9/00](#) , e.g. fork-lift trucks [B66B 9/06](#))
- B66B 9/187
 - . . with a liftway specially adapted for temporary connection to a building or other structure ([B66B 9/193](#) takes precedence)
- B66B 9/193
 - . . with inclined liftways
- B66B 11/00**
 - Main component parts of lifts in, or associated with, buildings or other structures**
- B66B 11/0005
 - . {Constructional features of hoistways}
- B66B 11/001
 - . {Arrangement of controller, e.g. location}
- B66B 11/0015
 - . . {in the machine room}
- B66B 11/002
 - . . {in the hoistway}
- B66B 11/0025
 - . . . {on the car}
- B66B 11/003
 - . . . {on the counterweight}
- B66B 11/0035
 - . {Arrangement of driving gear, e.g. location or support}
- B66B 11/004
 - . . {in the machine room}
- B66B 11/0045
 - . . {in the hoistway}
- B66B 11/005
 - . . . {on the car}
- B66B 11/0055
 - . . . {on the counterweight}
- B66B 11/006
 - . {Applications of loading and unloading equipment for lifts associated with buildings (of general application [B65G](#); for paternoster lifts [B65G 17/00](#) ; for mine lifts [B66B 17/14](#))}
- B66B 11/0065
 - . {Roping (Mining hoist [B66B 15/08](#))}
- B66B 11/007
 - . . {for counterweightless elevators}
- B66B 11/0075
 - . . {with hoisting rope or cable positively attached to a winding drum}
- B66B 11/008
 - . . {with hoisting rope or cable operated by frictional engagement with a winding drum or sheave}
- B66B 11/0085
 - . . . {of rucksack elevators}
- B66B 11/009
 - . . . {with separate traction and suspension ropes}
- B66B 11/0095
 - . . . {where multiple cars drive in the same hoist way}
- B66B 11/02
 - . Cages, {i.e. cars} (doors, gates or other apparatus controlling access to, or exit from, cages [B66B 13/00](#))
- B66B 11/0206
 - . . {Car frames}
- B66B 11/0213
 - . . . {for multi-deck cars}
- B66B 11/022
 - {with changeable inter-deck distances}
- B66B 11/0226
 - . . {Constructional features, e.g. walls assembly, decorative panels, comfort equipment, thermal or sound insulation}
- B66B 11/0233
 - . . . {Lighting systems}
- B66B 11/024
 - . . . {Ventilation systems}
- B66B 11/0246
 - . . . {Maintenance features ([devices facilitating maintenance in general B66B 5/0087](#))}
- B66B 11/0253
 - . . . {Fixation of wall panels}

- B66B 11/026 . . {Attenuation system for shocks, vibrations, imbalance, e.g. passengers on the same side (acting between car or supporting frame and guides [B66B 7/04](#) ; acting between car and ropes, cables [B66B 7/08](#) ; correcting levelling between car and floor [B66B 1/40](#))}
- B66B 11/0266 . . . {Passive systems (aerodynamic structure [B66B 11/0226](#))}
- B66B 11/0273 {acting between car and supporting frame}
- B66B 11/028 . . . {Active systems}
- B66B 11/0286 {acting between car and supporting frame}
- B66B 11/0293 . . . {Suspension locking or inhibiting means to avoid movement when car is stopped at a floor (locking car to building while loading to avoid movement [B66B 17/34](#))}
- B66B 11/04 . . Driving gear; {Details thereof, e.g. seals (braking devices acting on the driving gear [B66B 5/02](#) ; of mining-hoist winding devices [B66B 15/08](#))}
- B66B 11/0407 . . {actuated by an electrical linear motor (in the counterweight [B66B 17/12](#))}
- B66B 11/0415 . . {actuated manually, e.g. additional safety system}
- B66B 11/0423 . . {actuated pneumatically or hydraulically}
- B66B 11/043 . . {actuated by rotating motor; Details, e.g. ventilation (Roping on drum, sheave, winch or pulley [B66B 11/0065](#) ; Power supply or control [B66B 1/28](#) , [H02P](#) ; Motor construction [H02K](#))}
- B66B 11/0438 . . . {with a gearless driving, e.g. integrated sheave, drum or winch in the stator or rotor of the cage motor}
- B66B 11/0446 . . . {with screw-nut or worm-screw gear}
- B66B 11/0453 . . . {with planetary or epicycloidal gear, e.g. differential gear}
- B66B 11/0461 . . . {with rack and pinion gear}
- B66B 11/0469 . . . {with chain, pinion gear}
- B66B 11/0476 . . . {with friction gear, e.g. belt linking motor to sheave}
- B66B 11/0484 . . . {with a clutch or a coupling system between several motors, e.g. switching different speeds, progressive starting, torque limitation, flywheel (control [B66B 1/28](#))}
- B66B 11/0492 . . {actuated by other systems, e.g. combustion engines}
- B66B 11/06 . . with hoisting rope or cable positively attached to a winding drum {([B66B 11/0075](#) takes precedence)}
- B66B 11/08 . . with hoisting rope or cable operated by frictional engagement with a winding drum or sheave {([B66B 11/008](#) takes precedence)}
- B66B 13/00** **Doors, gates, or other apparatus controlling access to, or exit from, cages or lift well landings (door fittings, locks [E05](#))**
- B66B 13/02 . . Door or gate operation (of general application [E05F](#))
- B66B 13/04 . . of swinging doors
- B66B 13/06 . . of sliding doors
- B66B 13/08 . . . guided for horizontal movement
- B66B 13/10 . . . by car or cage movement
- B66B 13/12 . . Arrangements for effecting simultaneous opening or closing of cage and landing doors
- B66B 13/125 . . . {electrical}

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|-------------|-------|---|
| B66B 13/14 | .. | Control systems or devices |
| B66B 13/143 | ... | {electrical} |
| B66B 13/146 | | {method or algorithm for controlling doors} |
| B66B 13/16 | ... | Door or gate locking devices controlled or primarily controlled by condition of cage, e.g. movement or position |
| B66B 13/165 | .... | {electrical} |
| B66B 13/18 | .... | without manually-operable devices for completing locking or unlocking of doors |
| B66B 13/185 | ..... | {electrical} |
| B66B 13/20 | ..... | Lock mechanisms actuated mechanically by abutments or projections on the cages |
| B66B 13/22 | . | Operation of door or gate contacts |
| B66B 13/24 | . | Safety devices in passenger lifts, not otherwise provided for, for preventing trapping of passengers |
| B66B 13/245 | .. | {mechanical} |
| B66B 13/26 | .. | between closing doors |
| B66B 13/28 | .. | between car or cage and wells |
| B66B 13/285 | ... | {Toe guards or apron devices} |
| B66B 13/30 | . | Constructional features of doors or gates (of interest apart from this application E06B) |
| B66B 13/301 | .. | {Details of door sills} |
| B66B 13/303 | .. | {Details of door panels} |
| B66B 13/305 | ... | {Slat doors for elevators} |
| B66B 13/306 | .. | {Details of door jambs} |
| B66B 13/308 | .. | {Details of seals and joints} |

Lifts in hoistways of mines

B66B 15/00 Main component parts of mining-hoist winding devices

| | | |
|------------|----|-----------------------------------|
| B66B 15/02 | . | Rope or cable carriers |
| B66B 15/04 | .. | Friction sheaves; "Koepe" pulleys |
| B66B 15/06 | .. | Drums |
| B66B 15/08 | . | Driving gear |

B66B 17/00 Hoistway equipment

| | | |
|------------|----|--|
| B66B 17/02 | . | mounted in head-frames (winding towers for mines E04H 12/26) |
| B66B 17/04 | . | Mining-hoist cars or cages |
| B66B 17/06 | .. | with tiltable platforms |
| B66B 17/08 | . | Mining skips |
| B66B 17/10 | .. | adapted for passenger transport |
| B66B 17/12 | . | Counterpoises |
| B66B 17/14 | . | Applications of loading and unloading equipment (of general application B65G) |
| B66B 17/16 | .. | for loading and unloading mining-hoist cars or cages |

- B66B 17/18 . . . Swinging bridges, e.g. for compensating for differences in level between car or cage and landing
- B66B 17/20 . . . by moving vehicles into, or out of, the cars or cages
- B66B 17/22 . . . Securing vehicles in cars or cages
- B66B 17/24 mounted on the car or cage
- B66B 17/26 . . for loading or unloading mining-hoist skips
- B66B 17/28 . . electrically controlled ([for elevators in general B66B 1/06](#))
- B66B 17/30 . . . for cars or cages
- B66B 17/32 . . . for skips
- B66B 17/34 . Safe lift clips; Keps
- B66B 17/36 . Gates or other apparatus controlling access to, or exit from, cars, cages, or hoistway landings

B66B 19/00**Mining-hoist operation**

- B66B 19/002 . {installing or exchanging guide rails ([details of rails B66B 7/02](#))}
- B66B 19/005 . {installing or exchanging the elevator drive}
- B66B 19/007 . {method for modernisation of elevators}
- B66B 19/02 . installing or exchanging ropes or cables
- B66B 19/04 . installing or removing mining-hoist cars, cages, or skips
- B66B 19/06 . Applications of signalling devices ([depth indicators B66B 3/02](#) ; [order telegraphs G08B](#))

B66B 20/00**Elevators not provided for in groups [B66B 1/00](#) to [B66B 19/00](#)****Escalators or moving walkways****B66B 21/00****Kinds or types of escalators or moving walkways**

- B66B 21/02 . Escalators
- B66B 21/025 . . {of variable speed type}
- B66B 21/04 . . Linear type
- B66B 21/06 . . Spiral type
- B66B 21/08 . . Paternoster type, i.e. the escalator being used simultaneously for climbing and descending ([B66B 21/06 takes precedence](#))
- B66B 21/10 . Moving walkways
- B66B 21/12 . . of variable speed type

B66B 23/00**Component parts of escalators or moving walkways**

- B66B 23/02 . Driving gear
- B66B 23/022 . . {with polygon effect reduction means}
- B66B 23/024 . . {Chains therefor}
- B66B 23/026 . . {with a drive or carrying sprocket wheel located at end portions}
- B66B 23/028 . . {with separate drive chain or belt that engages directly the carrying surface chain}

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| B66B 23/04 | .. for handrails |
| B66B 23/06 | ... with means synchronising the operation of the steps or the carrying belts and the handrails |
| B66B 23/08 | . Carrying surfaces |
| B66B 23/10 | .. Carrying belts |
| B66B 23/12 | .. Steps |
| B66B 23/14 | . Guiding means for carrying surfaces |
| B66B 2023/142 | .. {paternoster return type system} |
| B66B 23/145 | .. {Roller assemblies} |
| B66B 23/147 | .. {End portions, i.e. means for changing the direction of the carrying surface} |
| B66B 23/16 | . Means allowing tensioning of the endless member |
| B66B 23/18 | .. for carrying surfaces |
| B66B 23/20 | .. for handrails |
| B66B 23/22 | . Balustrades |
| B66B 23/225 | .. {Lighting systems therefor} |
| B66B 23/24 | .. Handrails (driving gear therefor B66B 23/02 ; tensioning means therefor B66B 23/16 ; preventing jamming thereof by foreign objects B66B 29/04 ; accessories therefor B66B 31/02) |
| B66B 23/26 | ... of variable speed type |
| B66B 25/00 | Control of escalators or moving walkways (walkways of variable speed type B66B 21/12 ; handrails of variable speed type B66B 23/26 ; of general application G05) |
| B66B 25/003 | . {Methods or algorithms therefor} |
| B66B 25/006 | . {Monitoring for maintenance or repair (for security reasons B66B 29/005)} |
| B66B 27/00 | Indicating operating conditions of escalators or moving walkways (of general application G08) |
| B66B 29/00 | Safety devices of escalators or moving walkways (walkways of variable speed type B66B 21/12 ; handrails of variable speed type B66B 23/26) |
| B66B 29/005 | . {Applications of security monitors} |
| B66B 29/02 | . responsive to, or preventing, jamming by foreign objects |
| B66B 29/04 | .. for balustrades or handrails |
| B66B 29/06 | .. Combplates |
| B66B 29/08 | . Means to facilitate passenger entry or exit (moving handrails B66B 23/24) |
| B66B 31/00 | Accessories for escalators, or moving walkways, e.g. for sterilising or cleaning (for safety B66B 29/00) |
| B66B 31/003 | . {for cleaning steps or pallets} |
| B66B 31/006 | . {for conveying hand carts, e.g. shopping carts (hand carts per se B62B 1/00 , B62B 3/00)} |
| B66B 31/02 | . for handrails |

B66B 2201/00**Aspects of control systems of elevators**

- B66B 2201/10 . Details with respect to the type of call input
- B66B 2201/101 .. Single call input
- B66B 2201/102 .. Up or down call input
- B66B 2201/103 .. Destination call input before entering the elevator car
- B66B 2201/104 .. Call input for a preferential elevator car or indicating a special request
- B66B 2201/20 . Details of the evaluation method for the allocation of a call to an elevator car
- B66B 2201/21 .. Primary evaluation criteria
- B66B 2201/211 .. Waiting time, i.e. response time
- B66B 2201/212 .. Travel time
- B66B 2201/213 ... where the number of stops is limited
- B66B 2201/214 .. Total time, i.e. arrival time
- B66B 2201/215 .. Transportation capacity
- B66B 2201/216 .. Energy consumption
- B66B 2201/22 .. Secondary evaluation criteria
- B66B 2201/221 .. Penalisation of transfers
- B66B 2201/222 .. Taking into account the number of passengers present in the elevator car to be allocated
- B66B 2201/223 .. Taking into account the separation of passengers or groups
- B66B 2201/224 .. Avoiding potential interference between elevator cars
- B66B 2201/225 .. Taking into account a certain departure interval of elevator cars from a specific floor, e.g. the ground floor
- B66B 2201/226 .. Taking into account the distribution of elevator cars within the elevator system, e.g. to prevent clustering of elevator cars
- B66B 2201/23 .. Other aspects of the evaluation method
- B66B 2201/231 .. Sequential evaluation of plurality of criteria
- B66B 2201/232 ... where the time needed for a passenger to arrive at the allocated elevator car from where the call is made is taken into account
- B66B 2201/233 .. Periodic re-allocation of call inputs
- B66B 2201/234 .. Taking into account uncertainty terms for predicted values, e.g. the predicted arrival time of an elevator car at the floor where a call is made
- B66B 2201/235 .. Taking into account predicted future events, e.g. predicted future call inputs
- B66B 2201/24 .. Control of empty elevator cars
- B66B 2201/241 .. Standby control
- B66B 2201/242 .. Parking control
- B66B 2201/243 .. Distribution of elevator cars, e.g. based on expected future need
- B66B 2201/30 . Details of the elevator system configuration
- B66B 2201/301 .. Shafts divided into zones
- B66B 2201/302 ... with variable boundaries
- B66B 2201/303 .. Express or shuttle elevators
- B66B 2201/304 .. Transit control

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| B66B 2201/305 | ... | with sky lobby |
| B66B 2201/306 | .. | Multi-deck elevator cars |
| B66B 2201/307 | .. | Tandem operation of multiple elevator cars in the same shaft |
| B66B 2201/308 | .. | Ganged elevator cars |
| B66B 2201/34 | . | details |
| B66B 2201/40 | . | Details of the change of control mode |
| B66B 2201/401 | .. | by time of the day |
| B66B 2201/402 | .. | by historical, statistical or predicted traffic data, e.g. by learning |
| B66B 2201/403 | .. | by real-time traffic data |
| B66B 2201/404 | .. | by cost function evaluation |
| B66B 2201/405 | .. | by input of special passenger or passenger group |
| B66B 2201/406 | .. | by input of human supervisor |
| B66B 2201/46 | .. | Switches or switchgear |
| B66B 2201/4607 | ... | Call registering systems |
| B66B 2201/4615 | .... | Wherein the destination is registered before boarding |
| B66B 2201/4623 | .... | Wherein the destination is registered after boarding |
| B66B 2201/463 | .... | Wherein the call is registered through physical contact with the elevator system |
| B66B 2201/4638 | .... | Wherein the call is registered without making physical contact with the elevator system |
| B66B 2201/4646 | ..... | using voice recognition |
| B66B 2201/4653 | .... | wherein the call is registered using portable devices |
| B66B 2201/4661 | .... | for priority users |
| B66B 2201/4669 | ..... | using passenger condition detectors |
| B66B 2201/4676 | .... | for checking authorization of the passengers |
| B66B 2201/4684 | .... | for preventing accidental or deliberate misuse |
| B66B 2201/4692 | .... | for payment for use |