

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

Guidance heading: Common features of elevators

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 }
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 (control of acceleration and deceleration G05B 19/407) }
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](#)

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) }

- 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 }
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 }

Guidance heading: Lifts in, or associated with, buildings

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 }
- 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 }

Guidance heading: 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](#)

Guidance heading: 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 }
- 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 .. N: 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
- 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