B66B

ELEVATORS; ESCALATORS OR MOVING WALKWAYS ([N: apparatus for raising or lowering persons on theatrical stages or the like A63J5/12]; funicular railbound systems with rigid ground-supported tracks and cable traction, e.g. cliff railways, B61B9/00; arrangements of ammunition handlers in vessels B63G3/00; 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 E04H6/12; hoists for feeding ammunition or projectiles to launching apparatus or to loading mechanisms F41A9/00)

Definition statement

This subclass/group covers:

Transporting apparatus of the types specified herein for people or discrete loads when used in conjunction with buildings, complexes of buildings, mines, or similar scale manmade structures or natural formations (e.g. caves).

Elevating apparatus (i.e., elevators or lifts) for shifting a discrete load (e.g., person(s), freight), in its entirety, a significant distance (e.g., at least the height of a normal floor of a building) from an entry level (e.g., landing) to a vertically spaced exit level along a shaft. To be proper for this subclass, the elevating apparatus must include:

- a support surface (e.g., elevator car/lift cage) that underlies the load and to which the load is confined during travel,
- rigid or semirigid means for contacting and limiting the travel of the load support surface to back and forth travel along its vertically extending shaft (including inclined ways), and
- drive means (e.g., fluid motors, manually operated cable) for transmitting to the load support surface the force necessary to shift the load between the levels or motion resisting means (e.g., cable linked counterweights) for slowing the travel of the load-supporting surface when moving from a higher load entry level to a lower load exit level.

Conveying apparatus (i.e., an assemblage of elements for moving a load along a predetermined path) for transporting pedestrians (i.e., escalators or moving walkways) from an entrance location to at least one horizontally spaced egress location. To be proper for this subclass, the conveying apparatus must:

- include an underlying surface, or a series of interlinked underlying surfaces, that is intended to normally support and carry individuals to

their egress location,

- be arranged or constructed either with a structure that specially adapts the conveying apparatus to the transporting of people or to facilitate potential alternative traversal of the surface(s) by the individuals carried thereon utilizing their standard mode of locomotion (e.g., stepping, walking, manually powering their wheelchair) whenever the underlying surface is idle or the pedestrian wishes to supplement their pace of travel over the underlying surface,

- include rigid or semirigid means for limiting the travel of the supporting surface to a fixed extending path along which individuals are carried when travelling between the horizontally spaced locations, and

- include drive means (e.g., endless chain) for transmitting to the underlying surface the force necessary to shift people between the horizontally spaced locations.

Components of the elevating or conveying apparatus when:

- no specific place for the components exists in another subclass and

- the components are limited to use with the above types of apparatus by a structural modification (e.g., escalator handrails or guards).

Ancillary devices (e.g., elevator call registration systems) for either the elevating or conveying apparatus which are:

- used exclusively with elevating or conveying apparatus and

- have their operations influencing or being influenced by the operation of the elevating or conveying apparatus.

Explanatory Notes or Graphics

(1) Note. Examples of special adaptations for escalators or moving walkways that facilitate the transport of pedestrians are:

- moving steps,

- conveyors combined with handrails,

- conveyors having serrated foot engaging surfaces,

- entrance or exit comb plates,

- passenger operated control of drive means, or

- special layouts facilitating walking along conveying apparatus' path.

(2) Note. Elevating or conveying apparatus otherwise proper for the definition which is either specially modified for use with, or combined with, apparatus for

doing work on or treating (e.g., machine tools, furnaces) the discrete loads being carried (e.g., tools shaping load during elevation) are covered in appropriate subclasses for this subject matter.

(3) Note. The load support surfaces of elevators or lifts are intended to support their loads only for a short period of time during handling. Surfaces intended to either support an article in a non-use storage location, support a useable machine or tool, or move one portion of a machine or article relative to another portion thereof are covered in appropriate subclasses for this subject matter.

(4) Note. The discrete load transported by the elevating apparatus of this subclass is either

- a human,
- an animal or other living creature,
- an article,
- unitized bulk material (e.g., cotton bail, ice block), or
- a group or mix of the above types of loads that is moved as a unit between levels.

References relevant to classification in this subclass

This subclass/group does not cover:

Life-saving devices used as an alternative to normal egress means (e.g., stairs) during rescue to lower persons in cages, bags, or similar supports from buildings or other structures	A62B 1/02
Amusement rides (e.g., roundabouts, and Ferris wheels) that are, or may include as a part of their structure, elevating or conveying apparatus	A63G
Arrangements of ammunition handlers in military-type sea vessels	B63G
Equipment for handling freight or for facilitating passenger embarkation or the like to aircraft	B64D 9/00
Hoists, lifts, or conveyers for loading or unloading in general	B65G

Hoists, lifts, or conveyers for storing articles, individually or in orderly arrangement, in warehouses or magazines	B65G 1/00
Braking or detent devices controlling normal movements of winding drums or barrels for capstans, hoist, or winches	B66D
Lifting or elevating devices for ships	E02C
Multi-vehicle garages provided with mechanical means for lifting vehicles	E04H 6/12
Hoists for feeding ammunition or projectiles to launching apparatus or to loading mechanisms for weapons	F41A 9/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Lifting and lowering devices for moving disabled persons or patients	A61G
Hoisting or lowering devices for coffins	A61G 19/00
Funicular rail-bound systems with rigid ground-supported tracks and cable traction (e.g., cliff railways)	B61B 9/00
Ski-lift, sleigh-lift, or the like trackless systems with only guided towing cables	B61B 11/00
Devices for lifting or lowering bulky or heavy goods for loading or unloading purposes	B66F

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the

meaning indicated:

Drive means	means for supplying motive force to an element to be moved which includes both force generating means (e.g., motor) and structural linkage (e.g., gears) needed to transmit the force from the generating means to the element.
Landing	an in situ floor within a structure (e.g., building) (a) that is located adjacent to an elevator shaft or the entrance or egress points of the conveying apparatus' path and (b) to or from which a load (e.g., passenger, cargo, pedestrian) transfers during the charging or discharging of the load-underlying support surface of an elevator or conveying apparatus.
Shaft	a long, narrow, in situ passageway within a structure (e.g., building, ship, mine) which defines the fixed path between the vertically spaced load entrance and exit levels traveled by the load-underlying support surface of an elevator.
dumbwaiter	a very small elevator or lift (e.g., normally the support is too small for a person) for moving housekeeping or food items between floors

Synonyms and Keywords

In patent documents the following words "elevator" and "lift" are often used as synonyms.

In patent documents the following words "shaft", "hoistway" , " hatchway", "well" and" lift well" are often used as synonyms.

B66B 1/00

Control systems of elevators in general (safety devices B66B5/00; controlling door or gate operation B66B13/00 ; systems of general application G05)

Definition statement

This subclass/group covers:

Apparatus, systems and processes concerned with the control of elevators and mining hoists.

Control systems for manual operation where the movements are under control of a human operator

Automated control systems for a single or a plurality of elevator cars including call assignment systems and methods

Speed control for elevator cars

Position and motion detection of elevator cars

Call input means

Switches and other means used by the elevator controller for controlling the motion of the elevator car that are mounted in the hoistway

References relevant to classification in this group

This subclass/group does not cover:

Control of escalators and moving walkways	B66B 25/00
Control of elevator doors	B66B 13/14
Monitoring elevator operation	B66B 5/0006

B66B 1/04

hydraulic

Definition statement

This subclass/group covers:

All control systems for hydraulically powered elevators without regulation

Control systems containing hydraulic elements

References relevant to classification in this group

This subclass/group does not cover:

Levelling systems for hydraulically driven elevators	B66B 1/405

B66B 1/14

with devices, e.g. push-buttons for indirect control of movements

Definition statement

This subclass/group covers:

Control systems where the control is no longer done by a human operator but where the movements of the elevator system are controlled by an electro-mechanical controller that reacts to calls given by the passengers

References relevant to classification in this group

This subclass/group does not cover:

Systems especially concerned with the allocation of a call to a car	B66B 1/24B02

B66B 1/16

with means for storing pulses controlling the movements of a single car or cage [N: (B66B1/2433 takes precedence)]

Definition statement

This subclass/group covers:

Control systems where the calls given by the passengers are stored by the controller and executed

References relevant to classification in this group

This subclass/group does not cover:

Systems especially concerned with the allocation of a call to a car	B66B 1/24B02

B66B 1/18

with means for storing pulses controlling the movements of several cars or cages [N: (B66B1/2458 takes precedence)]

Definition statement

This subclass/group covers:

Control systems where the calls given by the passengers are stored by the controller and executed and where the controller controls several cars at the same time.

References relevant to classification in this group

This subclass/group does not cover:

Systems especially concerned with the allocation of a call to a car for an elevator system with multiple cars in a single hoist way	B66B 1/24B04
Systems especially concerned with the allocation of a call to a car for an elevator system with multiple hoist ways each containing a single car or cage	B66B 1/24B06
Systems especially concerned with the allocation of a call to a car for an elevator system with multiple hoist ways having multiple cars in each hoist way	B66B 1/24B08
Systems especially concerned with the allocation of a call to a car for an elevator system with multiple cars wherein a lateral transfer of the car and or car frame is possible	B66B 1/2491

B66B 1/20

and for varying the manner of operation to suit particular traffic conditions [N: (B66B1/2466 takes precedence)]

Definition statement

This subclass/group covers:

Control systems where the way in which the calls given by the passengers are executed e.g. operating speed, permissible load is varied depending on the traffic density.

References relevant to classification in this group

This subclass/group does not cover:

Systems especially concerned with the allocation of a call to a car	B66B 1/2408

B66B 1/24

Control systems with regulation, i.e. with retroactive action, for influencing travelling speed, acceleration, or deceleration

Definition statement

This subclass/group covers:

Hydraulic valves for the control of hydraulic elevators

B66B 1/2408

[N: where the regulating action of speed, acceleration, or deceleration is of secondary importance, e.g. car distribution in a building, rush hour traffic mode]

Definition statement

This subclass/group covers:

Systems and methods for handling the assignment of calls to cars.

References relevant to classification in this group

This subclass/group does not cover:

Input devices for elevator calls	B66B 1/468
Varying door-open time	B66B 13/143

Informative references

Attention is drawn to the following places, which may be of interest for search:

Control of acceleration in general	G05B 19/416

Special rules of classification within this group

Besides the EC class in this group the documents must be provided with one

or more Indexing Codes covering aspects of the call allocation other than the elevator system layout.

When the call input system is of importance: L66B 201/24B101 to L66B 201/24B104

When the system uses a cost function for the allocation: L66B 201/24B201 to L66B 201/24B209

When the allocation is influenced by the building layout: L66B 201/24B301 to L66B 201/24B311

When the control system changes the system of allocation: L66B 201/24B401 to L66B 201/24B406

B66B 1/26

mechanical

Definition statement

This subclass/group covers:

Control system with regulation where the comparison between actual and calculated speed is done mechanically; The other parts of the control system can be electrical

References relevant to classification in this group

This subclass/group does not cover:

Overspeed detecting	B66B 5/04

Informative references

Attention is drawn to the following places, which may be of interest for search:

Excess flow valve general (pipe rupture valve)	F16K 17/20

B66B 1/28

electrical (detecting excessive speed B66B5/04); [N: (control of electrical motor H02P)]

Definition statement

This subclass/group covers:

Control systems with regulation where the signal treatment and /or control action is performed by electrical or electronical means.

Control action is effective on the driving gear e.g. through the use of power electronics.

Control action is effective on braking devices of which the braking charateristics can be electrically modified.

References relevant to classification in this group

This subclass/group does not cover:

Overspeed detecting	B66B 5/04

B66B 1/34

details [N: e.g. call counting devices, data transmission from car to control system, devices giving information to the control system]

Definition statement

This subclass/group covers:

Details of control systems or control related subjects not otherwise provided for.

Special rules of classification within this group

Besides the EC class the Indexing Code range B66B 1/3415 is available to classify specific aspects.

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 H02B1/015)

References relevant to classification in this group

This subclass/group does not cover:

Switches preventing overwinding	B66B 5/10

B66B 1/461

[N: characterised by their shape or profile]

Definition statement

This subclass/group covers:
Constructional features of call registering systems.

B66B 1/468

[N: Call registering systems]

Definition statement

This subclass/group covers:
All systems by which the user can pass his call to the elevator control.

Systems with user identification and or prevention of unauthorised use

Pay for use systems

References relevant to classification in this group

This subclass/group does not cover:

Communication between the input device and the controller	B66B 1/34
False call cancellation	B66B 1/2408
Multiplexing for position indicators	B66B 3/02

Informative references

Attention is drawn to the following places, which may be of interest for search:

Switchboards and panels general	H02B 1/00

Special rules of classification within this group

Beside the EC class at least two of the following Indexing Codes must be assigned: Code relating to the moment of destination input: B66B 2201/4615 or B66B 2201/4623

Code relating to on how the call is made : B66B 2201/463 to B66B 2201/4653

Code relating to the processing of information after the call has been made: B66B 2201/4661 to B66B 2201/4692

B66B 1/50

with operating or control mechanisms mounted in the car or cage or in the lift well or hoist way

Definition statement

This subclass/group covers:

Switches, optical, magnetic devices and activators therefore that enable the control system to obtain the position of the car and/or landing levels in the hoistway

References relevant to classification in this group

This subclass/group does not cover:

Fine levelling of the car at the landing	B66B 1/40
Preventing overwinding	B66B 5/10

B66B 1/52

Floor selectors

Definition statement

This subclass/group covers:

apparatus that represent a scaled model of the elevator hoistway with containing switches to stop the car at predetermined levels

B66B 3/00

Applications of devices for indicating or signalling operating conditions

Definition statement

This subclass/group covers:

Devices, systems and methods providing information to elevator passengers or potential elevator passengers. The information can concern elevator related in formation such as running status, waiting time, assigned car, car position

etc or non-elevator information like weather, publicity, internet, television etc.

The information can be transmitted by sound, light or tactile means

Data transmission systems between car and outside not related to the control of the elevator operation

References relevant to classification in this group

This subclass/group does not cover:

Indicating operation condition of escalators or moving walkways	B66B 27/00
Elevator monitoring	B66B 5/0006
Data communication for control purposes	B66B 1/34
Data communication for mining hoists	B66B 19/06
Telephone inside car	B66B 5/0006

B66B 5/00

Applications of checking, fault-correcting or safety devices in elevators

Definition statement

This subclass/group covers:

Apparatus, systems and processes concerned with verifying the operation of the elevator(s), limiting the damage in case of malfunctions , the prevention of unsafe operation conditions and the safety of elevator users and maintenance personnel. The verification of the operation includes :

monitoring of elevator performance (e.g. normal operation; waiting times).

monitoring related to maintenance and repair.

The verification can be remote or on site and can include actively testing of devices.

Limiting the damage in case of malfunctions includes:

overspeed detection

emergency brake apparatus

evacuation from blocked elevators

Buffers or dampers limiting damage in case of impact

The prevention of unsafe operating conditions includes:

measures taken in case of abnormal operation conditions dependent (e.g. redundant components) or independent from the system (e.g. fire, flooding, earthquake,..)

prevention of overloading

measures in case of rope or cable slack, overwinding or cable slip.

prevention of uncontrolled car movement.

References relevant to classification in this group

This subclass/group does not cover:

Safety devices for escalators or moving walkways	B66B 29/00
Safety devices related to elevator doors	B66B 13/00
Verification of ropes or cables	B66B 7/12
Access control	B66B 1/468

Informative references

Attention is drawn to the following places, which may be of interest for search:

Alarm systems in general	G08B
Automatic brakes in general	F16D 59/00

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Safety gear means	emergency brake device for car or counterweight

Speed governor means	device to detect overspeed of car or counterweight

Synonyms and Keywords

In patent documents the following expressions/words "safety gear", "safety catch" are often used as synonyms.

In patent documents the expression/word "speed limiter" is often used with the meaning "speed governor" .

B66B 5/0006

[N: Monitoring devices or performance analysers (B66B5/02 takes precedence)]

Definition statement

This subclass/group covers:

Monitoring arrangements for elevators, checking , registering or analysing normal and or abnormal operating conditions. Performance analysers.

References relevant to classification in this group

This subclass/group does not cover:

Device or system that effectuate a response following the detection of an abnormality	B66B 5/02

B66B 5/02

responsive to abnormal operating conditions

Definition statement

This subclass/group covers:

Apparatus, systems and processes concerned with abnormal operation conditions for elevators. The abnormal condition can be caused by a malfunction of the elevator system itself or arise due to external factors (e.g. power failure; earthquake;)

Apparatus to permit passengers to leave an elevator car in case of failure.

Apparatus for detecting excessive speed.

Apparatus for preventing overwinding.

Apparatus acting in case of rope or cable slack.

Apparatus acting in case of excessive loads.

Apparatus for braking or catching cars, cages or skips by operating between them and fixed guide elements or surfaces in hoistway or well.

References relevant to classification in this group

This subclass/group does not cover:

Buffer-stops for cars, cages, or skips	B66B 5/28
Brakes on driving machine	B66D 5/00
Devices limiting sway of ropes and compensation ropes	B66B 7/06
Earthquake resistant guide rail arrangements	B66B 7/02

B66B 5/021

[N: the abnormal operating conditions being independent of the system (alarm systems in general G08B)]

Definition statement

This subclass/group covers:

Apparatus, systems and processes limiting the impact of external influences on elevator operation. The external influence can have a natural cause (e.g. earthquake, strong winds, flooding, lightning) , be caused by accidents (e.g. fire, smoke) or following human (mis)behaviour (e.g. criminal acts, forced doors, vandalism). Use of elevators for fire fighting and evacuation in case of fires.

References relevant to classification in this group

This subclass/group does not cover:

Verifying identity and authorisation of elevator users	B66B 1/468
Constructional features of doors	B66B 13/30

B66B 5/027

[N: 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]

Definition statement

This subclass/group covers:

Apparatus, systems and processes enabling the passengers to escape from the car in case of failure. Devices facilitating the liberation by rescue services.

References relevant to classification in this group

This subclass/group does not cover:

Devices for lowering the car in case of power failure for hydraulic lifts	B66B 5/028
Means for passengers to contact rescue services or monitoring centre or vice versa.	B66B 5/00
Systems preventing passengers to open the car door when car is stopped between landings	B66B 13/00

B66B 5/028

[N: Safety devices separate from control system in case of power failure, for hydraulical lifts, e.g. braking the hydraulic jack (B66B5/16 takes precedence)]

Definition statement

This subclass/group covers:

Safety devices exclusively used in hydraulic elevators, the devices can be integrated in the control system.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Excess flow valve general (pipe rupture valve)l	F16K 17/20

B66B 5/04

for detecting excessive speed

Definition statement

This subclass/group covers:

Apparatus for detecting excessive speed of elevator car and/or counterweight, upon detection emergency braking is initiated.

Mechanical speed governors;

Governor cable and tensioning means for speed governor cable;

Testing methods for speed governors;

Electrical and electronic speed governors.

Other operating mechanism for speed detecting (e.g. hydraulic; magnetic).

Adaptations of governors to prevent unintended car movements.

References relevant to classification in this group

This subclass/group does not cover:

Speed measurement for normal elevator control	B66B 1/3492

Synonyms and Keywords

In patent documents the following expressions/words "governor" and "limiter" are often used as synonyms.

B66B 5/044

[N: Overspeed governors]

Definition statement

This subclass/group covers:

Mechanical speed governors used for detection of excessive speed; constructional detail thereof.

B66B 5/048

[N: Testing of speed governor]

Definition statement

This subclass/group covers:

Methods and apparatus for testing devices detecting excessive speed

B66B 5/06

electrical

Definition statement

This subclass/group covers:

Apparatus for detecting excessive speed of elevators and counterweights where the detection is done electrically, electronically or opto-electronically.

B66B 5/08

for preventing overwinding

Definition statement

This subclass/group covers:

Apparatus preventing that the elevator car is hauled so high that it will contact the overhead structure. Apparatus to prevent that hauling cable breaks; Apparatus preventing the fall of the car in case of detached cable due to overwinding.

B66B 5/10

electrical

Definition statement

This subclass/group covers:

Apparatus preventing that the elevator car is hauled so high that it will contact the overhead structure . The apparatus detects the abnormallity electrically or electronically and/or corrects the elevator behaviour electrically or electronically . Terminal slowdown systems.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Constructional details of limit switches for elevators	B66B 1/48

B66B 5/12

in case of rope or cable slack

Definition statement

This subclass/group covers:

Apparatus preventing that the elevator car is operated in case where one or more ropes or cables are no longer taut (e.g. through breaking; car or counterweight rests on an obstacle in the hoistway)

B66B 5/125

[N: Electrical]

Definition statement

This subclass/group covers:

Apparatus preventing that the elevator car is operated in the case where one or more ropes or cables are no longer taut (e.g. through breaking; car or counterweight rests on an obstacle in the hoistway) and the detection is done electrically or electronically.

B66B 5/14

in the case of excessive load

Definition statement

This subclass/group covers:

Apparatus preventing that the elevator car is operated in the case where the car is overloaded. The apparatus normally has one switching level.

References relevant to classification in this group

This subclass/group does not cover:

Load measuring device for normal elevator operation	B66B 1/3476

B66B 5/145

[N: electrical]

Definition statement

This subclass/group covers:

Apparatus preventing that the elevator car is operated in the case where the car is overloaded. The apparatus normally has one switching level.

The detection is done electrically or electronically.

B66B 5/16

Braking or catch devices operating between cars, cages, skips and fixed guide elements or surfaces in hoistway or well

Definition statement

This subclass/group covers:

Apparatus retarding and stopping the car or counterweight by interacting with the hoistway or elements mounted therein.

Apparatus that retards and stops the hoisting ropes suspending the car and/or counterweight.

The apparatus can have a working based on friction or can be positively acting.

References relevant to classification in this group

This subclass/group does not cover:

Braking of the driving machine for normal operation	B66D 5/00

Synonyms and Keywords

In patent documents the following expressions/words "safety gear", "safety catch" are often used as synonyms.

B66B 5/18

and applying frictional retarding forces

Definition statement

This subclass/group covers:

Safety gear that works without a self reinforcing layout;

Mechanisms that initiate the braking action of all types.

B66B 5/185

[N: by acting on main ropes or main cables]

Definition statement

This subclass/group covers:

Apparatus where the frictional retarding forces are transmitted to the elevator main ropes.

B66B 5/20

By means of rotatable eccentrically-mounted members (B66B5/24 takes precedence)

Definition statement

This subclass/group covers:

Apparatus where the frictional retarding forces are generated by contacting an eccentric member with fixed guide members or surfaces in the hoistway or well. The eccentricity produces a self reinforcing effect.

References relevant to classification in this group

This subclass/group does not cover:

Safety gears that work on guide ropes or guide cables	B66B 5/24

B66B 5/22

By means of linearly-movable wedges (B66B5/24 takes precedence)

Definition statement

This subclass/group covers:

Apparatus where the frictional retarding forces are generated by contacting an wedge member with fixed guide members or surfaces in the hoistway or well. This group also covers round disks or balls that are wedged between a fixed surface in the hoistway and a tapered housing on the car or counterweight.

References relevant to classification in this group

This subclass/group does not cover:

Safety gears that work on guide ropes	B66B 5/24

or guide cables	

B66B 5/24

By acting on guide ropes or guide cables

Definition statement

This subclass/group covers:

Apparatus where the frictional retarding forces are applied to guide ropes or guide cables, so the car and /or counterweight is guided by ropes or cable. The means of generating the retarding forces can be any of the ones explained in B66B 5/18 to B66B 5/22

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cableway/ropeway	B61H 9/02

B66B 5/26

Positively acting devices e.g. latches, knives

Definition statement

This subclass/group covers:

Apparatus where, when applied a material interconnection (other then friction) between the brake apparatus and the fixed guide members or surfaces in the hoistway or well comes into existence.

B66B 5/28

Buffer-stops for cars, cages, or skips

Definition statement

This subclass/group covers:

Passive buffers placed in the bottom or top area of the shaft or hoistway or on the car or counterweight. Details of their construction and arrangement in the hoistway. Testing of the operational fitness of the buffer.

References relevant to classification in this group

This subclass/group does not cover:

Deployable device to create a safety space without any buffering action	B66B 5/0081

Informative references

Attention is drawn to the following places, which may be of interest for search:

Impact dampers on vehicles	B60R 19/00
General damping devices	F16F 7/00

Synonyms and Keywords

In patent documents the following expressions/words "buffer", "bumper", "damper" and "shock absorber" are often used as synonyms.

B66B 5/282

[N: structure thereof]

Definition statement

This subclass/group covers:

Constructional features of buffer-stops related to their workings and installation.

References relevant to classification in this group

This subclass/group does not cover:

The additional constructional features when buffer is used to create a temporary safety space	B66B 5/288

B66B 5/284

[N: Mounted on cars or counterweights]

Definition statement

This subclass/group covers:

Buffers mounted on cars or counterweights with the purpose of limiting the impact in case of a collision with the extremities of the shaft or hoistway.

References relevant to classification in this group

This subclass/group does not cover:

Buffers mounted on cars or counterweights with the purpose of limiting the impact of a collision between two cars or two counterweights	B66B 5/286

B66B 5/286

[N: limiting damage in case of collision between two cars or two counterweights]

Definition statement

This subclass/group covers:

Buffers mounted on cars or counterweights with the purpose of limiting the impact of a collision between two cars or two counterweights.

B66B 5/288

[N: with maintenance features (if not incorporated in the buffer B66B5/0087)]

Definition statement

This subclass/group covers:

Adaptations to buffers facilitating their maintenance and verification of fitness.

Adaptations to buffers so they can be used to create a temporary safety space.

B66B 7/00

Other common features of elevators;

Definition statement

This subclass/group covers:

Guideways; guides for elevators; Riding means for riding guideways or guides; structural details of ropes or cables which are adapted for elevator use including non-circular and coated elongated elements. Checking, cleaning and

lubricating apparatus for guideways and ropes or cables.

References relevant to classification in this group

This subclass/group does not cover:

Constructional features of hoistways	B66B 11/00
Elevator cars or cages	B66B 11/02
Driving gear for elevators	B66B 11/04
Doors or gates for elevators	B66B 13/00
Counterpoises or counter weights	B66B 17/12

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Guide rope means	a guide means composed of a non rigid elongated member destined at guiding a car or counterweight

Synonyms and Keywords

In patent documents the following expressions/words "guideway", "guide rail" and "guide" are often used as synonyms.

In patent documents the following expressions/words "rope" and "cable" are often used as synonyms.

B66B 7/02

Guideways; guides; (arrangements in mine shafts E21D7/02)

Definition statement

This subclass/group covers:

Fixed continuous structures installed along or constructional features of the hoistway adapted to guide the car and/or counterweight along a fixed path in the hoistway. Guideways; guides for elevators; Guide ropes

References relevant to classification in this group

This subclass/group does not cover:

Arrangements of guideways in cranes	B66C 7/08
Guide rails for lifts associated with stairways	B66B 9/0846
The installation of guideways	B66B 19/002
Guide rails for carrying surfaces of escalators and moving walkways	B66B 23/14
Self-supporting constructions of hoistways containing the guide rails	E04F 17/005
Production of guide rails	B21D 3/10

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fixations in general	E01B 9/00

B66B 7/04

[N: Riding means, e.g.] Shoes, Rollers, [N: between car and guiding means, e.g. rails, ropes (rollers adapted to match the shape of a special guiding means B66B7/02; vibration attenuation systems acting between car and its supporting frame B66B11/026)]

Definition statement

This subclass/group covers:

Riding means in general located between the car or counterweight and the guideways or guides. The riding means are intended to keep the car and or counterweight in a defined geometrical relationship with the guides, to reduce friction and attenuate shocks and vibrations Rollers, shoes located between the car or counterweight and the guideways or guides.

References relevant to classification in this group

This subclass/group does not cover:

Vibration attenuation systems between the car and its supporting frame	B66B 11/026
Roller assemblies for carrying surfaces of escalators and moving walkways	B66B 23/145

B66B 7/06

Arrangements of ropes or cables

Definition statement

This subclass/group covers:

Elongated flexible members suited for withstanding the suspension forces on cars and/or counterweights and/or transmitting the tractive force to car and or counterweight.

Elongated flexible members compensating the weight of the suspension and/or tractive force transmitting members.

Elongated flexible members for power and or signal supply to the car and/or counterweight.

Accessories for the elongated members

cable stabilisers

protecting devices for ropes

Relationship between large subject matter areas

Cables in general (construction, production,..) D07B; Transmission cables F16G 9/00; Transmission chains F16G 13/00

References relevant to classification in this group

This subclass/group does not cover:

Physical layout of the rope or cable within the hoistway to obtain a desired technical effect (roping)	B66B 11/008

B66B 7/062

[N: Belts]

Definition statement

This subclass/group covers:

Elongated members of non-circular cross-section used for the suspension or transmission of tractive force.

References relevant to classification in this group

This subclass/group does not cover:

Belts used for weight compensation	B66B 7/068
Belts used for power and signal supply	B66B 7/064
Chains	B66B 7/066

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rubber field in general	B29D 29/00 to B29D 29/106
V-belts in general	F16G 5/00 to F16G 5/24

B66B 7/064

[N: Power supply or signal cables]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrical connectors	H01R

B66B 7/068

[N: Cable weight compensating devices]

Definition statement

This subclass/group covers:
The elongated member itself.

Tensioners and dampers for the elongated member

B66B 7/08

for connection to the cars or cages, e.g. couplings

Definition statement

This subclass/group covers:
connections to the cars, counterweights and fixed structures in the hoistway or machine room.

Measures to stop transmission of vibration between cable and car or counterweight

Informative references

Attention is drawn to the following places, which may be of interest for search:

General means for fixing cables	F16G 11/00

B66B 7/085

[N: Belt termination devices]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Termination devices for straps	B66C 1/18
Load securing devices	B60P 7/08

B66B 7/10

for equalising rope or cable tension

Definition statement

This subclass/group covers:
Devices taking up the difference in tension between several cables.

Devices taking up the difference in length between several cables. the devices are mounted between the cable termination and the cage, counterweight or drum.

B66B 7/12

Checking, lubricating, or cleaning means for ropes, cable or guides

Definition statement

This subclass/group covers:

flaw detectors for cables ropes and belts.

lubricating means for ropes cables and guides

cleaning means for guides ropes and cables

References relevant to classification in this group

This subclass/group does not cover:

Testing of power transmitting endless elements	G01M 13/023

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rope inspection in FICLA	B66B 5/02&C

B66B 7/12B2C

[N: By means of analysing magnetic variables]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Magnetic flaw detection in general	G01N 27/83

B66B 7/123

[N: By means of optical devices]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Optical flaw detection in moving materials in general	G01N 21/89

B66B 7/1246

[N: specially adapted for guides]

Definition statement

This subclass/group covers:

Guide checking device for installed guide rails

References relevant to classification in this group

This subclass/group does not cover:

Installation of guide rails	B66B 19/002

B66B 7/12C

Lubricating means

Informative references

Attention is drawn to the following places, which may be of interest for search:

Lubrication of ropeways	B61B 12/08
Lubricating in general	F16G 9/00

B66B 9/00

Kind or types of lifts in, or associated with buildings or other structures (characterised by control systems B66B1/00; apparatus for raising or lowering persons on stages of theatres A63J5/12)

Definition statement

This subclass/group covers:

lift or elevator concepts in which either the function of the elevator or the components that are used and/or the way components are arranged differs from traditionally traction elevators.

Lifts with a characterising driving mechanism

Lifts with multiple cars

Lifts with inclined hoistways

Transportable lifts that can be shifted from one part of a building to another or to another building

References relevant to classification in this group

This subclass/group does not cover:

Lifts facilitating access to vehicles for disabled persons	A61G 3/02
Devices especially for evacuation of high-rise buildings	A62B 1/02
Space elevators	B64G 1/00
Lifts for bulky goods	B66F,C,D
Lifting tables, platform, scissor tables	B66F 7/00
Vehicle lifts in parking garages	E04H 6/14
Lifts on ladders	E06C 7/12

Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices used for window cleaning	A47L 1/02
Devices used for facade cleaning	E04G 23/002
Elevator system with second cabin instead of counterweight	B66B 2009/006

B66B 9/027

[N: Rope climbing devices]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Apparatus for mountaineering	A63B 29/00
Suspended scaffolding platforms	E04G 3/30
Self acting brakes	F16D 59/00

B66B 9/04

actuated pneumatically or hydraulically (platforms for lifting or lowering through short distances B66F7/00)

Definition statement

This subclass/group covers:
constructional aspects of the as such driven elevators

Friction enhancing systems on pulleys

References relevant to classification in this group

This subclass/group does not cover:

Control of hydraulic elevators	B66B 1/04; B66B 1/24
Hydraulic pistons	F15B 15/00

B66B 9/08

associated with stairways e.g. for transporting disabled persons [N: (facilitating access of invalids to vehicles A61G3/02)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Balustrades for stairways etc.	E04F 11/18

B66B 9/187

with a liftway specially adapted for temporary connection to a building or other structure (B66B9/193 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

With inclined liftways	B66B 9/193

B66B 11/00

Main component parts of lifts in or associated with buildings or other structures

Definition statement

This subclass/group covers:
Constructional features of hoistways

elevators characterised by the location of the driving gear and or controller

Loading/unloading equipment for lifts associated with buildings

Roping

Elevator cabin, cars, cages or load supporting structures

Driving gear for elevators

References relevant to classification in this group

This subclass/group does not cover:

Installation of elevators	B66B 19/00
Hoistways, lift wells, lift shafts,	E04F 17/005, E04B 1/34

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Roping	The spatial distribution of the traction and/or suspension means throughout the elevator installation. The distribution is changed in order to obtain e.g. a different speed ratio, space saving in the hoistway, more stable suspension of the car

B66B 11/0246

N: Maintenance features (devices facilitating maintenance in general B66B5/0087)]

Definition statement

This subclass/group covers:

features forming an integral part of the elevator car which enable or facilitate the maintenance tasks of service personnel

B66B 11/06

with hoisting rope or cable positively attached to a winding drum [N: B66B11/0075 takes precedence]

References relevant to classification in this group

This subclass/group does not cover:

Roping aspect when such a drive is used	B66B 11/0075

B66B 11/08

with hoisting rope or cable operated by frictional engagement with a winding drum or sheave [N: B66B11/008 takes precedence]

References relevant to classification in this group

This subclass/group does not cover:

Roping aspect when such a drive is used	B66B 11/008

B66B 13/00

Doors, gates, or other apparatus controlling access to, or exit from, cages or lift well landings (door fittings, locks E05)

Definition statement

This subclass/group covers:

Doors and gates for elevator cages and landings.

Door locks specially adapted for use in elevator doors

Mechanisms and controllers for (semi-) automatic operation of the doors.

Door contacts

Safety devices related to elevator doors

Relationship between large subject matter areas

Doors of general application E05F

References relevant to classification in this group

This subclass/group does not cover:

General door fittings	E05

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Landing door means	Stationary door closing the entrance to the lift well
Car door	Door attached to the elevator car or cabin which closes the entrance thereof

B66B 13/02

Door or gates operation (of general application E05F)

Definition statement

This subclass/group covers:
The complete door mechanism if not of the door types mentioned below.

Constructional details : motor,brake, clutch, damper, test device

Informative references

Attention is drawn to the following places, which may be of interest for search:

Counterweight for door in general	E05D 13/10

B66B 13/06

of sliding doors

Definition statement

This subclass/group covers:
Vertically sliding elevator doors or gates.

B66B 13/10

by car or cage movement

Definition statement

This subclass/group covers:
Sliding elevator doors or gates where the operation thereof is effected through the movement of the car.

References relevant to classification in this group

This subclass/group does not cover:

Unlocking the door by the car	B66B 13/20

B66B 13/12

arrangements for effecting simultaneous opening or closing of cage and landing doors.

Definition statement

This subclass/group covers:

Arrangements and apparatus that effect the simultanous movement in opening and closing of the cage and landing doors when the cage is situated at a landing. The devices often perform an unlocking action as well. Their operating principle can be mechanical, electrical or electromechanical or hydraulic .

B66B 13/14

Control systems or devices

Definition statement

This subclass/group covers:

Systems, methods and apparatus for controlling the operation of elevator doors.

References relevant to classification in this group

This subclass/group does not cover:

Locking and unlocking devices for elevator doors	B66B 13/16 to B66B 13/20
Safety devices preventing passengers getting trapped between closing doors	B66B 13/26

B66B 13/16

Door or gate locking devices controlled or primarily controlled by condition of the cage e.g. movement or position

References relevant to classification in this group

This subclass/group does not cover:

Locks for special uses	F16P 3/08

B66B 13/22

Operation of door or gate contacts

Definition statement

This subclass/group covers:

Safety contacts to check if door is correctly locked

The circuit containing such contacts (safety chain or safety line)

Checking and testing systems for the circuit

Informative references

Attention is drawn to the following places, which may be of interest for search:

Safety contacts associated with closing members in general	H01H 3/00

B66B 13/24

Safety devices in passenger lifts, not otherwise provided for, for preventing trapping of passengers

Definition statement

This subclass/group covers:
Devices to avoid lock picking

Devices for emergency unlocking and/or opening of car and landing doors

Systems detecting unauthorised access to the hoistway

Systems to detect car position in emergency if associated with the doors

Systems avoiding passengers getting trapped between doors

Systems avoiding passengers getting trapped between car and hoist way

References relevant to classification in this group

This subclass/group does not cover:

Adaptations of car door locks preventing opening between floors	B66B 13/12

Informative references

Attention is drawn to the following places, which may be of interest for search:

Proximity switches in general	H03K 17/945

B66B 13/26

between closing doors

Definition statement

This subclass/group covers:

Devices preventing that passengers get caught between closing doors or door panels and door frame

Devices preventing that members of passengers their clothing or luggage gets drawn in between door panels an doorframe or car walls

B66B 13/28

between car or cage and wells

Definition statement

This subclass/group covers:

Devices preventing that passengers or freight get caught between the car and the hoistway in cars without car doors

movable car sills; photo electrical protection of the open car entrance

Lining to smoothen the hoistway wall in front of the car entrance

References relevant to classification in this group

This subclass/group does not cover:

Car doors	B66B 13/00

B66B 13/285

[N: toe guard or apron device]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Toe guard in FICLA	B66B 11/02&Z

B66B 13/30

constructional features of doors or gates (of interest apart from this application E06B)

References relevant to classification in this group

This subclass/group does not cover:

Swinging bridges between car floor and landing	B66B 17/18
Doors for mining lifts	B66B 17/36
Doors in general	E06B

B66B 13/306

[N: details of door jambs or posts]

Informative references

Attention is drawn to the following places, which may be of interest for search:

For controller built in door frame	B66B 1/34&C

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Three way frame	Japanese expression for door post

B66B 13/308

[N: details of seals and joints]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Seals in general	F16J 15/00 to F16J 15/56

B66B 15/00

Main component parts of mining-hoist winding devices

References relevant to classification in this group

This subclass/group does not cover:

Cable brakes	B66B 5/185
Hoist brakes general	B66D 5/16
Winding towers for mines	E04H 12/26

B66B 15/02

Rope or cable carriers

Definition statement

This subclass/group covers:

Drums and pulleys both for mine- hoist and elevators in buildings.

B66B 15/04

Friction sheaves: "Koepe" Pulleys

Definition statement

This subclass/group covers:

Pulleys that transmit hoisting force to the hoisting members by means of friction.

Friction enhancing systems on pulleys

Informative references

Attention is drawn to the following places, which may be of interest for search:

Pulleys in general	F16H 55/32
Special friction	F16H 55/50

B66B 15/06

Drums

Definition statement

This subclass/group covers:

The motive force on the hoisting member is generated by winding/unwinding the hoisting member on a drum

B66B 15/08

Driving gear

Definition statement

This subclass/group covers:

The motive force generating means to power the rope and cable carriers for mine lifts

Roping systems used in mines

B66B 17/00

Hoistway equipment

Definition statement

This subclass/group covers:

- Equipment installed and used in mining hoistways
- Mining hoist cages
- Mining skips
- Counterweights for both mining and elevators installed in buildings

References relevant to classification in this group

This subclass/group does not cover:

Winding towers for mines	E04H 12/26

B66B 17/06

with tiltable platforms

Definition statement

This subclass/group covers:
e.g. to transport long materials

B66B 17/08

Mining skips

References relevant to classification in this group

This subclass/group does not cover:

Skips used for inclined or horizontal transport	B65G 63/02

B66B 17/12

Counterpoises

Definition statement

This subclass/group covers:
counterpoises used in mine lifts

counterpoises used in lifts associated with buildings

constructural features of counterpoise

filler weights

Synonyms and Keywords

In patent documents the following expressions/words "counterweight", "counterpoises", balance weight" and "compensation weight" are often used as synonyms.

B66B 17/14

Applications of loading and unloading equipment (of general application B65G)

References relevant to classification in this group

This subclass/group does not cover:

Loading and unloading in general	B65G
Loading and unloading of lifts associated with buildings	B66B 11/006

B66B 17/34

Safe lift clips; keps

Definition statement

This subclass/group covers:

Devices used for locking the car or cage to the hoist way or guide rails during loading and unloading. The devices are self releasing so that operations can continue after loading or unloading. The devices can have a double function as safety break which then is activated during an emergency

B66B 19/00

Mining-hoist operation equipment

Definition statement

This subclass/group covers:

Installation of mining hoists

installation of elevator associated with buildings

design of elevators associated with buildings

modernisation of elevators

installing and exchanging guide rails and ropes or cables both in mines and elevators in buildings

Method for training service staff

safety devices used during installation only

References relevant to classification in this group

This subclass/group does not cover:

Scaffolding in the hoistway	E04G 3/18

B66B 20/00

Elevators not provided for in groups B66B1/00-B66B19/00

Definition statement

This subclass/group covers:
This symbol is not to be used.

B66B 21/00

Kinds or types of escalators or moving walkways

Definition statement

This subclass/group covers:
principals and concepts

installation of escalators and moving walkways in or against a building

References relevant to classification in this group

This subclass/group does not cover:

Tools for installation of escalators and moving walkways	B66B 31/00
Stairways transforming in to an elevator or lifting platform	B66B 9/0869

Informative references

Attention is drawn to the following places, which may be of interest for search:

Skilifts	B61B
General continuous transporters with variable speed	B61K 1/00;B65G 47/04
Conveyers for articles	B65G

B66B 23/00

Component parts of escalators or moving walkways

Definition statement

This subclass/group covers:
Frame and frame structure

Driving gear for the passenger carrying surface

Driving gear for the handrails

Carrying surfaces

Guiding means for carrying surfaces

tensioning means for carrying surfaces

tensioning means for handrails

Balustrades

handrails

References relevant to classification in this group

This subclass/group does not cover:

Frame structures for general conveyers	B65G 21/00 to B65G 21/22

B66B 23/02

Driving gear

Informative references

Attention is drawn to the following places, which may be of interest for search:

Gearbox in general	F16H 1/14

B66B 23/10

carrying belts

Definition statement

This subclass/group covers:

continuous carrying surfaces for horizontal or slightly inclined transport of passengers

carrying surface composed of interlinked pallets having a single side exposed to the passenger for horizontal or slightly inclined transport of passengers

B66B 23/12

Steps

Definition statement

This subclass/group covers:
carrying surfaces having a tread and riser used in escalators

constructional details of steps

production methods of steps

advertising on steps

Informative references

Attention is drawn to the following places, which may be of interest for search:

Advertising on walls or similar surfaces in general	G09F 19/22

B66B 23/14

guiding means for carrying surfaces

Definition statement

This subclass/group covers:
for steps and pallets

B66B 23/145

[N: roller assemblies]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roller attached to moving chains or belts in general	B65G 39/20

B66B 23/16

means allowing tensioning of the endless member

Informative references

Attention is drawn to the following places, which may be of interest for search:

Belt or chain tensioning means in general	B65G 23/44

B66B 23/22

Balustrades

Definition statement

This subclass/group covers:
constructional details of balustrades

Guiding means for the handrail

Handrails

B66B 23/24

Handrails (driving gear therefor B66B23/02; tensioning means therefor B66B23/16; preventing jamming thereof by foreign objects B66B29/04; accessories therefor B66B31/02)

Definition statement

This subclass/group covers:
shape, kind and materials adapted for handrails

advertising on handrails

References relevant to classification in this group

This subclass/group does not cover:

Fabrication of handrails	B29C 47/00
Fiber reinforcement	B29C 70/00

B66B 25/00

Control of escalators or moving walkways (walkways of variable speed type B66B21/12; handrails of variable speed type B66B23/26 ; of general application G05)

Definition statement

This subclass/group covers:

Starting, reversing, slowing down in relation to passenger demand and special needs for passengers

control system configuration

monitoring of escalators for maintenance or repair

References relevant to classification in this group

This subclass/group does not cover:

Monitoring for safety 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 B66B21/12; handrails of variable speed type B66B23/26)

B66B 31/00

Accessories for escalators, or moving walkways, e.g. for sterilising or cleaning (for safety B66B29/00)

Definition statement

This subclass/group covers:

protection structures for elevators against fire, rain, snow other external influences

tools for maintenance and installation of escalators and moving walkways

adaptations for conveying hand carts e.g. shopping or airport carts

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cleaning in general	A47L 11/00

Japanese classification	B66B 31/00&F /fi
Hand carts per se	B62B 1/00; B62B 3/00