

SECTION E — FIXED CONSTRUCTIONS

E05 LOCKS; KEYS; WINDOW OR DOOR FITTINGS; SAFES

Note(s)

In this class, the following terms are used with the meanings indicated:

- "wing" is a general term for swingable, slidable, or otherwise movable doors or windows. This term also includes other movable structures such as drawers, lids of chests, car boots, or car bonnets, to which the operating, mounting, latching, or locking means covered by this class may be applied;
- "frame" means any member to which a wing may be held by a fastening device. It does not include a framework forming part of the wing, but it may be another wing;
- "lock" means primarily a device for releasing or securing any member, which requires a key or a permutation mechanism for release. In groups E05B 1/00-E05B 9/00, E05B 13/00-E05B 17/00, E05B 39/00-E05B 47/00, E05B 51/00, E05B 53/00, E05B 63/00 and E05B 65/00 however, the term "lock" may include other fastening devices;
- "bolt" means a sliding, pivoted, or otherwise movable member such as is normally carried by a door to hold it shut by engagement with a keeper on the frame. It may be operated by hand directly or through mechanism or by a key; it may be a latch (see below);
- "latch" means a bolt arranged to be moved to the releasing position against the force of a spring, or some other returning force, when a wing meets the frame on closing, so that it does not have to be operated by hand to secure the wing, but only to open it;
- "hasp" means a member hinged to the frame or wing so that it can be moved towards the face of the wing or frame and secured thereto, e.g. by a turn-button, by a padlock and staple.

E05B LOCKS; ACCESSORIES THEREFOR; HANDCUFFS

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Details or accessories of locks or the like; keys

1/00	Knobs or handles for wings (for furniture A47B 95/02); Knobs, handles, or press buttons for locks or latches on wings (E05B 5/00, E05B 7/00 take precedence)	3/06	• by means arranged in or on the rose
1/02	• of solid material	3/08	• Fastening the spindle to the follower
1/04	• with inner rigid member and outer cover or covers	3/10	• by a bipartite or cleft spindle in the follower or in the handle shank
1/06	• of sheet material	5/00	Handles completely let into the surface of the wing
		5/02	• able to be turned outwards before operation
		5/04	• able to be shifted parallel to the wing after being pulled out
3/00	Fastening handles to lock or latch parts	7/00	Handles pivoted about an axis parallel to the wing (E05B 5/00 takes precedence)
3/02	• Fastening handles to the spindle by pinning or riveting	9/00	Lock or latch-mechanism casings mountable on or in wings (padlock casings E05B 67/02)
3/04	• Fastening the handle shank to the spindle by screws, springs, or snap bolts	9/02	• of latch-bolt locks

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- 9/04 • of cylinder locks
 - 9/06 • Fastening together the parts of casings
 - 9/08 • Fastening the casings of latch-bolt locks or cylinder locks to the wing
 - 9/10 • Coupling devices for the two halves of double cylinder locks
- 11/00 Devices preventing keys from being removed from the lock**
- 11/02 • before the wing is locked
 - 11/04 • before the wing is closed
 - 11/06 • for catching skeleton or incorrect keys
- 13/00 Devices preventing the key or the handle or both from being used**
- 13/02 • shaped as sectors of escutcheons, arranged in the keyhole
 - 13/04 • shaped as fork-like implements grasping and fixing the key
 - 13/06 • shaped as bolt detents arranged in the path of motion of the key bit
 - 13/08 • formed by longitudinal bolt or cross-bar connecting the handle with a stationary lock part or fitting
 - 13/10 • formed by a lock arranged in the handle
- 15/00 Other details of locks; Parts for engagement by bolts of fastening devices (fastening devices for wings other than locks or associated with locks E05C)**
- 15/02 • Striking-plates; Keepers; Bolt staples; Escutcheons
 - 15/04 • Spring arrangements in locks
 - 15/06 • Lock wards
 - 15/08 • Key guides; Key pins
 - 15/10 • Bolts of locks or night latches
 - 15/12 • Pins or detents for locking bolts
 - 15/14 • Tumblers
 - 15/16 • Use of special materials for parts of locks (for handles E05B 1/00)
- 17/00 Accessories in connection with locks (locks with indicating or timing devices E05B 39/00-E05B 45/00; buffers E05F 5/00; means for preventing rattling of wings E05F 7/04; means for taking the weight of the wing E05F 7/06) [4]**
- 17/02 • Coupling devices for double doors, i.e. two doors one behind the other and hinged on the same side
 - 17/04 • Devices for coupling the turning cylinder of a single or double cylinder lock with the bolt-operating member
 - 17/06 • Templates for marking the position of apertures in fittings of wings
 - 17/08 • Lubricating devices
 - 17/10 • Illuminating devices on, or for, locks or keys
 - 17/12 • Devices for removing keys stuck in the lock
 - 17/14 • Closures or guards for keyholes
 - 17/16 • • shaped as pins or key bits
 - 17/18 • • shaped as lids or slides
 - 17/20 • Means independent of the locking mechanism for preventing unauthorised opening, e.g. for securing the bolt in the fastening position (pins or detents E05B 15/12) [4]
 - 17/22 • Means for operating or controlling lock or fastening device accessories, i.e. other than the fastening members, e.g. switches, indicators [4]
- 19/00 Keys; Accessories therefor (making keys, see the relevant places, e.g. B21D 53/42; milling grooves in keys B23C 3/35)**
- 19/02 • Construction of the shank of the key
 - 19/04 • Construction of the bow of the key; Construction of flat keys
 - 19/06 • Key bits; Flat key bits
 - 19/08 • • Special forms of key bits, e.g. double key bits, folding key bits
 - 19/10 • Fastening the key bit and bow on the shank of the key
 - 19/12 • Keys with several bits moving relatively to each other when in use
 - 19/14 • Double keys
 - 19/16 • Extremely thin keys acting without rotation
 - 19/18 • Keys adjustable before use
 - 19/20 • Skeleton keys; Devices for picking locks; Other devices for similar purposes
 - 19/22 • Keys with devices for indicating whether the last operation was locking or unlocking
 - 19/24 • Key-distinguishing marks
 - 19/26 • Use of special materials for keys
- Locks with rotary keys moving lamelliform tumblers perpendicular to the key**
- 21/00 Locks with rotary keys moving lamelliform tumblers perpendicular to the key, in which the tumblers do not follow the movement of the bolt**
- 21/02 • with identical tumblers
 - 21/04 • with stop pins on the tumbler (E05B 21/02 takes precedence)
 - 21/06 • Cylinder locks, e.g. protector locks
- 23/00 Locks with rotary keys moving lamelliform tumblers perpendicular to the key, in which the tumblers follow the movement of the bolt**
- 25/00 Locks with rotary keys moving lamelliform tumblers perpendicular to the key, characterised by the tumblers**
- 25/02 • with tumblers in the cut-out of which the key bit is moved
 - 25/04 • with tumblers in which the stop pin is guided from one locked position to the other in an inclined direction
 - 25/06 • with tumblers in which the stop pin is guided from one locked position to the other along a curved path
 - 25/08 • with tumblers with movable pawls engaging the key
 - 25/10 • with tumblers formed to engage one another to determine their unlocked position
- Locks of which the tumblers are set by pushing the key in**
- 27/00 Cylinder locks with tumbler pins or balls that are set by pushing the key in**
- 27/02 • operated by the edge of the key
 - 27/04 • • arranged radially in one row
 - 27/06 • • arranged radially in more than one row
 - 27/08 • • arranged axially
 - 27/10 • operated by other surfaces of the key, e.g. openings receiving projections on the tumblers
- 29/00 Cylinder locks with plate tumblers that are set by pushing the key in**
- 29/02 • operated by the edge of the key
 - 29/04 • • arranged singly
 - 29/06 • • arranged in pairs
 - 29/08 • operated by other surfaces of the key

- 29/10 • • operated by a curved groove or slot
- 29/12 • • operated by a curved rib
- 29/14 • with both axially and radially arranged plate tumblers

31/00 Cylinder locks with both tumbler pins or balls and plate tumblers that are set by pushing the key in

33/00 Cylinder lock with tumblers that are set by pushing the key in, in which the bolt is moved by means other than the key

35/00 Locks for use with special keys or a plurality of keys

- 35/02 • which can be shifted laterally
- 35/04 • for pull keys
- 35/06 • for screw keys
- 35/08 • operable by a plurality of keys
- 35/10 • • with master and pass keys
- 35/12 • • requiring the use of two keys, e.g. safe-deposit locks
- 35/14 • with keys of which different parts operate separate mechanisms

37/00 Permutation locks (electric permutation locks E05B 49/00; for bicycles E05B 71/02); **Puzzle locks**

- 37/02 • with tumbler discs or rings arranged on a single axis, each disc being adjustable independently of the others
- 37/04 • with tumbler discs on a single axis, all the discs being adjustable by rotating a shiftable knob
- 37/06 • • in padlocks
- 37/08 • with tumbler discs on a single axis, all the discs being adjustable by a rotary knob which is not shifted
- 37/10 • • in padlocks
- 37/12 • with tumbler discs on several axes
- 37/14 • • in padlocks
- 37/16 • with two or more push or pull knobs, slides, or the like
- 37/18 • • in padlocks
- 37/20 • Puzzle locks
- 37/22 • • in padlocks

Locks with indicating or timing devices

39/00 Locks giving indication of unauthorised unlocking

- 39/02 • with destructible seal closures or paper closures (seals *per se* G09F 3/00) [4]
- 39/04 • with counting or registering devices

41/00 Locks with visible indication as to whether the lock is locked or unlocked

43/00 Time locks (clocks or clock mechanisms with attached or built-in means operating any device at preselected times or after a predetermined time interval G04C 23/00)

45/00 Alarm locks (alarm devices actuated by tampering with fastenings in general G08B)

- 45/02 • with mechanically-operated bells
- 45/04 • with detonating alarm devices
- 45/06 • Electric alarm locks
- 45/08 • • with contact making inside the lock or in the striking plate
- 45/10 • • • by introducing the key
- 45/12 • • • by movement of the bolt

- 45/14 • • with contact making outside the lock

Operation or control of locks by non-mechanical means, e.g. from a distance

47/00 Operating or controlling locks or other fastening devices by electric or magnetic means (electric permutation locks E05B 49/00; holding in open position or limiting movement of wings by magnetic or electromagnetic attraction E05C 17/56; key switches H01H 27/00) [2]

- 47/02 • Adaptation of locks, latches, or parts thereof, for movement of the bolt by electromagnetic means
- 47/04 • • for unlocking only
- 47/06 • Controlling mechanically-operated bolts by electromagnetically-operated detents
- 47/08 • • the bolt being withdrawn by a spring which is stressed by closing the wing

49/00 Electric permutation locks; Circuits therefor

- 49/02 • with electrical arrangements inside the lock
- 49/04 • with electrical arrangements outside the lock

51/00 Operating or controlling locks or other fastening devices by other non-mechanical means

- 51/02 • by pneumatic or hydraulic means

53/00 Operation or control of locks by mechanical transmissions, e.g. from a distance (for passenger doors E05B 65/20)

Locks with provision for latching

55/00 Locks in which a sliding latch is used also as a locking bolt

- 55/02 • the bolt being secured by the tumbler
- 55/04 • the bolt being secured by the cross-bar or the turnbuckle and the handle being locked
- 55/06 • the handle being disconnected
- 55/08 • • the bolt being secured by transverse bolts
- 55/10 • • without securing the bolt
- 55/12 • the bolt being secured by the operation of a hidden parallel member
- 55/14 • the bolt being secured by the operation of a wing handle, or by means in the wing handle or knob
- 55/16 • • merely by normal use of the handle on one side of the wing

57/00 Locks in which a pivoted latch is used also as locking means

59/00 Locks with latches separate from the lock-bolts, or with a plurality of latches or lock-bolts

- 59/02 • with arrangements for securing the latch while shooting the lock-bolt
- 59/04 • Locks in which the latch is moved by a lock-bolt, or the lock-bolt by a latch, or one latch by another, or the like
- 59/06 • with a lock-bolt slidable in the latch

61/00 Other locks with provision for latching

Locks with special structural characteristics or for special use**63/00 Locks with special structural characteristics**

- 63/02 • without springs
- 63/04 • for alternative use on the right-hand or left-hand side of wings
- 63/06 • with lengthwise-adjustable bolts
- 63/08 • Mortise locks
- 63/10 • • requiring only two cylindrical holes in the wing
- 63/12 • with means carried by the bolt for interlocking with the keeper (for passenger doors E05B 65/28)
- 63/14 • Arrangement of several locks or locks with several bolts, e.g. arranged one behind the other (locks for keys with several bits E05B 35/14; with provision for latching E05B 59/00, E05B 61/00; arrangements of simultaneously-actuated bolts or other securing devices at well-separated positions on the same wing E05C 9/00) [4]
- 63/16 • with the handles on opposite sides moving independently (the latch being secured by the operation of a wing handle E05B 55/14)
- 63/18 • with arrangements independent of the locking mechanism for retaining the bolt in the retracted position
- 63/20 • • released automatically when the wing is closed
- 63/22 • operated by a pulling or pushing action perpendicular to the front plate (E05B 35/04 takes precedence)
- 63/24 • Arrangements in which the fastening members which engage one another are mounted respectively on the wing and the frame and are both movable, e.g. for release by moving either of them (hasp locks E05B 65/48; hasp fastenings E05C 19/08) [4]

65/00 Locks for special use

- 65/02 • for thin, hollow, or thin-metal wings
- 65/04 • for wings, one behind the other, hinged on the same side (fastening devices specially adapted for two wings which lie one behind the other when closed E05C 7/02) [4]
- 65/06 • for swing doors
- 65/08 • for sliding wings
- 65/10 • for panic or emergency doors
- 65/12 • for vehicles (E05B 71/00 takes precedence; locking arrangements for non-fixed vehicle roofs B60J 7/185) [2]
- 65/14 • • for railway freight-cars or the like; for lorries (E05B 65/20 takes precedence)
- 65/16 • • • for back doors of vans
- 65/18 • • • with provision for sealing
- 65/19 • • for car-boot lids; for car bonnets
- 65/20 • • for passenger or like doors
- 65/22 • • • with rectilinearly-moving bolt
- 65/24 • • • • locked by a special movement of the door handle
- 65/26 • • • • with the outside door handle drawn into a recess when the door is locked
- 65/28 • • • • with means carried by the bolt for interlocking with the keeper
- 65/30 • • • • with two or more bolts moved simultaneously
- 65/32 • • • with the bolt turning about an axis
- 65/34 • • • • in which the member engaging the keeper is shaped as a lockable toothed wheel or the like
- 65/36 • • • Locking several doors simultaneously
- 65/38 • • • • by pneumatic or hydraulic means

- 65/40 • • • Locking one door by shutting another (by non-mechanical means E05B 47/00, E05B 51/00; operation of locks by mechanical transmissions E05B 53/00; fastenings, other than locks, for double doors E05C 7/06)
 - 65/42 • • • Securing the latch or bolt by movement of the vehicle
 - 65/44 • for furniture or drawers
 - 65/46 • • Special locks for drawers, e.g. for a plurality of drawers [4]
 - 65/48 • Hasp locks (hasp fastenings other than locks E05C 19/08)
 - 65/50 • • for briefcases
 - 65/52 • Other locks for chests, boxes, trunks, baskets, travelling bags, or the like (closures for bags or trunks A45C 13/06, A45C 13/10, A45C 13/16)
- 67/00 Padlocks (permutation locks E05B 37/00); Details thereof**
- 67/02 • Cases
 - 67/04 • • Armoured cases
 - 67/06 • Shackles; Arrangement of the shackle
 - 67/08 • • Padlocks with shackles hinged on the case
 - 67/10 • • • with devices for securing the free end of the shackle
 - 67/12 • • • • with built-in cylinder locks
 - 67/14 • • • with devices for securing the hinged end of the shackle
 - 67/16 • • • • with built-in cylinder locks
 - 67/18 • • • with devices for securing both ends of the shackle
 - 67/20 • • • • with built-in cylinder locks
 - 67/22 • • Padlocks with sliding shackles, with or without rotary or pivotal movement
 - 67/24 • • • with built-in cylinder locks
 - 67/26 • • • with screw action, with or without the shackle being moved by turning the key
 - 67/28 • • Padlocks with shackles forming a circle
 - 67/30 • • • with built-in cylinder locks
 - 67/32 • • Padlocks with pincer-like shackles
 - 67/34 • • • with built-in cylinder locks
 - 67/36 • Padlocks with closing means other than shackles
 - 67/38 • Auxiliary or protective devices

Locking devices for clothing, sticks, umbrellas, or cycles**69/00 Devices for locking clothing; Lockable clothing holders or hangers (dress or hat holders in general A47G 25/00)**

- 69/02 • Lockable clothing hooks (coin-controlled locking hooks G07F)

71/00 Locks specially adapted for bicycles, other than padlocks (locks integral with cycles B62H 5/00)

- 71/02 • with permutation locking devices

73/00 Devices for locking portable objects against unauthorised removal; Locking devices not provided for in other groups of this subclass

- 73/02 • for walking-sticks or umbrellas (stick or umbrella holders in general A47G 25/12)

75/00 Handcuffs

E05C BOLTS OR FASTENING DEVICES FOR WINGS, SPECIALLY FOR DOORS OR WINDOWS (latching means for sideboard or tailgate structures for vehicles B62D 33/037; fastening devices for constructional or engineering elements E04, F16B; locks, fastening devices structurally or operatively combined or having significant cooperation with locks E05B; means for operating or controlling wing fasteners in conjunction with mechanisms for moving the wing E05F)

Note(s)

1. In this subclass, only the movement essential for securing the wing is considered, e.g. a sliding bolt which is rotated on its axis to prevent its withdrawal is classified as having only a sliding movement.
2. Attention is drawn to the definitions following the title of class E05.

Subclass index

FASTENING DEVICES

characterised by the way the bolt is moved.....	1/00-5/00
specially for holding wings open.....	17/00, 19/00
specially adapted for two wings.....	7/00
ARRANGEMENT OF FASTENING, SECURING, OR LOCKING DEVICES.....	9/00, 21/00

Bolts, latches or equivalent wing-fastening devices, characterised by special way of movement, e.g. moving rectilinearly, pivotally or rotatively

1/00 Fastening devices with bolts moving rectilinearly
(devices released automatically by pull or pressure on the wing E05C 19/02)

- 1/02 • without latching action
- 1/04 • • with operating handle or equivalent member rigid with the bolt
- 1/06 • • with operating handle or equivalent member moving otherwise than rigidly with the bolt
- 1/08 • with latching action
- 1/10 • • with operating handle or equivalent member rigid with the latch
- 1/12 • • with operating handle or equivalent member moving otherwise than rigidly with the latch
- 1/14 • • • the handle or member moving essentially towards, or away from, the plane of the wing or frame
- 1/16 • • • the handle or member moving essentially in a plane substantially parallel to the wing

3/00 Fastening devices with bolts moving pivotally or rotatively (devices released automatically by pull or pressure on the wing E05C 19/02)

- 3/02 • without latching action
- 3/04 • • with operating handle or equivalent member rigid with the bolt
- 3/06 • • with operating handle or equivalent member moving otherwise than rigidly with the bolt
- 3/08 • • • the handle or member moving essentially towards, or away from, the plane of the wing or frame
- 3/10 • • • the handle or member moving essentially in a plane substantially parallel to the wing
- 3/12 • with latching action (devices in which the securing part is formed or merely carried by a spring and moves only by distortion of the spring, e.g. snaps, E05C 19/06)
- 3/14 • • with operating handle or equivalent member rigid with the latch
- 3/16 • • with operating handle or equivalent member moving otherwise than rigidly with the latch
- 3/22 • • • the bolt being spring-controlled

- 3/24 • • • • in the form of a bifurcated member
 - 3/26 • • • • • engaging a stud-like keeper
 - 3/28 • • • • • with simultaneously-operating double bolts
 - 3/30 • • • • in the form of a hook
 - 3/32 • • • • • engaging a hooked keeper (E05C 3/34 takes precedence)
 - 3/34 • • • • • with simultaneously-operating double bolts
 - 3/36 • • • • in the form of a rotary gear
 - 3/38 • • • • with bolts engaging a hooked keeper (E05C 3/24, E05C 3/30, E05C 3/36 take precedence)
 - 3/40 • • • • with bolts engaging a stud-like keeper (E05C 3/24, E05C 3/30, E05C 3/36 take precedence)
- 5/00 Fastening devices with bolts moving otherwise than only rectilinearly and only pivotally or rotatively**
(devices released automatically by pull or pressure on the wing E05C 19/02)
- 5/02 • both moving axially and turning about their axes to secure the wing
 - 5/04 • • performing both movements simultaneously, e.g. screwing into a keeper

7/00 Fastening devices specially adapted for two wings

Note(s)

- In this group, if a fastening device merely secures one wing to another wing which is already closed it is not regarded as specially adapted for two wings.
- 7/02 • for wings which lie one behind the other when closed
 - 7/04 • for wings which abut when closed
 - 7/06 • • a fastening device for one wing being actuated or controlled by closing another wing

9/00 Arrangement of simultaneously-actuated bolts or other securing devices at well-separated positions on the same wing (essentially involving locking means E05B 63/14; similar constructions for engineering closures for pressure vessels, in general F16J 13/08)

E05C

- 9/02 • with one sliding bar for fastening when moved in one direction and unfastening when moved in opposite direction; with two sliding bars moved in the same direction when fastening or unfastening [4]
- 9/04 • with two sliding bars moved in opposite directions when fastening or unfastening
- 9/06 • with three or more sliding bars
- 9/08 • with a rotary bar for actuating the fastening means
- 9/10 • Actuating mechanisms for bars
- 9/12 • • with gears and racks
- 9/14 • • with pins engaging slots
- 9/16 • • with crank pins and connecting rods
- 9/18 • Details of fastening means or of fixed retaining means for the ends of bars
- 9/20 • Coupling means for sliding bars, rods, or cables [4]
- 9/22 • Guides for sliding bars, rods, or cables (corner guides E05C 9/24) [4]
- 9/24 • Means for transmitting movements between vertical and horizontal sliding bars, rods, or cables, e.g. corner guides (means for transmitting movements between vertical and horizontal sliding bars, rods, or cables, for moving wings into open or closed position E05F 7/08) [4]
- 17/00 Devices for holding wings open; Devices for limiting opening of wings or for holding wings open by a movable member extending between frame and wing; Braking devices, stops or buffers, combined therewith (combined with hinges E05D 11/00; combined with operating apparatus for wings E05F; other braking devices, stops, buffers E05F 5/00) [4]**
- 17/02 • by mechanical means (E05C 17/60 takes precedence) [4]
- 17/04 • • with a movable bar or equivalent member extending between frame and wing
- 17/06 • • • releasable to allow further opening only when the wing is nearly closed
- 17/08 • • • with special means for release, e.g. automatic release by further opening
- 17/10 • • • incorporating a special device for securing the wing in the closed position
- 17/12 • • • consisting of a single rod
- 17/14 • • • • Hook and eye, or equivalent
- 17/16 • • • • pivoted only at one end and having an elongated slot
- 17/18 • • • • pivoted only at one end and having a row of holes, notches, or pins
- 17/20 • • • • sliding through a guide (E05C 17/18 takes precedence)
- 17/22 • • • • • with braking, clamping or securing means in the guide [4]
- 17/24 • • • • pivoted at one end, and with the other end running along a guide member
- 17/26 • • • • • with braking, clamping or securing means at the pivot of the rod [4]
- 17/28 • • • • • with braking, clamping or securing means at the connection to the guide member [4]
- 17/30 • • • of extensible, e.g. telescopic, construction (flexible members E05C 17/36)
- 17/32 • • • consisting of two or more pivoted rods
- 17/34 • • • • with means for holding in more than one position
- 17/36 • • • comprising a flexible member, e.g. chains
- 17/38 • • with a curved rail rigid with the frame for engagement with means on the wing, or *vice versa*
- 17/40 • • Bars or like parts connecting a right wing with a left wing which move against each other when being closed
- 17/42 • • connecting exterior and interior wings
- 17/44 • • with a device carried on the wing for frictional or like engagement with a fixed flat surface, e.g. retractable feet
- 17/46 • • in which the wing or a member fixed thereon is engaged by a movable fastening member in a fixed position; in which a movable fastening member mounted on the wing engages a stationary member [4]
- 17/48 • • • comprising a sliding securing member
- 17/50 • • • comprising a single pivoted securing member
- 17/52 • • • comprising a snap, catch, or the like
- 17/54 • • Portable devices, e.g. wedges
- 17/56 • by magnetic or electromagnetic attraction (operation of locks or fasteners by electric or magnetic means E05B 47/00) [2]
- 17/58 • operated or controlled from a distance
- 17/60 • holding sliding wings open [4]
- 17/62 • • using notches [4]
- 17/64 • • by friction [4]
- 19/00 Other devices specially designed for securing wings (movable draft sealings additionally used for bolting E06B 7/18) [2]**
- 19/02 • Automatic catches, i.e. released by pull or pressure on the wing (E05C 19/06 takes precedence)
- 19/04 • • Ball or roller catches
- 19/06 • in which the securing part is formed or carried by a spring and moves only by distortion of the spring, e.g. snaps
- 19/08 • Hasps; Hasp fastenings; Spring catches therefor
- 19/10 • Hook fastenings; Fastenings in which a link engages a fixed hook-like member
- 19/12 • • pivotally mounted
- 19/14 • • • with toggle action
- 19/16 • Devices holding the wing by magnetic or electromagnetic attraction
- 19/18 • Portable devices specially adapted for securing wings (preventing operation of handles E05B 13/00)
- 21/00 Arrangement or combinations of wing fastening, securing, or holding devices, not covered by any single one of main groups E05C 1/00-E05C 19/00**
- 21/02 • for holding a wing closed only

E05D HINGES OR OTHER SUSPENSION DEVICES FOR DOORS, WINDOWS, OR WINGS (pivotal connections in general F16C 11/00)

Subclass index

HINGES

- General structure..... 1/00, 3/00
- Special structure..... 7/00

Details; accessories.....	5/00, 9/00, 11/00
OTHER SUSPENSION DEVICES FOR WINGS.....	13/00, 15/00

1/00	Pinless hinges; Substitutes for hinges	7/10	• to allow easy separation of the parts at the hinge axis (substitutes for hinges E05D 1/06)
1/02	• made of one piece	7/12	• to allow easy detachment of the hinge from the wing or the frame
1/04	• with guide members shaped as circular arcs	7/14	• Hinges for safes
1/06	• consisting of two easily-separable parts		
3/00	Hinges with pins	9/00	Flaps or sleeves specially designed for making from particular material, e.g. hoop-iron, sheet metal, plastics
3/02	• with one pin	11/00	Additional features or accessories of hinges
3/04	• • engaging three or more parts, e.g. sleeves, movable relatively to one another for connecting two or more wings to another member	11/02	• Lubricating arrangements
3/06	• with two or more pins (E05D 7/08 takes precedence) [2]	11/04	• relating to the use of free balls as bearing-surfaces (E05D 7/06 takes precedence)
3/08	• • for swing-doors, i.e. openable by pushing from either side	11/06	• Devices for limiting the opening movement of hinges
3/10	• • with non-parallel pins	11/08	• Friction devices between relatively-movable hinge parts (E05D 7/086 takes precedence) [2]
3/12	• • with two parallel pins and one arm (E05D 3/08 takes precedence) [7]	11/10	• Devices for preventing movement between relatively-movable hinge parts
3/14	• • with four parallel pins and two arms (E05D 3/08 takes precedence) [7]	13/00	Accessories for sliding or lifting wings, e.g. pulleys, safety catches (counterbalance devices E05F 1/00, E05F 3/00) [4]
3/16	• • with seven parallel pins and four arms (E05D 3/08 takes precedence) [7]	15/00	Suspension arrangements for wings (arrangements of wings not characterised by the construction of the supporting means E06B 3/32)
3/18	• • with sliding pins or guides (E05D 3/08 takes precedence) [7]	15/02	• for revolving wings
5/00	Construction of single parts, e.g. the parts for attachment	15/04	• with arms fixed on the wing pivoting about an axis outside of the wing
5/02	• Parts for attachment, e.g. flaps	15/06	• for wings sliding horizontally more or less in their own plane
5/04	• • Flat flaps	15/08	• • consisting of two or more independent parts movable each in its own guides
5/06	• • Bent flaps	15/10	• • movable out of one plane into a second parallel plane
5/08	• • of cylindrical shape	15/12	• • consisting of parts connected at their edges
5/10	• Pins, sockets or sleeves; Removable pins (E05D 15/522 takes precedence) [2]	15/14	• • with movable arms situated in the plane of the wing
5/12	• • Securing pins in sockets, movably or not	15/16	• for wings sliding vertically more or less in their own plane
5/14	• • Construction of sockets or sleeves	15/18	• • consisting of two or more independent parts movable each in its own guides
5/16	• • • to be secured without special attachment parts on the socket or sleeve	15/20	• • movable out of one plane into a second parallel plane
7/00	Hinges or pivots of special construction (used for special suspension arrangements E05D 15/00; so as to be self-closing E05F 1/06, E05F 1/12; with means for raising wings before being turned E05F 7/02)	15/22	• • allowing an additional movement
7/02	• for use on the right-hand as well as on the left-hand side; Convertible right-hand or left-hand hinges	15/24	• • consisting of parts connected at their edges
7/04	• Hinges adjustable relative to the wing or the frame	15/26	• for folding wings
7/06	• to allow tilting of the members	15/28	• supported on arms movable in horizontal plane
7/08	• for use in suspensions comprising two spigots placed at opposite edges of the wing, especially at the top and the bottom, e.g. trunnions	15/30	• • with pivoted arms and sliding guides
7/081	• • the pivot axis of the wing being situated near one edge of the wing (braking devices therefor E05D 11/08) [2]	15/32	• • with two pairs of pivoted arms
7/082	• • the pivot axis of the wing being situated at a considerable distance from the edges of the wing [2]	15/34	• • • with wings opening parallel to themselves
7/083	• • • with a fixed pivot axis [2]	15/36	• moving along slide-ways so arranged that one guide member of the wing moves in a direction substantially perpendicular to the movement of another guide member
7/084	• • • with a movable pivot axis [2]	15/38	• • for upwardly-moving wings, e.g. up-and-over doors
7/085	• • • • with two or more pivot axes, e.g. used at the same time [2]	15/40	• supported on arms movable in vertical planes
7/086	• • • Braking devices structurally combined with hinges (braking devices for windows per se E05F 5/00) [2]	15/42	• • with pivoted arms and horizontally-sliding guides
		15/44	• • with pivoted arms and vertically-sliding guides
		15/46	• • with two pairs of pivoted arms

E05D

- 15/48 • allowing alternative movements (for vertically-sliding wings E05D 15/22)
- 15/50 • • for opening at either of two opposite edges
- 15/52 • • for opening about a vertical as well as a horizontal axis
- 15/522 • • • with disconnecting means for the appropriate pivoting parts [2]
- 15/523 • • • • using movable rods [2]
- 15/524 • • • • Actuating mechanisms [2]
- 15/526 • • • Safety devices [2]
- 15/54 • • for opening both inwards and outwards
- 15/56 • with successive different movements
- 15/58 • • with both swinging and sliding movements

E05F DEVICES FOR MOVING WINGS INTO OPEN OR CLOSED POSITION; CHECKS FOR WINGS; WING FITTINGS NOT OTHERWISE PROVIDED FOR, CONCERNED WITH THE FUNCTIONING OF THE WING

Note(s)

In this subclass, the following terms are used with the meanings indicated:

- "closer" or "opener" includes devices for assisting wing-movement or for wing-counterbalancing.

Subclass index

CLOSERS, OPENERS, OR CHECKS FOR WINGS.....1/00, 3/00, 5/00
 ACCESSORIES FOR WINGS.....7/00
 OPERATING MECHANISMS FOR WINGS.....9/00-17/00

1/00 Closers or openers for wings, not otherwise provided for in this subclass

- 1/02 • gravity-actuated
- 1/04 • • for wings which lift during movement
- 1/06 • • • Mechanisms in the shape of hinges or pivots, operated by the weight of the wing
- 1/08 • spring-actuated
- 1/10 • • for swinging wings
- 1/12 • • • Mechanisms in the shape of hinges or pivots, operated by springs
- 1/14 • • • with double-acting springs, e.g. for closing and opening or checking and closing
- 1/16 • • for sliding wings [4]

3/00 Closers or openers with braking devices, e.g. checks; Construction of pneumatic or liquid braking devices (construction of non-pneumatic or non-liquid braking devices E05F 5/00; friction devices in hinges E05D 11/08)

- 3/02 • with pneumatic piston brakes (rotary type E05F 3/14)
- 3/04 • with liquid piston brakes (rotary type E05F 3/14)
- 3/06 • • in which a torsion spring rotates a member around an axis perpendicular to the axis of the piston
- 3/08 • • in which a torsion spring rotates a member around an axis arranged in the direction of the axis of the piston
- 3/10 • • with a spring, other than a torsion spring, and a piston, the axes of which are the same or lie in the same direction
- 3/12 • • Special devices controlling the circulation of the liquid, e.g. valve arrangement (valves *per se* F16K)
- 3/14 • with fluid brakes of the rotary type
- 3/16 • with friction brakes
- 3/18 • with counteracting springs (double-acting springs E05F 1/14)
- 3/20 • in hinges
- 3/22 • Additional arrangements for closers, e.g. for holding the wing in opened or other position

5/00 Braking devices, e.g. checks; Stops; Buffers

- (construction of pneumatic or liquid braking devices E05F 3/00; combined with devices for holding wings open E05C 17/00; devices for limiting opening of wings or for holding wings open by a movable member extending between frame and wing E05C 17/04) [4]
- 5/02 • specially for preventing the slamming of wings
 - 5/04 • • hand-operated; operated by centrifugal action
 - 5/06 • Buffers (E05F 5/02 takes precedence)
 - 5/08 • • with springs
 - 5/10 • • with piston brakes
 - 5/12 • specially for preventing the closing of a wing before another wing has been closed

7/00 Accessories for wings not provided for in other groups of this subclass (specially adapted for furniture A47B 95/00; door-lifters B66F, E04F 21/00; knobs or handles E05B) [2]

- 7/02 • for raising wings before being turned
- 7/04 • Arrangements affording protection against rattling (with buffering action E05F 5/00)
- 7/06 • Devices for taking the weight of the wing, arranged away from the hinge axis
- 7/08 • Means for transmitting movements between vertical and horizontal sliding bars, rods, or cables (means for transmitting movements between vertical and horizontal sliding bars, rods, or cables, for the fastening of wings E05C 9/24)

Operating mechanisms for wings [2]

9/00 Means for operating wings by hand rods not guided in or on the frame, including those which also operate the fastening (bolts or fastening devices for wings E05C)

11/00 Man-operated mechanisms for operating wings, including those which also operate the fastening (connecting mechanisms for a plurality of wings E05F 17/00)

- 11/02 • for wings in general, e.g. fanlights (E05F 11/36 takes precedence; for windows to be lowered vertically E05F 11/38; for doors E05F 11/54)
- 11/04 • • with cords, chains, or cables
- 11/06 • • • in guide-channels
- 11/08 • • with longitudinally-moving bars guided, e.g. by pivoted links, in or on the frame
- 11/10 • • • Mechanisms by which a handle moves the bar
- 11/12 • • • Mechanisms by which the bar shifts the wing
- 11/14 • • • • directly, i.e. without links, shifting the wing, e.g. by rack-and-gear or pin-and-slot
- 11/16 • • • • shifting the wing by pivotally-connected members moving in a plane perpendicular to the pivot axis of the wing
- 11/18 • • • • • consisting of a lever, e.g. an angle lever, only
- 11/20 • • • • • consisting of a lever, e.g. an angle lever, and only one additional link
- 11/22 • • • • • consisting of a lever, e.g. an angle lever, and two or more additional links in series
- 11/24 • • • • • shifting the wing by pivotally-connected members moving in a plane parallel to the pivot axis of the wing
- 11/26 • • • • • consisting of a lever, e.g. an angle lever, only
- 11/28 • • • • • consisting of a lever, e.g. an angle lever, and one or more additional links
- 11/30 • • • • • consisting of links in rhomb form
- 11/32 • • with rotary bars guided in the frame (E05F 11/34 takes precedence)
- 11/34 • • with screw mechanisms
- 11/36 • specially designed for passing through a wall
- 11/38 • for sliding windows, e.g. vehicle windows, to be opened or closed by vertical movement
- 11/40 • • operated by screw mechanism
- 11/42 • • operated by rack bars and toothed wheels
- 11/44 • • operated by one or more lifting arms
- 11/46 • • operated by lazy-tongs mechanism
- 11/48 • • operated by cords or chains
- 11/50 • • Crank gear with clutches or retaining brakes, for operating window mechanisms
- 11/52 • • combined with means for producing an additional movement, e.g. a horizontal or a rotary movement
- 11/53 • for sliding windows, e.g. vehicle windows, to be opened or closed by horizontal movement [2]
- 11/54 • for doors
- 13/00 Operating mechanisms for wings, operated by the movement or weight of a person or vehicle** (through power-operated wing-operating mechanisms E05F 15/00)
- 13/02 • by devices, e.g. lever arms, affected by the movement of the user
- 13/04 • by platforms lowered by the weight of the user
- 15/00 Power-operated mechanisms for wings**
- 15/02 • with pressure medium
- 15/04 • • for swinging wings
- 15/06 • • for horizontally-sliding wings
- 15/08 • • for vertically-sliding wings
- 15/10 • with rotary electromotors
- 15/12 • • for swinging wings
- 15/14 • • for horizontally-sliding wings
- 15/16 • • for vertically-sliding wings
- 15/18 • with other electrical means, e.g. solenoids
- 15/20 • controlled by automatically-acting means, e.g. by photocells, by electric waves, by thermostats, by rain, by fire
- 17/00 Special devices for shifting a plurality of wings operated simultaneously** (for simultaneously moving a plurality of interconnected ventilating lamellae E06B 7/086) [2]

E05G SAFES OR STRONG-ROOMS FOR VALUABLES; BANK PROTECTION DEVICES; SAFETY TRANSACTION PARTITIONS (alarm arrangements *per se* G08B) [2]

Note(s)

In this subclass, the following terms or expressions are used with the meanings indicated:

- "bank" is a building or portion of a building devoted to the safekeeping or exchange of valuables between the "bank" and its customers;
- "bank protection device" is a mechanism in or on a bank for protecting the valuables or repelling attacks by stealth or force.

- 1/00 Safes or strong-rooms for valuables** (savings boxes A45C 1/12; floatable safes B63C 7/30; storage containers without attack or fire repellent features B65D; bank buildings in general, e.g. modular construction, floor plan, E04H 1/06; buildings resistant to earthquake or war action E04H 9/00)
- 1/02 • Details (safe hinges E05D 7/14)
- 1/024 • • Wall or panel structure [2]
- 1/026 • • Closures (protective doors, windows, or like closures against air-raid or other war-like action E06B 5/10; shutters, movable grilles, other safety closures E06B 9/02) [2]
- 1/04 • • Closure fasteners (locks E05B)
- 1/06 • having provision for multiple compartments [2]
- 1/08 • • secured individually [2]
- 1/10 • with alarm, signal, or indicator (burglar, theft, or intruder alarm *per se* G08B 13/00; fire or explosion alarm *per se* G08B 17/00) [2]
- 1/12 • with fluent-material releasing, generating, or distributing means, e.g. repellent or fire extinguishing (E05G 1/14 takes precedence; identifying, scaring or incapacitating burglars, thieves, or intruders with smoke, gas, powder, or liquid G08B 15/02) [2, 6]
- 1/14 • with means for marking or destroying the valuables, e.g. in case of theft [6]
- 5/00 Bank protection devices** (E05G 1/12, E05G 7/00 take precedence; closed-circuit television systems H04N 7/18) [2]
- 5/02 • Trapping or confining mechanisms (thief or burglar incapacitating means in general G08B 15/00) [2]

E05G

7/00 Safety transaction partitions, e.g. movable payplates

(non-safety paying counters, e.g. for supermarkets,
A47F 9/02) [2]