

SECTION E — FIXED CONSTRUCTIONS

E05 LOCKS; KEYS; WINDOW OR DOOR FITTINGS; SAFES

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) [4]

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.

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CLOSERS, OPENERS, OR CHECKS FOR WINGS.....	1/00, 3/00, 5/00
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1/00 Closers or openers for wings, not otherwise provided for in this subclass [1, 2006.01]

- 1/02 • gravity-actuated [1, 2006.01]
- 1/04 • • for wings which lift during movement [1, 2006.01]
- 1/06 • • • Mechanisms in the shape of hinges or pivots, operated by the weight of the wing [1, 2006.01]
- 1/08 • spring-actuated [1, 2006.01]
- 1/10 • • for swinging wings [1, 2006.01]
- 1/12 • • • Mechanisms in the shape of hinges or pivots, operated by springs [1, 2006.01]
- 1/14 • • • with double-acting springs, e.g. for closing and opening or checking and closing [1, 2006.01]
- 1/16 • • for sliding wings [4, 2006.01]

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) [1, 2006.01]

- 3/02 • with pneumatic piston brakes (rotary type E05F 3/14) [1, 2006.01]
- 3/04 • with liquid piston brakes (rotary type E05F 3/14) [1, 2006.01]
- 3/06 • • in which a torsion spring rotates a member around an axis perpendicular to the axis of the piston [1, 2006.01]
- 3/08 • • in which a torsion spring rotates a member around an axis arranged in the direction of the axis of the piston [1, 2006.01]
- 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 [1, 2006.01]
- 3/12 • • Special devices controlling the circulation of the liquid, e.g. valve arrangement (valves *per se* F16K) [1, 2006.01]
- 3/14 • with fluid brakes of the rotary type [1, 2006.01]
- 3/16 • with friction brakes [1, 2006.01]
- 3/18 • with counteracting springs (double-acting springs E05F 1/14) [1, 2006.01]
- 3/20 • in hinges [1, 2006.01]

- 3/22 • Additional arrangements for closers, e.g. for holding the wing in opened or other position [1, 2006.01]

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

- (construction of pneumatic or liquid braking devices E05F 3/00; braking devices, buffers or end stops on drawers for tables, cabinets or like furniture A47B 88/473; 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) [1, 4, 2006.01, 2017.01]
- 5/02 • specially for preventing the slamming of wings [1, 2006.01]
- 5/04 • • hand-operated; operated by centrifugal action [1, 2006.01]
- 5/06 • Buffers (E05F 5/02 takes precedence) [1, 2006.01]
- 5/08 • • with springs [1, 2006.01]
- 5/10 • • with piston brakes [1, 2006.01]
- 5/12 • specially for preventing the closing of a wing before another wing has been closed [1, 2006.01]

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) [1, 2, 2006.01]

- 7/02 • for raising wings before being turned [1, 2006.01]
- 7/04 • Arrangements affording protection against rattling (with buffering action E05F 5/00) [1, 2006.01]
- 7/06 • Devices for taking the weight of the wing, arranged away from the hinge axis [1, 2006.01]
- 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) [1, 2006.01]

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) [1, 2006.01]
- 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) [1, 2006.01]
- 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) [1, 2006.01]
- 11/04 • • with cords, chains, or cables [1, 2006.01]
- 11/06 • • • in guide-channels [1, 2006.01]
- 11/08 • • with longitudinally-moving bars guided, e.g. by pivoted links, in or on the frame [1, 2006.01]
- 11/10 • • • Mechanisms by which a handle moves the bar [1, 2006.01]
- 11/12 • • • Mechanisms by which the bar shifts the wing [1, 2006.01]
- 11/14 • • • • directly, i.e. without links, shifting the wing, e.g. by rack-and-gear or pin-and-slot [1, 2006.01]
- 11/16 • • • • shifting the wing by pivotally-connected members moving in a plane perpendicular to the pivot axis of the wing [1, 2006.01]
- 11/18 • • • • • consisting of a lever, e.g. an angle lever, only [1, 2006.01]
- 11/20 • • • • • consisting of a lever, e.g. an angle lever, and only one additional link [1, 2006.01]
- 11/22 • • • • • consisting of a lever, e.g. an angle lever, and two or more additional links in series [1, 2006.01]
- 11/24 • • • • • shifting the wing by pivotally-connected members moving in a plane parallel to the pivot axis of the wing [1, 2006.01]
- 11/26 • • • • • consisting of a lever, e.g. an angle lever, only [1, 2006.01]
- 11/28 • • • • • consisting of a lever, e.g. an angle lever, and one or more additional links [1, 2006.01]
- 11/30 • • • • • consisting of links in rhomb form [1, 2006.01]
- 11/32 • • with rotary bars guided in the frame (E05F 11/34 takes precedence) [1, 2006.01]
- 11/34 • • with screw mechanisms [1, 2006.01]
- 11/36 • specially designed for passing through a wall [1, 2006.01]
- 11/38 • for sliding windows, e.g. vehicle windows, to be opened or closed by vertical movement [1, 2006.01]
- 11/40 • • operated by screw mechanism [1, 2006.01]
- 11/42 • • operated by rack bars and toothed wheels [1, 2006.01]
- 11/44 • • operated by one or more lifting arms [1, 2006.01]
- 11/46 • • operated by lazy-tongs mechanism [1, 2006.01]
- 11/48 • • operated by cords or chains [1, 2006.01]
- 11/50 • • Crank gear with clutches or retaining brakes, for operating window mechanisms [1, 2006.01]
- 11/52 • • combined with means for producing an additional movement, e.g. a horizontal or a rotary movement [1, 2006.01]
- 11/53 • for sliding windows, e.g. vehicle windows, to be opened or closed by horizontal movement [2, 2006.01]
- 11/54 • for doors [1, 2006.01]
- 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) [1, 2006.01]
- 13/02 • by devices, e.g. lever arms, affected by the movement of the user [1, 2006.01]
- 13/04 • by platforms lowered by the weight of the user [1, 2006.01]
- 15/00 Power-operated mechanisms for wings** (motor-operated accessories in locks for completing closing or initiating opening of a wing E05B 17/00) [1, 2006.01, 2015.01]
- 15/40 • Safety devices, e.g. detection of obstructions or end positions [2015.01]
- 15/41 • • Detection by monitoring transmitted force or torque (E05F 15/48 takes precedence); Safety couplings with activation dependent upon torque or force, e.g. slip couplings [2015.01]
- 15/42 • • Detection using safety edges [2015.01]
- 15/43 • • • responsive to disruption of energy beams, e.g. light or sound [2015.01]
- 15/44 • • • responsive to changes in electrical conductivity [2015.01]
- 15/46 • • • responsive to changes in electrical capacitance [2015.01]
- 15/47 • • • responsive to changes in fluid pressure [2015.01]
- 15/48 • • • by transmission of mechanical forces, e.g. by rigid or movable members [2015.01]
- 15/49 • • specially adapted for mechanisms operated by fluid pressure, e.g. detection by monitoring transmitted fluid pressure (E05F 15/47 takes precedence) [2015.01]
- 15/50 • using fluid-pressure actuators [2015.01]
- 15/51 • • for folding wings [2015.01]
- 15/53 • • for swinging wings [2015.01]
- 15/54 • • • operated by linear actuators acting on a helical track coaxial with the swinging axis [2015.01]
- 15/56 • • for horizontally-sliding wings [2015.01]
- 15/57 • • for vertically-sliding wings [2015.01]
- 15/59 • • • for overhead wings [2015.01]
- 15/60 • using electrical actuators [2015.01]
- 15/603 • • using rotary electromotors [2015.01]
- 15/605 • • • for folding wings [2015.01]
- 15/608 • • • for revolving wings [2015.01]
- 15/611 • • • for swinging wings [2015.01]
- 15/614 • • • • operated by meshing gear wheels, one of which being mounted at the wing pivot axis; operated by a motor acting directly on the wing pivot axis [2015.01]
- 15/616 • • • • operated by push-pull mechanisms [2015.01]
- 15/619 • • • • • using flexible or rigid rack-and-pinion arrangements [2015.01]
- 15/622 • • • • • using screw-and-nut mechanisms [2015.01]
- 15/624 • • • • • using friction wheels [2015.01]
- 15/627 • • • • • operated by flexible elongated pulling elements, e.g. belts, chains or cables (using flexible elongated push-pull mechanisms E05F 15/619) [2015.01]
- 15/63 • • • • operated by swinging arms [2015.01]
- 15/632 • • • • for horizontally-sliding wings [2015.01]
- 15/635 • • • • operated by push-pull mechanisms, e.g. flexible or rigid rack-and-pinion arrangements (E05F 15/652 takes precedence) [2015.01]

- 15/638 • • • • • allowing or involving a secondary movement of the wing, e.g. rotational or transversal **[2015.01]**
- 15/641 • • • • • operated by friction wheels **[2015.01]**
- 15/643 • • • • • operated by flexible elongated pulling elements, e.g. belts, chains or cables (by flexible elongated push-pull mechanisms E05F 15/635) **[2015.01]**
- 15/646 • • • • • allowing or involving a secondary movement of the wing, e.g. rotational or transversal **[2015.01]**
- 15/649 • • • • • operated by swinging arms **[2015.01]**
- 15/652 • • • • • operated by screw-and-nut mechanisms **[2015.01]**
- 15/655 • • • • • specially adapted for vehicle wings **[2015.01]**
- 15/657 • • • • • enabling manual drive, e.g. in case of power failure **[2015.01]**
- 15/659 • • • • • Control circuits therefor **[2015.01]**
- 15/662 • • • • • Motor units therefor, e.g. geared motors **[2015.01]**
- 15/665 • • • • • for vertically-sliding wings **[2015.01]**
- 15/668 • • • • • for overhead wings **[2015.01]**
- 15/67 • • • • • operated by flexible or rigid rack-and-pinion arrangements **[2015.01]**
- 15/673 • • • • • operated by screw-and-nut mechanisms **[2015.01]**
- 15/676 • • • • • operated by friction wheels **[2015.01]**
- 15/678 • • • • • operated by swinging lever arms **[2015.01]**
- 15/681 • • • • • operated by flexible elongated pulling elements, e.g. belts **[2015.01]**
- 15/684 • • • • • by chains **[2015.01]**
- 15/686 • • • • • by cables or ropes **[2015.01]**
- 15/689 • • • • • specially adapted for vehicle windows **[2015.01]**
- 15/692 • • • • • enabling manual drive, e.g. in case of power failure **[2015.01]**
- 15/695 • • • • • Control circuits therefor **[2015.01]**
- 15/697 • • • • • Motor units therefor, e.g. geared motors **[2015.01]**
- 15/70 • • with automatic actuation **[2015.01]**
- 15/71 • • responsive to temperature changes, rain, wind or noise **[2015.01]**
- 15/72 • • responsive to emergency conditions, e.g. fire **[2015.01]**
- 15/73 • • responsive to movement or presence of persons or objects **[2015.01]**
- 15/74 • • • using photoelectric cells **[2015.01]**
- 15/75 • • • responsive to the weight or other physical contact of a person or object **[2015.01]**
- 15/76 • • • responsive to devices carried by persons or objects, e.g. magnets or reflectors (E05F 15/77 takes precedence) **[2015.01]**
- 15/77 • • using wireless control **[2015.01]**
- 15/78 • • • using light beams **[2015.01]**
- 15/79 • • using time control **[2015.01]**
- 17/00 Special devices for shifting a plurality of wings operated simultaneously** (for simultaneously moving a plurality of interconnected ventilating lamellae E06B 7/086) **[1, 2, 2006.01]**