

E 06 DOORS, WINDOWS, SHUTTERS, OR ROLLER BLINDS, IN GENERAL; LADDERS

E 06 B FIXED OR MOVABLE CLOSURES FOR OPENINGS IN BUILDINGS, VEHICLES, FENCES, OR LIKE ENCLOSURES, IN GENERAL, e.g. DOORS, WINDOWS, BLINDS, GATES (shades or blinds for greenhouses [A 01 G 9/22](#); curtains [A 47 H](#); lids for car boots or bonnets [B 62 D 25/10](#); sky-lights [E 04 B 7/18](#); sunshades, awnings [E 04 F 10/00](#))

Notes

- (1) This subclass does not cover combinations of wings or frames with operating, mounting, latching or locking means of the type found in class [E 05](#), which are covered by the relevant subclasses of class [E 05](#), except such as are covered by groups [7/086](#), [9/00](#), or [11/02](#) of this subclass. [2]
- (2) In this subclass, the following terms or expressions are used with the meanings indicated:
 - “wing” means a swingable, slidable or otherwise movable member such as a door or window, for closing an opening;
 - “wing frame” means the peripheral edge or edges which define the outer border of the wing.
- (3) For vehicle door or window arrangements, attention is drawn to Notes (1) and (2) following the title of subclass [B 60 J](#). [3]

Subclass Index

BORDER CONSTRUCTIONS.....	1/00	SPECIAL ARRANGEMENTS.....	7/00, 9/00
ELEMENTS FOR CLOSING OPENINGS	3/00, 5/00	MEANS ALLOWING PASSAGE THROUGH FENCES	11/00

1/00	Border constructions of openings in walls, floors, or ceilings; Frames to be rigidly mounted in such openings (5/00 takes precedence; features relating also to inner frames or wing frames, features relating solely to the mounting of inner frames 3/00; corner joints or edge joints 3/96) [4]	1/38	. . . for shop-, show- or like large windows
		1/40	. . . Frames with parts removable to admit the glass (1/38 takes precedence)
		1/52	. . Frames specially adapted for doors
		1/56	. Fastening frames to the border of openings
		1/58	. . by filling-up the joints, e.g. by cementing
		1/60	. . by mechanical means, e.g. anchoring means
		1/62	. Tightening or covering joints between the border of openings and the frame (1/34 takes precedence)
		1/64	. . by loosely-inserted means, e.g. strip, resilient tongue
		1/66	. . by labyrinth packings
		1/68	. . by profiled external parts
		1/70	. Sills; Thresholds
		3/00	Window sashes, door leaves, or like elements for closing openings; Layout of fixed or moving closures, e.g. windows; Features of rigidly-mounted outer frames relating to the mounting of wing frames (5/00 takes precedence; shutters or the like 9/00; glass panes C 03 ; uniting glass sheets by fusion C 03 B 23/203 ; joining glass to glass other than by fusing or to other inorganic material C 03 C 27/00)
1/02	. Base frames, i.e. template frames for openings in walls or the like, provided with means for securing a further rigidly-mounted frame; Special adaptations of frames to be fixed therein	3/01	. Removable or disappearing walls for hangars or other halls, e.g. for aircraft (wall constructions E 04 B 2/00)
1/04	. Frames for doors, windows, or the like to be fixed in openings (special adaptations for fixing in base frames 1/02; features relating solely to the mounting of glass panes or other sheets 3/00)	3/02	. Wings made completely of glass
1/06	. . Wooden frames	3/04	. Wing frames not characterised by the manner of movement (features relating to the manner of movement 3/32)
1/08	. . . composed of several parts with respect to the cross-section of the frame itself	3/06	. . Single frames
1/10	. . . . adjustable with respect to the thickness of walls	3/08	. . . Constructions depending on the use of specified materials (3/24 takes precedence)
1/12	. . Metal frames	3/10	. . . . of wood
1/14	. . . of special cross-section (1/18, 1/22 take precedence)	3/12	. . . . of metal
1/16	. . . . Hollow frames	3/14	. . . . . of special cross-section
1/18	. . . composed of several parts with respect to the cross-section of the frame itself	3/16	. . . . . Hollow frames
1/20	. . . . adjustable with respect to the thickness of walls		
1/22	. . . with integral thresholds of special form		
1/24	. . Frames of natural stone, concrete, or other stone-like material		
1/26	. . Frames of plastics		
1/28	. . . Hollow frames (1/30 takes precedence)		
1/30	. . . composed of several parts with respect to the cross-section of the frame itself		
1/32	. . Frames composed of parts made of different materials		
1/34	. . Coverings, e.g. protecting against weather, for decorative purposes		
1/36	. . Frames uniquely adapted for windows		

- 3/18 of concrete or other stone-like material
- 3/20 of plastics
- 3/22 Hollow frames
- 3/24 . . . specially adapted for double glazing (separable parts for securing panes 3/64)
- 3/26 . . Compound frames, i.e. one frame within or behind another (3/263, 3/28 take precedence; arrangements of movable frames 3/32)
- 3/263 . . Frames with special provision for insulation [6]
- 3/267 . . . with insulating elements formed *in situ* [6]
- 3/273 . . . with prefabricated insulating elements held in position by deformation of portions of the frame members [6]
- 3/277 . . . with prefabricated insulating elements held in position by expansion of the insulating elements [6]
- 3/28 . . with additional removable glass panes or the like, framed or unframed
- 3/30 . Coverings, e.g. protecting against weather, for decorative purposes
- 3/32 . Arrangements of wings characterised by the manner of movement; Arrangements of movable wings in openings; Features of wings or frames relating solely to the manner of movement of the wing [3]
- 3/34 . . with only one kind of movement (3/48 takes precedence)
- 3/36 . . . with a single vertical axis of rotation at one side of the opening, or swinging through the opening (wings requiring lifting before opening 3/52)
- 3/38 . . . with a horizontal axis of rotation at the top or bottom of the opening
- 3/40 . . . with a vertical or horizontal axis of rotation not at one side of the opening, e.g. turnover wings
- 3/42 . . . Sliding wings; Details of frames with respect to guiding
- 3/44 Vertically-sliding wings
- 3/46 Horizontally-sliding wings
- 3/48 . . Wings connected at their edges, e.g. foldable wings
- 3/50 . . with more than one kind of movement (3/48 takes precedence)
- 3/52 . . . Wings requiring lifting before opening
- 3/54 . Fixing of glass panes or like plates
- 3/56 . . by means of putty, cement, or adhesives only (3/64 takes precedence)
- 3/58 . . by means of borders, cleats, or the like (3/64 takes precedence)
- 3/60 . . . of clamping cleats of metal
- 3/62 . . . of rubber-like elastic cleats
- 3/64 . . Fixing of more than one pane to a frame
- 3/66 . Units comprising two or more parallel glass or like panes in spaced relationship, the panes being permanently secured together, e.g. along the edges (layered products essentially comprising sheet glass B 32 B 17/00; coating of glass C 03 C 17/00)
- 3/663 . . Elements for spacing panes [6]
- 3/667 . . . Connectors therefor [6]
- 3/67 . . characterised by additional arrangements or devices for heat or sound insulation [6]
- 3/673 . . Assembling the units (3/677 takes precedence) [6]
- 3/677 . . Evacuating or filling the gap between the panes; Preventing condensation in the gap between the panes (by means of spacing elements 3/663); Cleaning the gap between the panes [6]
- 3/68 . Window bars
- 3/70 . Door leaves (wing frames 3/04)
- 3/72 . . consisting of frame and panels
- 3/74 . . . with wooden panels
- 3/76 . . . with metal panels
- 3/78 . . . with panels of plastics
- 3/80 . . flexible
- 3/82 . . Flush doors, i.e. with completely flat surface (3/02 takes precedence)
- 3/84 . . . of plywood
- 3/86 . . . of plastics
- 3/88 . . Edge-protecting devices for door leaves (finger guards for doors or windows 7/36)
- 3/90 . Revolving doors; Cages or housings therefor (turnstiles 11/08)
- 3/92 . Doors or windows extensible when set in position (sliding wings for windows 3/42; foldable wings 3/48; wall-closing devices which may be rolled up, e.g. shutters, 9/08)
- 3/94 . . Doors of the bellows type
- 3/96 . Corner joints or edge joints for windows, doors, or the like frames or wings [4]
- 3/964 . . using separate connecting pieces, e.g. T-connecting pieces (3/984, 3/988, 3/99 take precedence) [5]
- 3/968 . . . characterised by the way the connecting pieces are fixed in or on the frame members [5]
- 3/972 by increasing the cross-section of the connecting pieces, e.g. by expanding the connecting pieces with wedges (3/976 takes precedence) [5]
- 3/976 by deformation of the frame members [5]
- 3/98 the connecting pieces being specially adapted for drawing the frame members towards each other (3/972, 3/976 take precedence) [5]
- 3/984 . . specially adapted for frame members of wood or other material worked in a similar way (3/99 takes precedence) [5]
- 3/988 . . specially adapted for frame members of sheet metal, or similar sheet material, with an open generally U-shaped cross-section, e.g. for door frame members [5]
- 3/99 . . for continuous frame members crossing each other without interruption (window bars 3/68) [5]
- 5/00 Doors, windows, or like closures for special purposes; Border constructions therefor**
- 5/01 . Trap-doors
- 5/02 . for out-buildings or cellars; Other simple closures not designed to be close-fitting
- 5/04 . . with fixed wooden frames
- 5/06 . . with fixed metal frames
- 5/08 . . with fixed frames made of concrete, stone-like material, or plastics
- 5/10 . for protection against air-raid or other war-like action; for other protective purposes
- 5/11 . . against burglary [6]

- 5/12 . . . against air pressure, explosion, or gas
- 5/14 . . . Gasproof doors or similar closures; Adaptation of fixed constructions therefor
- 5/16 . . . Fireproof doors or similar closures; Adaptations of fixed constructions therefor
- 5/18 . . . against harmful radiation (against heat 5/16)
- 5/20 . . . for insulation against noise
- 7/00 Special arrangements or measures in connection with doors or windows** (screening or similar protective devices 9/00)
- 7/02 . . . for providing ventilation, e.g. through double windows; Arrangement of ventilation roses (airflow control members per se F 24 F 13/08)
- 7/03 . . . Ventilating devices for inserting under upwardly-sliding windows (rain or draught deflectors 7/26)
- 7/04 . . . with ventilation wings (7/08 takes precedence)
- 7/06 . . . with one ventilation wing only
- 7/08 . . . Louvre doors, windows, or grilles
- 7/082 . . . with rigid or slidable lamellae
- 7/084 . . . with rotatable lamellae
- 7/086 interconnected for concurrent movement [2]
- 7/088 with facing protective grille or safety guard [2]
- 7/09 mounted in movable wing, e.g. door [2]
- 7/092 operable in two or more distinct sets [2]
- 7/094 operable in sequence; characterised by additional independent movement [2]
- 7/096 operated or interconnected by gearing (wing operators with gearing in general E 05 F 11/00) [2]
- 7/098 with weather seal [2]
- 7/10 . . . by special construction of the frame members
- 7/12 . . . Measures preventing the formation of condensed water (double glazing 3/24 to 3/28, 3/64, 3/66; heating arrangements specially adapted for transparent or reflecting areas H 05 B 3/84)
- 7/14 . . . Measures for draining-off condensed water or water leaking-in
- 7/16 . . . Sealing arrangements on wings or parts co-operating with the wings (7/098 takes precedence) [2]
- 7/18 . . . by means of movable edgings, e.g. draught sealings additionally used for bolting
- 7/20 automatically withdrawn when the wing is opened
- 7/205 with sealing strip mounted on sill [2]
- 7/21 with sealing strip movable in plane of wing [2]
- 7/215 with sealing strip being moved to a retracted position by elastic means, e.g. springs [2]
- 7/22 . . . by means of elastic edgings, e.g. elastic rubber tubes; by means of resilient edgings, e.g. felt or plush strips, resilient metal strips (7/18 takes precedence)
- 7/23 Plastic, sponge rubber, or like strips or tubes
- 7/232 Resilient strips of hard material, e.g. metal
- 7/24 . . . without separate sealing members, e.g. with labyrinth
- 7/26 . . . Rain or draught deflectors, e.g. under sliding wings
- 7/28 . . . Other arrangements on doors or windows, e.g. door-plates, windows adapted to carry plants, hooks for window cleaners
- 7/30 . . . Peep-holes; Devices for speaking through; Doors having windows
- 7/32 . . . Serving doors; Passing-through doors
- 7/34 . . . Doors containing cupboards (cabinets in general A 47 B)
- 7/36 . . . *Finger guards* [7]
- 9/00 Screening or protective devices for openings, with or without operating or securing mechanisms; Closures of similar construction** (5/10 takes precedence; wings for doors or windows, connected at their edges, 3/48; additional indoor equipment of doors or windows, not forming part of the proper finishing work of a building, e.g. curtains, A 47 H; gratings as building elements E 04 C 2/42; locks, accessories therefor E 05 B; bolts or fastening devices for wings E 05 C; operating mechanism for wings in general E 05 F)
- 9/01 . . . Grilles fixed to walls, doors, or windows; Grilles moving with doors or windows; Walls formed as grilles, e.g. claustra
- 9/02 . . . Shutters, movable grilles, or other safety closing devices, e.g. against burglary (louvre windows or grilles 7/08; lamellar blinds 9/26)
- 9/04 . . . of wing type, e.g. revolving or sliding
- 9/06 . . . collapsible or foldable, e.g. of the bellows or lazy-tongs type (bellows-type doors 3/94; roll-type grilles 9/18)
- 9/08 . . . Roll-type closures (roller blinds 9/40; operating, guiding or securing devices or arrangements for roll-type closures 9/56; usable only as awnings E 04 F 10/06) [5]
- 9/11 Roller shutters [5]
- 9/13 with closing members of one piece, e.g. of corrugated sheet metal [5]
- 9/15 with closing members formed of slats or the like [5]
- 9/165 with slats disappearing in each other; with slats the distance between which can be altered [5]
- 9/17 Parts or details of roller shutters, e.g. suspension devices, shutter boxes, wicket doors, ventilation openings [5]
- 9/171 Rollers therefor; Fastening roller shutters to rollers [5]
- 9/172 by clamping bars
- 9/173 by clasps or buttons
- 9/174 Bearings specially adapted therefor [5]
- 9/18 Roll-type grilles [5]

- 9/24 . Screens or other constructions affording protection against light, especially against sunshine; Similar screens for privacy or appearance (operating, guiding or securing devices or arrangements for roll-type closures 9/56; free-hanging flexible screens A 47 H 23/00)
- 9/26 . . Lamellar or like blinds, e.g. venetian blinds
- 9/262 . . . with flexibly-interconnected horizontal or vertical strips; Concertina blinds
- 9/264 . . . Combinations of lamellar blinds with roller shutters, screen windows, windows, or double panes; Lamellar blinds with special devices
- 9/266 . . . Devices or accessories for making or mounting lamellar blinds or parts thereof [3]
- 9/28 . . . with horizontal lamellae, e.g. non-liftable (louvre windows or gratings 7/08)
- 9/30 liftable
- 9/302 without ladder-tape, e.g. with lazy-tongs, with screw spindle
- 9/303 with ladder-tape
- 9/304 with tilting bar and separate raising shaft
- 9/305 with tilting bar and raising cords guided along fixed bar
- 9/306 with tilting bar along which the raising cords are guided
- 9/307 Details of tilting bars or their operation
- 9/308 with coaxial tilting bar and raising shaft
- 9/32 Operating, guiding, or securing devices therefor (operation of tilting bars 9/307)
- 9/322 Details of operating devices, e.g. pulleys, brakes, spring drums, drives (devices of general interest specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material B 65 H 75/34)
- 9/323 Structure or support of upper box
- 9/324 Cord-locks
- 9/325 Immobilising devices preventing raising
- 9/326 Details of cords, e.g. buckles, drawing knobs
- 9/327 Guides for raisable lamellar blinds with horizontal lamellae
- 9/34 roller type
- 9/36 . . . with vertical lamellae
- 9/38 . . . Other details
- 9/382 Details of ladder-tapes or ladder-chains, e.g. buckles for local shortening of tapes
- 9/384 Details of interconnection or interaction of tapes and lamellae
- 9/386 Details of lamellae
- 9/388 Details of bottom or upper slats or their attachment
- 9/40 . . Roller blinds (usable only as awnings E 04 F 10/06) [5]
- 9/42 . . . Parts or details of roller blinds, e.g. suspension devices, blind boxes (brackets or adjustable mountings for roller blinds and drawable curtains A 47 H 1/13) [5]
- 9/44 Rollers therefor; Fastening roller blinds to rollers [5]
- 9/46 by clamping bars [5]
- 9/48 by clasps or buttons [5]
- 9/50 Bearings specially adapted therefor [5]
- 9/52 . Devices affording protection against insects, e.g. fly screens; Mesh windows for other purposes
- 9/54 . . Roller fly screens (operating, guiding or securing devices therefor 9/56) [2,5]
- 9/56 . Operating, guiding or securing devices or arrangements for roll-type closures; Spring drums; Tape drums; Counterweighting arrangements therefor (devices of general interest specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material B 65 H 75/34) [5]
- 9/58 . . Guiding devices [5]
- 9/60 . . Spring drums operated only by closure members [5]
- 9/62 . . Counterweighting arrangements (9/60 takes precedence) [5]
- 9/64 . . with lowerable roller [5]
- 9/66 . . with a roller situated at the bottom [5]
- 9/68 . . Operating devices or mechanisms, e.g. with electric drive [5]
- 9/70 . . . comprising an electric motor positioned outside the roller [5]
- 9/72 . . . comprising an electric motor positioned inside the roller [5]
- 9/74 . . . adapted for selective electrical or manual operation [5]
- 9/76 . . . using crank handles [5]
- 9/78 . . for direct manual operation, e.g. by tassels, by handles [5]
- 9/80 . . Safety measures against dropping or unauthorised opening; Braking or immobilising devices; Devices for limiting unrolling (securing devices or arrangements for direct manual operation 9/78) [5]
- 9/82 . . . automatic [5]
- 9/84 against dropping [5]
- 9/86 against unauthorised opening [5]
- 9/88 for limiting unrolling [5]
- 9/90 for immobilising the closure member in various chosen positions [5]
- 9/92 . . Means allowing the closures to be shifted out of the plane of the opening [5]
- 11/00 Means for allowing passage through fences, barriers, or the like, e.g. stiles** (general features of doors 1/00 to 9/00)
- 11/02 . Gates; Doors
- 11/04 . . characterised by the kind of suspension (suspensions per se E 05 D)
- 11/06 . . characterised by the kind of fastening (fastening devices for wings E 05 C)
- 11/08 . Turnstiles (on vehicles B 60 N 5/00; with registering means G 07 C 9/02)

E 06 C LADDERS (E 04 F 11/00 takes precedence; step-stools A 47 C 12/00; adaptation of ladders to use on ships B 63 B, to use on aircraft B 64; scaffolding E 04 G) [5,6]

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- 1/00 Ladders in general** (mounted on undercarriages or vehicles 5/00; permanently attached to fixed structures 9/00)
- 1/02 . . with rigid longitudinal member or members
 - 1/04 . . Ladders for resting against objects, e.g. walls, poles, trees (supports for ladder heads 7/48)
 - 1/06 in one piece
 - 1/08 multi-part
 - 1/10 Sections fitted end to end
 - 1/12 extensible, e.g. telescopic
 - 1/14 . . Ladders capable of standing by themselves
 - 1/16 with struts which rest on the ground (with struts rigid with the ladder 1/24; having platforms 1/39)
 - 1/18 with supporting struts formed as ladders
 - 1/20 with supporting struts formed as poles
 - 1/22 with extensible, e.g. telescopic, ladder parts or struts
 - 1/24 Free-standing ladders
 - 1/26 in one piece
 - 1/28 multi-part (with movable supporting struts formed as ladders 1/18)
 - 1/30 extensible, e.g. telescopic
 - 1/32 . . Ladders with a strut which is formed as a ladder and can be secured in line with the ladder
 - 1/34 . . Ladders attachable to structures, such as windows, cornices, poles, or the like (ladders permanently fastened to buildings 9/00)
 - 1/36 . . . Ladders suspendable by hooks or the like
 - 1/38 . . Special constructions of ladders, e.g. ladders with more or less than two longitudinal members, ladders with movable rungs or other treads, longitudinally-foldable ladders
 - 1/383 . . . Foldable ladders in which the longitudinal members are brought together on folding
 - 1/387 . . . having tip-up steps
 - 1/39 . . . Ladders having platforms; Ladders changeable into platforms (platforms for use on ladders 7/16)
 - 1/393 Ladders having platforms foldable with the ladder
 - 1/397 . . . characterised by having wheels, rollers, or runners
 - 1/52 . . with non-rigid longitudinal members
 - 1/54 . . of the lazy-tongs type
 - 1/56 . . Rope or chain ladders
 - 1/58 . . with both rigid and non-rigid longitudinal members
- 5/00 Ladders characterised by being mounted on undercarriages or vehicles; Securing ladders on vehicles** (ladders having wheels, rollers, or runners 1/397)
- 5/02 . . with rigid longitudinal members
 - 5/04 . . . capable of being elevated or extended
 - 5/06 by piston and cylinder, or equivalent means, operated by a pressure medium
 - 5/08 derived directly from a pressure reservoir
 - 5/10 charged by a pump or compressor driven by the motor of the vehicle or another motor on the vehicle
 - 5/12 derived directly from a pump or compressor
 - 5/14 driven by the motor of the vehicle or another motor on the vehicle
 - 5/16 using mechanical transmission only, with or without fluid or other non-mechanical couplings or clutches
 - 5/18 using power from the motor of the vehicle or another motor
 - 5/20 using hand-power (hand-operated extending means carried by the ladder 7/04)
 - 5/22 by, or with the assistance of, springs (5/06, 5/16 take precedence)
 - 5/24 . . Dismounting ladders from vehicles
 - 5/26 . . with non-rigid longitudinal members
 - 5/28 . . of the lazy-tongs type
 - 5/30 . . formed of links which reinforce themselves against each other
 - 5/32 . . Accessories
 - 5/34 . . Indicating devices
 - 5/36 . . Safety devices against slipping or falling of ladders; Safety devices against overloading ladders
 - 5/38 . . Devices for blocking the springs of the vehicle; Devices for supporting the undercarriage directly from the ground
 - 5/40 . . Devices for canting ladders laterally
 - 5/42 . . Devices for altering inclination; Latching devices therefor
 - 5/44 . . Other accessories on ladders, e.g. acoustical signalling devices, dismantlable switchboards
- 7/00 Component parts, supporting parts, or accessories**
- 7/02 . . Extending means (for ladders mounted on undercarriages or vehicles 5/00)
 - 7/04 . . Hand-operated extending means carried by the ladder
 - 7/06 . . Securing devices or hooks for parts of extensible ladders
 - 7/08 . . Special construction of longitudinal members, or rungs or other treads
 - 7/10 . . Reinforcements for ladders
 - 7/12 . . Lifts or other hoisting devices on ladders
 - 7/14 . . Holders for pails or other equipment on or for ladders
 - 7/16 . . Platforms on, or for use on, ladders, e.g. liftable or lowerable platforms (aspects relating to the lifting B 66 F)
 - 7/18 . . Devices for preventing persons from falling (life-saving belts A 62 B 1/16)

E 06 C

- 7/42 . Ladder feet; Supports therefor (for scaffolding elements [E 04 G 5/02](#))
- 7/44 . . Means for mounting ladders on uneven ground
- 7/46 . . Non-skid equipment
- 7/48 . Ladder heads; Supports for heads of ladders for resting against objects
- 7/50 . Joints or other connecting parts

- 9/00 Ladders characterised by being permanently attached to fixed structures, e.g. fire escapes**
(movable stairways [E 04 F 11/04](#))
- 9/02 . rigidly mounted

- 9/04 . . in the form of climbing irons or the like
- 9/06 . movably mounted
- 9/08 . . with rigid longitudinal members
- 9/10 . . . forming part of a building, such as a balcony grid, window grid, or other window part
- 9/12 . . . laterally displaceable
- 9/14 . . with non-rigid longitudinal members, e.g. rope or chain ladders, ladders of the lazy-tongs type