

CLASS 16, MISCELLANEOUS HARDWARE (E.G., BUSHING, CARPET FASTENER, CASTER, DOOR CLOSER, PANEL HANGER, ATTACHABLE OR ADJUNCT HANDLE, HINGE, WINDOW SASH BALANCE, ETC.)

SECTION I - CLASS DEFINITION

This class includes specific articles of hardware not otherwise classified. It comprises such articles as carpet-fasteners, door-hangers, sash-cord fasteners, sash-weights, hinges, door checks and closures, sash-balances, furniture-casters, etc.

Hardware articles such as nails, screws, staples, bolts, and rivets are classified as in References to Other Classes, below.

SECTION II - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

- 7, Compound Tools, appropriate subclasses for compound tools.
- 59, Chain, Staple, and Horseshoe Making, subclasses 78+ for chains.
- 70, Locks, appropriate subclasses for locks.
- 81, Tools, appropriate subclasses for tools.
- 292, Closure Fasteners, appropriate subclasses for bolt elements and latching devices not combined with lock structure and door checks of the door-bracing type.
- 301, Land Vehicles: Wheels and Axles, subclass 5.301 for skate wheels.
- 384, Bearings, appropriate subclasses for plain and anti-friction bearings, per se.
- 411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, appropriate subclasses for fastening elements of the kinds provided for therein.

SECTION III - GLOSSARY

HINGE AXIS

Any axis about which a hinged member* rotates during operation of the hinge.

HINGED MEMBER

Any device or portion thereof (e.g., closure, seat back,

etc.) which is adapted to be swingably connected by a hinge to another device or portion thereof (e.g., frame, box, sill, etc.).

HINGE PIN

An elongated rodlike element about which a hinged member* swings (e.g., "pintle").

LEAF

A rod or platelike portion by which the hinge is adapted to be secured to a hinged member*.

SUBCLASSES

2.1 BUSHING:

This subclass is indented under the class definition. Device comprising an annular sleeve to line an opening which extends through the interior of a structure to (a) prevent the abrasion of any elements passing through the opening or the structure itself or (b) fortify the opening.

- (1) Note. The device of this subclass may have any of a variety of means for fastening it to the wall of the opening such as a weld or a compression ring. The opening may be the end of a pipe or other conduit.
- (2) Note. In a claim proper for this subclass as much of the device having the opening (e.g., pipe) may be included as is necessary to define the bushing.
- (3) Note. A grommet is considered appropriate for this subclass since it includes structure that extends through an opening having a substantially planar exterior surface.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 2.2, for a bushing with a sealing means.
- 2.3, for a bung or tap bushing.

SEE OR SEARCH CLASS:

- 12, Boot and Shoe Making, for a bushing used during the manufacture of shoes.
- 24, Buckles, Buttons, Clasps, etc., for subject matter claiming interfitting fasteners, where one is embedded in

- the structure and intending to receive the other.
- 174, Electricity: Conductors and Insulators, especially subclass 83, for a bushing limited by structure for use with an electric conduits or cables, subclass 136 for anti-abrasion devices, subclasses 152+ for wall mounted insulators of the bushing type, and subclasses 153+, 154+, and 167 for other bushing insulators.
- 217, Wooden Receptacles, subclasses 98+ for a bung and particularly subclass 113 for a bushing combined with a bung.
- 226, Advancing Material of Indeterminate Length, may include a nominal recitation of a supply or take-up coil (e.g., less than a support for such a coil or a cooperative relationship between a tension or exhaust detector and reel driving or reel stopping means, etc.), subclass 196.1 for a passive guide combined with a material feeder.
- 242, Winding, Tensioning, or Guiding, subclasses 615+ for a residual guide or guard that directs elongated flexible material or one combined with more than nominal winding structure.
- 250, Radiant Energy, subclasses 466.1+ for self luminous sources or attachments therefor and subclasses 483.1+ for fluorescent and phosphorescent plates and escutcheons.
- 285, Pipe Joints or Couplings, subclasses 130 and 213 for a bushing or lining for an opening intended to receive a pipe.
- 384, Bearings, subclasses 276+ for a sleeve or liner intended to serve as a bearing.
- 408, Cutting by use of Rotating Axially Moving Tool, subclass 241 for a bushing used to guide a drill bit.
- 439, Electrical Connectors, especially subclasses 207+ for an electrical connector combined with a conduit which may include a bushing.
- 2.2 Providing a restricted or insulated environment (i.e., sealable) for internal elements:**
This subclass is indented under subclass 2.1. Bushing particularly adapted to prevent the flow of heat or material from one side of the structure to the other.
- (1) Note. Included herein are firebreak devices, which prevents smoke and flames from traveling through a wall along the axis of a conduit, and means to insulate electrical conduits.
- 2.3 Bung or tap:**
This subclass is indented under subclass 2.1. Bushing for use in an opening in the wall of a liquid storage container (e.g., a barrel or keg) adapted to receive a plug or valve means to facilitate flow of the liquid into or out of the container.
- SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 320+, for a valved closure i.e., a tap for a pipe or keg.
217, Wooden Receptacles, subclasses 98+ for a bung and particularly subclass 113 for the combination of a bung with a bushing.
220, Receptacles, appropriate subclasses, for a receptacle combined with a tap means.
- 2.4 Threaded:**
This subclass is indented under subclass 2.3. Subject matter including a helical cooperating portion in the interior adapted to threadingly engage a cooperating helical portion on the exterior of the bung or tap to secure the bushing in place.
- 2.5 Providing strain relief:**
This subclass is indented under subclass 2.1. Subject matter claiming means to relieve externally exerted loads on elements passing through the annular member.
- 4 CARPET FASTENERS:**
This subclass is indented under the class definition. Devices comprising fastening devices for securing carpets rugs, and floor-coverings in extended position upon floors.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 17.1, for a rug antislip or stiffener attachment, per se, in combination with a rug, where no more of the rug structure is recited than is necessary to support the attachment.
- SEE OR SEARCH CLASS:
 24, Buckles, Buttons, Clasps, etc., subclass 311 for combined fasteners of the buckle, button or clasp type; subclasses 706+ for pin fasteners; subclass 572 for separable fasteners and subclass 455 for clasps.
 411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, appropriate subclasses for fasteners in which the floor penetrating member is an integral part of the fastener.
- 5 Combined fasteners and stretchers:**
 This subclass is indented under subclass 4. Devices for stretching and holding carpets and rugs in stretched position upon floors.
- 6 Hook:**
 This subclass is indented under subclass 4. Devices comprising hook devices.
- 7 Moldings:**
 This subclass is indented under subclass 4. Devices including floor-moldings.
- 8 Rug:**
 This subclass is indented under subclass 4. Devices for securing rugs in extended position upon carpets or floor-coverings.
- 9 Sliding:**
 This subclass is indented under subclass 4. Devices of the sliding type.
- SEE OR SEARCH CLASS:
 411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, subclasses 439+ for impact driven fasteners.
- 10 Stair:**
 This subclass is indented under subclass 4. Devices for securing stair-carpets in extended position upon stairs.
- 11 Risers:**
 This subclass is indented under subclass 10. Devices for securing stair-carpets in extended position upon or adjacent to stair-risers.
- 12 Rods:**
 This subclass is indented under subclass 10. Devices of the rod type.
- 13 Catches:**
 This subclass is indented under subclass 12. Devices having catch devices for holding the rods in adjusted position.
- 14 Sliding:**
 This subclass is indented under subclass 13. Devices of the sliding type.
- 15 Swinging:**
 This subclass is indented under subclass 13. Devices of the swinging type.
- 16 Strips:**
 This subclass is indented under subclass 4. Devices comprising binding-strips.
- 17 Swinging:**
 This subclass is indented under subclass 4. Devices of the swinging type.
- 17.1 CARPET STIFFENER OR ANTI-SLIP DEVICE, PER SE:**
 This subclass is indented under the class definition. Subject matter adapted for attachment to a fabric type floor covering, i.e., a rug, especially to maintain the rug in a flattened condition or to prevent the rug from sliding on the floor.
- (1) Note. A carpet stiffener or anti-slip device combined with a carpet is not included herein; however, the device of this subclass may include the carpet structure necessary to support the device.
- (2) Note. Included herein is a carpet stiffener attached to the corners of a carpet.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
4+, for a carpet fastener used to secure a rug or carpet to the floor.
- SEE OR SEARCH CLASS:
24, Buckles, Buttons, Clasps, etc., especially subclass 311 for a combined diverse multi part fastener of the buckle, button or clasp type, subclasses 455+ for a clasp, subclasses 572+ for a separable fastener and subclasses 706+ for a pin fasteners.
139, Textiles: Weaving, subclasses 391+ for a carpet, including a carpet combined with a carpet stiffener or with an anti-slip device.
411, Expanded, Threaded, Driven, Headed, Tool Deformed, or Lock Threaded Fastener, for a fastener in which a floor penetrating member is an integral part of the fastener.
- 18 CASTERS:**
This subclass is indented under the class definition. Casters comprising wheels, balls or sliding shoes mounted for movably supporting furniture and other like objects.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
97, and see the Notes appended thereto, for wheel mounts for panel hangers or travelers.
- SEE OR SEARCH CLASS:
211, Supports: Racks, subclass 74 for condiment cruets and stands entitled casters.
- 19 Adjustable:**
This subclass is indented under subclass 18. Casters having vertically adjustable means for the wheel or pintle.
- SEE OR SEARCH CLASS:
280, Land Vehicles, subclasses 43+ for vehicles having vertically adjustable wheels.
- 20 Antifrictionally swiveled:**
This subclass is indented under subclass 18. Casters which are antifrictionally swiveled.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
48, for multiple wheel casters antifrictionally swiveled.
- 21 Ball:**
This subclass is indented under subclass 20. Casters in which the casters antifrictional swiveling means comprises balls.
- 22 Cylinder:**
This subclass is indented under subclass 20. Casters in which the antifrictional swiveling means comprises cylinders.
- 23 Pivoted:**
This subclass is indented under subclass 22. Casters in which the cylinders are pivoted.
- 24 Ball:**
This subclass is indented under subclass 18. Casters comprising balls.
- 25 Antifrictionally mounted:**
This subclass is indented under subclass 24. Casters having antifrictional mounting means.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
46, for caster wheels having antifrictionally mounting means.
- 26 Ball:**
This subclass is indented under subclass 25. Casters in which the antifrictional mounting means comprises balls.
- 27 Cylinder:**
This subclass is indented under subclass 25. Casters in which the antifrictional mounting means comprises cylinders.
- 28 Pivoted:**
This subclass is indented under subclass 24. Casters in which the balls are pivoted in the caster-frames with or without antifriction means.
- 29 Bracket supports:**
This subclass is indented under subclass 18. Devices comprising corner braces or brackets for mounting casters.

- 30 Detachable:**
This subclass is indented under subclass 18. Casters bodily separable from the article supported.
- 31 Frame:**
This subclass is indented under subclass 18. Casters having a wheel mount or horn of specific construction.
- 32 Leg elevators:**
This subclass is indented under subclass 18. Devices having means for supporting the caster or leg in raised or lowered position above or upon the floor.
- SEE OR SEARCH CLASS:
280, Land Vehicles, subclasses 43.14+ for vehicles having nonwheel means for engaging the vehicle supporting surface.
- 33 Sliding:**
This subclass is indented under subclass 32. Devices slidably mounted for supporting the caster or leg in raised or lowered position above or upon the floor.
- 34 Swinging:**
This subclass is indented under subclass 32. Devices pivotally mounted for supporting the caster or leg in raised or lowered position above or upon the floor.
- 35 Locked:**
This subclass is indented under subclass 18. Casters having means for fastening the caster-wheels or caster-mounts against movement.
- 36 Lubricators:**
This subclass is indented under subclass 18. Casters having means for lubricating the pintles or wheels.
- 37 Pintles:**
This subclass is indented under subclass 18. Casters having pintles of specific construction.
- 38 Pintle retainers:**
This subclass is indented under subclass 18. Casters having specific means for retaining the pintles in their sockets or bearings.
- 39 Frame:**
This subclass is indented under subclass 38. Casters in which the caster-pintles are provided with pintle-retaining frames.
- 40 Rigid wheel supports:**
This subclass is indented under subclass 18. Casters which are nonswiveling and have rigid wheel-mounts.
- 41 Scrapers:**
This subclass is indented under subclass 18. Casters having scrapers for engaging the caster-wheels.
- 42 Sliding:**
This subclass is indented under subclass 18. Casters comprising rounded sliding shoes for furniture and the like.
- SEE OR SEARCH CLASS:
248, Supports, subclass 188.9 for an attachment for a furniture leg or foot to prevent sliding, e.g., pad, antiskid device.
- 43 Sockets:**
This subclass is indented under subclass 18. Casters comprising sockets of specific construction.
- 44 Spring supported:**
This subclass is indented under subclass 18. Casters having means for resiliently supporting furniture and the like.
- 45 Wheels:**
This subclass is indented under subclass 18. Casters having wheels of specific construction.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
107, for wheels on panel hangers.
- SEE OR SEARCH CLASS:
301, Land Vehicles: Wheels and Axles, subclass 5.301 for skate wheels.
492, Roll or Roller, for a roll, per se, not elsewhere provided for, and see the notes thereunder.

- 46 Antifrictionally mounted:**
This subclass is indented under subclass 45. Caster-wheels having antifriction-bearings comprising balls or cylinders.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
98, for panel hanger and traveler wheels which are antifrictionally mounted.
- 47 Multiple:**
This subclass is indented under subclass 45. Casters having a plurality of floor-engaging wheels.
- 48 Antifrictionally swivelled:**
This subclass is indented under subclass 47. Devices having antifrictional swiveling bearings comprising balls and cylinders.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
20+, for other antifrictionally swiveled casters.
- 48.5 THERMALLY RELEASED CHECK OR CLOSER:**
This subclass is indented under the class definition. Device including means for holding a closure open or for maintaining a closing device inoperative, said means including an element disabled at a predetermined temperature, or rate of change thereof, to release the closure or closer for movement.
- (1) Note. The means for holding the closure open are usually associated with a closing device, so that release of the holder permits the device to act.
- SEE OR SEARCH CLASS:
49, Movable or Removable Closures, subclasses 7+ for a thermally released check or closer combined with a closure of that class, and see the search notes thereto for the loci of other thermally released devices. This class (16) takes patents which claim only enough of the closure or its supporting frame as is necessary to mount the check or closer.
- 49 CHECKS AND CLOSERS:**
This subclass is indented under the class definition. Devices for closing doors and the like, and checking them against slamming.
- (1) Note. The closing force is usually derived from spring means associated with the device.
- SEE OR SEARCH CLASS:
49, Movable or Removable Closures, subclass 137 for an interrelated fluid operator and closure check.
- 50 Hinge:**
This subclass is indented under subclass 49. Devices combined with hinge structure.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
54, for liquid type checks combined with hinge structure.
68, for pneumatic type checks combined with hinge structure.
221+, for hinge structure, per se.
- 51 Liquid:**
This subclass is indented under subclass 49. Devices the checking devices including liquid acting as the checking means.
- 52 Concentric spring chamber:**
This subclass is indented under subclass 51. Devices in which the spring-chamber is within or concentric with the liquid-chamber.
- 53 Cam:**
This subclass is indented under subclass 52. Devices having cam-operating means for the pistons.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
60, for cam-operating structure in side spring chamber checks.
- 54 Hinge:**
This subclass is indented under subclass 51. Devices combined with hinge structure.
- 55 Floor pivot:**
This subclass is indented under subclass 54. Devices the hinges having floor-pivots.

- 56 Multiple piston:**
This subclass is indented under subclass 51. Devices including a plurality of cylinders and pistons.
- 57 Oscillating cylinder:**
This subclass is indented under subclass 51. Devices including oscillating cylinders.
- 58 Oscillating piston:**
This subclass is indented under subclass 51. Devices including cylinders having oscillating pistons.
- 59 Side spring chamber:**
This subclass is indented under subclass 51. Devices in which the spring-chambers are at one side and at right angles to the checking-cylinders.
- 60 Cam:**
This subclass is indented under subclass 59. Devices having cam or eccentric operating means for the pistons.
- 61 Spring and flexible link:**
This subclass is indented under subclass 51. Devices in which the closing devices include springs and flexible links.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
63, for springs and flexible link checks, per se.
78, for spring and flexible link type door closers.
- 62 Spring and gear:**
This subclass is indented under subclass 51. Devices in which the closing devices include springs and gear elements.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
64, for spring and gear checks, per se.
69, for pneumatic checks including spring and gear elements.
79, for spring and gear type door closers.
- 63 Spring and flexible link:**
This subclass is indented under subclass 49. Devices in which the closing devices include springs and flexible links.
- 64 Spring and gear:**
This subclass is indented under subclass 49. Devices in which the closing devices include springs and gear elements.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
69, for pneumatic checks including spring and gear elements.
79, for spring and gear type door closers.
- 65 Spring and lever:**
This subclass is indented under subclass 49. Devices in which the closing devices include springs and lever elements.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
70, for pneumatic checks including spring and lever elements.
80, for spring and lever type door closers.
- 66 Pneumatic:**
This subclass is indented under subclass 49. Devices the checking devices including pneumatic checking means.
- 67 Flexible link:**
This subclass is indented under subclass 66. Devices in which the closing devices include flexible elements.
- 68 Hinge:**
This subclass is indented under subclass 66. Devices combined with hinge structure.
- 69 Spring and gear:**
This subclass is indented under subclass 66. Devices in which the closing devices include springs and gear elements.
- 70 Spring and lever:**
This subclass is indented under subclass 66. Devices in which the closing devices include springs and lever elements.
- 71 CLOSERS:**
This subclass is indented under the class definition. Closing devices for doors and the like.

- SEE OR SEARCH CLASS:
49, Movable or Removable Closure, subclasses 386+ for a closure mounted for swinging movement combined with a means to bias it in one direction.
- 72 Spring:**
This subclass is indented under subclass 71. Devices including miscellaneous spring elements.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
78, 79 and 80, for springs combined with other elements for closing doors.
85+, for spring devices for checking a closure.
- SEE OR SEARCH CLASS:
124, Mechanical Guns and Projectors, subclasses 7+ for spring devices actuating projectile-throwing arms and subclasses 16+ for spring devices actuating a plunger or other device to impel a projectile.
- 73 Bow:**
This subclass is indented under subclass 72. Devices in which the spring elements are substantially bowed or U-shaped.
- 74 Rubber:**
This subclass is indented under subclass 72. Devices in which the spring elements are composed of rubber.
- 75 Torsional:**
This subclass is indented under subclass 72. Devices in which the spring elements are subjected to torsional stresses.
- 76 Coil:**
This subclass is indented under subclass 75. Devices in which the torsional spring elements are wholly or in part in the form of coils.
- 77 Volute:**
This subclass is indented under subclass 72. Devices in which the spring elements are in form of volute coils.
- 78 Spring and flexible link:**
This subclass is indented under subclass 71. Devices including springs, and inks for connecting the springs to the doors or closures.
- 79 Spring and gear:**
This subclass is indented under subclass 71. Devices including springs, and gears or rack-and-pinion elements for connecting the springs to the doors or closures.
- 80 Spring and lever:**
This subclass is indented under subclass 71. Devices including springs, and lever elements for connecting the springs to the doors or closures.
- 81 Weight:**
This subclass is indented under subclass 71. Devices including gravitating weights and connecting elements.
- SEE OR SEARCH CLASS:
49, Movable or Removable Closures, subclass 387 for a swinging closure biased in one direction by a separate weight.
- 82 CLOSURE CHECKS:**
This subclass is indented under the class definition. Buffers, antislamming devices and stops for doors, drawers and the like.
- SEE OR SEARCH CLASS:
109, Safes, Bank Protection, or a Related Device, subclass 63.5 for the combination of a receptacle, a closure, closure fastening means, and means to prevent closing of the closure under abnormal conditions.
292, Closure Fasteners, subclasses 341.12+ for keepers including or combined with buffers or cushioning means.
- 83 Inertia:**
This subclass is indented under subclass 82. Devices including inertia elements or movable cushioning means.
- 84 Pneumatic:**
This subclass is indented under subclass 82. Devices including pneumatic checking means.

- SEE OR SEARCH CLASS:
188, Brakes, subclasses 297+ for a dash-pot or shock absorber of general utility.
- 85 Spring:**
This subclass is indented under subclass 82. Devices including spring cushioning means, unless otherwise classified.
- 86 Rubber:**
This subclass is indented under subclass 85. Devices in which the spring means is composed largely of rubber or the like.
- 86.1 GATE HANGERS:**
This subclass is indented under the class definition. Supporting devices or hangers for sliding gates and the like.
- 86.2 Sliding and swinging:**
This subclass is indented under subclass 86.1. Devices in which the gate may have both a horizontal translational and a lateral swinging movement.
- 87 PANEL HANGERS, TRAVELERS AND/OR TRACKS:**
This subclass is indented under the class definition. Movable supporting devices and/or tracks for sliding panels of either rigid or flexible nature, not otherwise classified. The combination of the device or track with its support and/or with the article supported will also be found here, where the characteristics of the supported article (other than those which directly cooperate with the supporting device or track) are not claimed.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
86.1+, for hangers for sliding gates.
- SEE OR SEARCH CLASS:
104, Railways, subclass 93 for suspended railways of the single rail type.
105, Railway Rolling Stock, subclasses 150+ for suspended railway rolling stock of the single rail type.
160, Flexible or Portable Closure, Partition, or Panel, subclasses 19+, 123+ and 330+ for closures, partitions and
- panels, having hangers travelers and track devices.
- 296, Land Vehicles: Bodies and Tops, subclasses 210+ for land vehicles having specific top structure having an opening therein with closure means for said opening slidable on track means.
- 87.2 With flexible panel attaching means:**
This subclass is indented under subclass 87. Devices wherein some means for attaching a flexible fabric panel to the device and capable of travel along the track or hanger is claimed.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
87+, for devices in which the fastening means is for a rigid panel (usually in the form of bolts, screws or their equivalents).
93, and 97+, for the traveler element, per se, without any antifriction means.
94+, for the track element with or without its mounting means.
- SEE OR SEARCH CLASS:
24, Buckles, Buttons, Clasps, etc., subclass 716 for a hanger (e.g., hook) on a portable article support.
180, Motor Vehicles, subclasses 19 and 340+ for this same combination including in addition means for operating the panel structure.
- 87.4 Covered, hollow or slotted track:**
This subclass is indented under subclass 87.2. Devices wherein the track (1) has a shield or protecting hood covering the same, or (2) is an elongated element, longitudinally slotted or hollow, in which the traveler portion moves, and from which the panel or panel carrying portion extends to the exterior of the hollow or slotted elongated element.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
94, for track elements with their supporting brackets.
96, for the track element, per se.

- SEE OR SEARCH CLASS:
160, Flexible or Portable Closure, Partition, or Panel, subclasses 19 and 345 for other hollow or slotted track combined with closures etc.
- 87.6 With antifriction means:**
This subclass is indented under subclass 87.4. Devices in which antifriction means is used between the traveler and the track.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
88, 89 and 97+, for traveler elements, per se, equipped with either balls, rollers or wheels.
- SEE OR SEARCH CLASS:
104, Railways, subclass 93 for suspended railways of the single rail type.
105, Railway Rolling Stock, subclass 150 for suspended railway rolling stock of the single rail type.
160, Flexible or Portable Closure, Partition, or Panel, subclasses 19 and 346 for hollow or slotted track with antifriction means, combined with closures, etc.
- 87.8 With antifriction means:**
This subclass is indented under subclass 87.2. Devices in which antifriction means is used between the traveler and the track.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
87.6, for antifriction means with hollow, slotted or covered tracks.
88, 89 and 97+, for traveler elements, per se, equipped with either balls, rollers or wheels.
- SEE OR SEARCH CLASS:
104, Railways, subclass 93 for suspended railways of the single rail type.
105, Railway Rolling Stock, subclass 150 for suspended railway rolling stock of the single rail type.
160, Flexible or Portable Closure, Partition, or Panel, subclasses 19 and 347 for antifriction means.
- 88 Ball:**
This subclass is indented under subclass 87. Devices having rolling elements in the form of balls.
- 89 Cylinder:**
This subclass is indented under subclass 87. Devices having rolling elements in the form of cylinders.
- 90 Guide brackets:**
This subclass is indented under subclass 87. Guiding devices for the lower edges of sliding panels and the like.
- 91 Guide rollers:**
This subclass is indented under subclass 87. Brackets carrying guide or stay rollers for the edges of sliding panels and the like.
- 92 Link and lever:**
This subclass is indented under subclass 87. Movable supporting-hangers for sliding panels and the like, the supporting means composed largely of link and lever elements.
- SEE OR SEARCH CLASS:
160, Flexible or Portable Closure, Partition, or Panel, subclasses 194+, 333+, and 368.1+ for movable position types of flexible and portable panels.
- 93 Sliding shoe:**
This subclass is indented under subclass 87. Sliding supporting means for panels and the like, the supporting means including tracks and sliding shoes.
- (1) Note. The ring type combinations have been placed in this subclass (Class 16, subclass 93).
- SEE OR SEARCH CLASS:
24, Buckles, Buttons, Clasps, etc., subclass 311 for combined fasteners of general application, even if disclosed as flexible panel travelers. These include particularly the hook-type devices, e.g., the hook-hook, hook-clasp and hook-pin hangers.

94 Track and bracket:

This subclass is indented under subclass 87. Tracks as defined in subclass 96 combined with supporting brackets.

SEE OR SEARCH CLASS:

- 104, Railways, subclasses 89 through 111 for suspended railway structures and subclasses 106+ for the suspended rail structures with or without their supports.
- 211, Supports: Racks, subclass 105.1 (and see the notes thereunder), for single horizontal rod type devices and their supports.
- 248, Supports, subclasses 200+ for bracket supports, per se, and particularly subclasses 261+ for horizontal curtain rod brackets.

95 Covered, hollow or slotted track:

This subclass is indented under subclass 87. Devices wherein the track as defined in subclass 96 below (1) has a shield or protecting hood covering the same, (2) is an elongated element longitudinally slotted or hollow in which the traveler portion moves and from which the panel or panel carrying portion of the traveler extends to the exterior of the hollow or slotted elongated element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 87.4+, for covered hollow or slotted track combined with flexible panel attaching means.
- 94, for tracks of this type combined with supporting brackets.

SEE OR SEARCH CLASS:

- 104, Railways, subclasses 89 through 111 for suspended railway structures and particularly subclass 106 for the suspended rail structures with or without their supports.
- 160, Flexible or Portable Closure, Partition, or Panel, subclasses 345+ for hollow or slotted track combined with closures, etc.
- 191, Electricity: Transmission to Vehicles, subclasses 22+ (especially subclasses 23+ and 30+) for similar structure for

transmitting electrical energy to moving vehicles.

96 Tracks:

This subclass is indented under subclass 87. Tracks or track devices for sliding panels of either rigid or flexible nature.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 94, for tracks of this type combined with supporting brackets and see the notes appended thereto.
- 95, for covered tracks of this type, and see the notes appended thereto.

SEE OR SEARCH CLASS:

- 104, Railways, subclasses 89 through 111 for suspended railway structures and particularly subclass 106 for the suspended rail structures with or without their supports.
- 238, Railways: Surface Track, subclass 238, appropriate subclasses for railway surface track.

97 Wheel mounts:

This subclass is indented under subclass 87. Wheel-supporting frames or brackets for sliding panels not otherwise classified.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 18+, (especially subclasses 45+ for other wheel mounts).

SEE OR SEARCH CLASS:

- 280, Land Vehicles, subclasses 11.19+ for skates provided with wheels.
- 295, Railway Wheels and Axles, pertinent subclasses.
- 301, Land Vehicles: Wheels and Axles, subclasses 124.1+ for axles, per se.
- 474, Endless Belt Power Transmission Systems or Components, various subclasses for a pulley or guide roll associated with an endless belt power transmission.

98 Antifrictionally mounted wheels:

This subclass is indented under subclass 97. Devices the wheels having antifriction-rollers.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
46+, for caster wheels.
- SEE OR SEARCH CLASS:
384, Bearings, appropriate subclasses for plain and anti-friction bearing, per se.
- 99 Door elevating:**
This subclass is indented under subclass 97. Devices combined with lever means or the like for releasing and elevating the panels or wheel-supporting frames.
- 100 Floor:**
This subclass is indented under subclass 97. Devices in which the frames or brackets are carried by the lower parts of the panels or floor.
- 101 Reciprocating track:**
This subclass is indented under subclass 97. Devices having reciprocating tracks secured to the tops of sliding panels and the like.
- 102 Traveling wheel:**
This subclass is indented under subclass 97. Devices in which the wheel-journals roll upon the frames or brackets.
- 103 Swinging:**
This subclass is indented under subclass 97. Devices which are pivotally connected whereby the panels may be swung transversely.
- 104 Swiveling:**
This subclass is indented under subclass 97. Devices which are vertically pivoted to provide for swiveling of the wheel-mount or panel.
- 105 Vertically adjustable:**
This subclass is indented under subclass 97. Devices having means for vertical adjustment of the panels.
- 106 Wheel and guide roller:**
This subclass is indented under subclass 97. Devices having one or more guide-rollers for guiding the panels and wheel-mounts.
- 107 Wheels:**
This subclass is indented under subclass 87. Devices having wheels of specific construction.
- 108 FERRULES, RINGS, AND THIMBLES:**
This subclass is indented under the class definition. Devices comprising annular protective bands, caps, or collars to be applied to the exterior of rods, pipes, conduits, strands or other devices to reinforce the same and/or to prevent abrasion of elements passing therethrough into an opening in the rod, pipe, conduit, etc.
- (1) Note. These devices have various means for fastening them to the device to which they are applied.
- (2) Note. So much of the device to which they are applied may be claimed as is necessary to the definition of the ferrule, ring or thimble or its fastening means.
- SEE OR SEARCH CLASS:
29, Metal Working, subclass 277 for impact-receiving thread-protectors used to facilitate assembly or disassembly of a threaded part, such as a vehicle axle.
- 135, Tent, Canopy, Umbrella, or Cane, subclasses 77+ for ferrules on tips of umbrellas, canes or crutches.
- 138, Pipes and Tubular Conduits, subclass 96 for pipe end protectors.
- 174, Electricity: Conductors and Insulators, subclass 82 for similar devices limited by claimed structure to use with electric conduits or cables.
- 226, Advancing Material of Indeterminate Length, may include a nominal recitation of a supply or take-up coil (e.g., less than a support for such a coil or a cooperative relationship between a tension or exhaust detector and reel driving or reel stopping means, etc.), subclass 196.1 for a passive guide combined with a material feeder.
- 242, Winding, Tensioning, or Guiding, subclasses 615+ for a residual guide or guard that directs elongated flexible material or one combined with more than nominal winding structure.
- 403, Joints and Connections, subclasses 299+ for a plurality of rods connected by a coupling ferrule.

109 Ring ferrules:

This subclass is indented under subclass 108. Devices substantially in the form of rings.

110.1 HANDLE, HANDLE COMPONENT, OR HANDLE ADJUNCT:

This subclass is indented under the class definition. Subject matter, not otherwise classified, wherein the device comprises (1) a construction which is attached or intended to be attached to a number of implements (e.g., utensil, appliance, tool, etc.) or such items as movable structures (e.g., door or drawer, etc.) or carried means (e.g., luggage, casket, container, etc.) for the purpose of manipulating such, (2) a subcombination of such a construction, or (3) an accessory which cooperates with the construction while it is attached for use.

- (1) Note. The inclusion of the structure of a handle shaft will not exclude a reference from classification in this subclass.
- (2) Note. Handles in other classes.
- (3) Note. The following See or Search Class notes include six subject areas as indicated: (1) for receptacles, (2) for tools, implements, and analogous devices, (3) for handles, handtools, and analogous devices for operating mechanisms, (4) for boat, buoy, and vehicle handholds and handles, (5) for handling fastening devices, and (6) other handles and attachments or attaching means.

SEE OR SEARCH CLASS:

- 5, Beds, subclass 662 for handles and handholds for assisting rising from a bed, subclasses 466+ for mattress handles; and subclasses 658+ for bed accessories. (For other handles, and attachments or attaching means, as indicated).
- 7, Compound Tools, subclasses 167+ compound tool handles and holders. (For tools, implements, and analogous devices).
- 15, Brushing, Scrubbing, and General Cleaning, subclasses 22.1+, 79.1+, 143.1+, 222, 327.1+, 329, 335, 344, 350+, 361, and 410+ for handles associated with brushing, scrubbing or

cleaning devices (For tools, implements, and analogous devices); subclasses 146, 147.1+, and 148 for holders for brushes, brooms and mops (For handle fastening devices).

29, Metal Working, subclass 161 for processes of manufacture of knobs and knob shanks. (For other handles, and attachments or attaching means, as indicated).

30, Cutlery, subclasses 340+ connections between handles and cutting tools (for handle fastening devices); subclasses 85+, 329+, 340+ for handles for razors, and connections between handles and detachable blades, and subclasses 491 handle for a plane, and 517+ for a saw handle. (For tools, implements, and analogous devices).

36, Boots, Shoes, and Leggings, subclass 56 bootstraps. (For other handles, and attachments or attaching means, as indicated).

38, Textiles: Ironing or Smoothing, subclasses 90+ handles for flat irons. (For tools, implements, and analogous devices).

42, Firearms, subclasses 7 and 71.02+ for handles and grips for firearms. (For tools, implements, and analogous devices).

43, Fishing, Trapping, and Vermin Destroying, subclass 23 handles or butts for fishing rods. (For tools, implements, and analogous devices).

49, Movable or Removable Closures, subclasses 460+ for a push or pull bar mounted on a closure and in combination therewith. (For other handles, and attachments or attaching means, as indicated).

53, Package Making, subclasses 134.1+ for a packaging machine which also applies a handle to a package as an adjunct to the cover therefor. (For other handles, and attachments or attaching means, as indicated).

70, Locks, subclasses 192+, 207+ and 225+ for locks and latch mechanisms for handles, hand wheels and levers. (For other handles, and attachments or attaching means, as indicated).

- 74, Machine Element or Mechanism, subclasses 543+ handles, handle bars, hand wheels for machine elements. (For handles, handwheels, and analogous devices for operating mechanisms).
- 76, Metal Tools and Implements, Making, subclass 106 blanks and processes for making hollow cutlery handles. (For other handles, and attachments or attaching means, as indicated).
- 81, Tools, subclasses 119+ for rigid jaw wrenches, subclasses 177.1+ for wrench handle and shanks, subclass 427.5 for plier handles, subclass 487 for a hand held holder, and subclasses 489+ for a general tool handle which is not disclosed for use with a particular type of handtool. (For tools, implements, and analogous devices).
- 101, Printing, subclasses 405+ for printing stamp handles. (For tools, implements, and analogous devices).
- 105, Railway Rolling Stock, subclass 461 grab irons. (For boat, buoy, and vehicle handholds and handles).
- 116, Signals and Indicators, subclass 172 for bell pulls, cranks and push buttons. (For handles, handwheels and analogous devices for operating mechanisms).
- 119, Animal Husbandry, subclass 633 for handle detail for animal comb. (For tools, implements, and analogous devices).
- 132, Toilet, subclass 76.5 for separable holders for abrader, file, or buffer. (For tools, implements, and analogous devices).
- 135, Tent, Canopy, Umbrella, or Cane, subclasses 65+ handles for canes and umbrellas. (For tools, implements, and analogous devices).
- 150, Purses, Wallets, and Protective Covers, subclasses 107+ for handles for pocketbooks. (For receptacles).
- 172, Earth Working, subclasses 329+ for earth working tools with handles. (For tools, implements, and analogous devices).
- 173, Tool Driving or Impacting, appropriate subclass for a manipulating handle combined with a tool drive or impacting device, and particularly subclasses 168+ for a handle having a passage for drive motor motive fluid, and subclass 170 for a manipulating handle having a drive control operable by the engaging hand. (For tools, implements, and analogous devices).
- 190, Trunks and Hand-Carried Luggage, subclass 39 for handles on trunks, and subclasses 115+ for handles on hand luggage. (For receptacles).
- 200, Electricity: Circuit Makers and Breakers, subclass 61.85 for handle for special application switch. (For handles, handwheels and analogous devices for operating mechanisms).
- 217, Wooden Receptacles, subclass 125 handles on baskets. (For receptacles).
- 220, Receptacles, subclass 696 for container with structure for lifting, subclass 710.5 for drinking device with handle and subclasses 752+ for receptacle handle, handle component or handle adjunct. (For receptacles).
- 222, Dispensing, subclasses 323+, 441+ and 465.1+, handles or handgrips connected to a supply or dispenser container for handling the dispenser. (For receptacles).
- 229, Envelopes, Wrappers, and Paperboard Boxes, subclasses 117.09+ for a handle combined with a paperboard box. (For receptacles).
- 239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 154, 175, 375+ and 525+ for fluid discharging devices having handles for manipulation thereof, with or without vehicular or other type of supply container. (For tools, implements, and analogous devices).
- 244, Aeronautics and Astronautics, subclass 129.1 handles on aircraft. (For boat, buoy, and vehicle handholds and handles).
- 248, Supports, subclass 145.6 for movable receptacle supports with handles. (For receptacles).
- 250, Radiant Energy, subclass 465.1 self-luminous handles or attachments therefore and subclass 483.1 for fluorescent and phosphorescent handles.

- (Other handles, and attachments or attaching means, as indicated).
- 279, Chucks or Sockets, appropriate subclasses for connections of the chuck or socket type. (For handle fastening devices).
- 280, Land Vehicles, subclasses 242.1+ for hand propelled wheeled vehicle. (For boat, buoy, and vehicle handholds and handles).
- 292, Closure Fasteners, subclasses 348+ connections between knobs and latch spindles. (For handle fastening devices); subclasses 347 and 348+ for latch spindle operating knobs and connections. (For handles, handwheels and analogous devices for operating mechanisms).
- 294, Handling: Hand and Hoist-Line Implements, subclasses 57+ for hand fork and shovel handles (For tools, implements, and analogous devices); subclasses 27.1+ for a removable handle or handling device for a plate or receptacle wherein there is no particular modification on the plate or receptacle for reception of the handle or handling device and subclass 137 for article carriers gripped and carried by the hand, especially subclasses 170 and 171 for handles having article-engaging hooks or grooves for accommodating twine around a package. (For other handles, and attachments or attaching means, as indicated).
- 296, Land Vehicles: Bodies and Tops, subclasses 71+ handles on vehicle dashboards. (For boat, buoy, and vehicle handholds and handles).
- 297, Chairs and Seats, subclasses 183.1+ for a chair or seat having handles for carrying, or for steadying a standing person adjacent to the seat, as in a bus or train. (For boat, buoy, and vehicle handholds and handles).
- 359, Optical: Systems and Elements, subclass 882 for mirrors and reflectors including a handle. (For tools, implements, and analogous devices).
- 362, Illumination, subclass 399 handles and bails for lighting supports. (For other handles, and attachments or attaching means, as indicated.)
- 383, Flexible Bags, for subclasses 6+ for a handle combined with a flexible bag. (For receptacles).
- 401, Coating Implements With Material Supply, for hand-manipulable coating implements with material supply, in which the following subclasses may include patents to implements with significant handle structure: 3, heat insulating handle; 6+, with means to attach or conform to a body member of the user; 48, with means to support or stabilize implement while in use; 88+, pencil, or the like; 99+, including means to project and retract tool; and 138, and 140, including reservoir mounted on elongated handle. (For tools, implements, and analogous devices).
- 403, Joints and Connections, appropriate subclasses for a connection between a handle and a device to which it is attached wherein only so much structure of the handle and device is included as cooperates to effect the joint. (For handle fastening devices).
- 414, Material or Article Handling, subclasses 722+ shovel and handle structure. (For tools, implements, and analogous devices).
- 429, Chemistry: Electrical Current Producing Apparatus, Product, and Processes, subclass 187 for battery having a handle. (For receptacles).
- 441, Buoys, Rafts, and Aquatic Devices, subclasses 125+ handles for life rafts. (For boat, buoy, and vehicle handholds and handles).
- 473, Games Using Tangible Projectile, subclasses 300+ for a golf grip. (For tools, implements, and analogous devices).
- D8, Tools and Hardware, subclasses 300+ for designs for handles. (For other handles, and attachments or attaching means, as indicated.)
- 111.1 Having receptacle within:**
This subclass is indented under subclass 110.1. Subject matter wherein the handle includes structure such as a storage cavity or other receiving device.

SEE OR SEARCH CLASS:

- 30, Cutlery, subclasses 535+ for razor handles having a receptacle, subclass 125 for cutlery implements having a material holder in the form of a handle receptacle, and subclass 151 for cutlery implements retractable into the handle or having some other form of sheath and see the notes thereto for sheathed tools elsewhere classified.
- 42, Firearms, subclass 7 for breech loading pistols in which a magazine is placed in the handle or grip of the pistol.
- 132, Toilet, subclass 147 for combs with a storage cavity in the back, subclass 75 for manicuring devices combined with a storage cavity in the body or handle and subclass 290 for shaving kits combining an article peculiar to toilet use (e.g., comb, mirror) with a brush and a soap holder which may be the brush handle.
- 135, Tent, Canopy, Umbrella, or Cane, subclasses 65+ for stick and handle structures for canes and other sticks or staffs used as aids to locomotion and providing for the storage of articles.
- 174, Electricity: Conductors and Insulators, subclass 46 for handles encasing or housing conductors.
- 222, Dispensing, subclass 191 for devices in which a dispenser container may serve as or be contained in a tool or implement handle.
- 401, Coating Implements With Material Supply, subclass 123 for a coating implement including a coating tool, within the handle of which is stored a supply of coating material which is removable for application to the tool.

112.1 For plow:

This subclass is indented under subclass 110.1. Subject matter wherein the handle is for an implement used to cut lift and turn over soil.

SEE OR SEARCH CLASS:

- 172, Earth Working, subclasses 329+ for earth working tools with handles.

113.1 Length adjustable pull handle for luggage or luggage cart (e.g., wheeled suitcase handle, etc.):

This subclass is indented under subclass 110.1. Subject matter which usually includes a graspable handle element for movement of a carrier for travelers belongings and a mechanism for extension and retraction of said element.

- (1) Note. The handle is often referred to as retractable to a storage or nonuse position.
- (2) Note. Subcombinations such as retraction and extension and handle locking mechanisms are included herein.

SEE OR SEARCH CLASS:

- 190, Trunks and Hand-Carried Luggage, subclass 18 for wheels bearing the weight of baggage and subclass 115 for hand luggage including a graspable handle for moving it.
- 280, Land Vehicles, subclass 37 for a wheeled vehicle foldable into the form of a traveling bag or case having wheels or parts enclosed therein and subclass 655.1 for a wheeled vehicle wherein only a handle is folded or retracted.

114.1 Luggage type (loop style) hand grip for carrying (e.g., suitcase, handbag, briefcase, shopping bag, package, etc.):

This subclass is indented under subclass 110.1. Subject matter including a grasped element comprising a normally curved portion connected at its ends usually in close proximity with the body of a article such as a suitcase intended to be hand carried.

- (1) Note. When the gripping portion is grasped the fingers of the hand pass between such portion and the carried article.

SEE OR SEARCH CLASS:

- 190, Trunks and Hand-Carried Luggage, subclasses 115+ for handles on hand luggage.

- 193 SASH BALANCES:**
This subclass is indented under the class definition. Devices, including means connected with sashes, frames or panels for holding them in balanced or adjusted position.
- (1) Note. In the following indented subclass, “sashes” is used generically.
- SEE OR SEARCH CLASS:
49, Movable or Removable Closures, subclasses 445+ for a counterbalance combined with means, e.g., bearing, to guide the movement of the closure or a counterbalance interrelated with two or more closures, and see the search notes thereto for the loci of other closure counterbalances.
248, Supports, subclasses 325, 329-331 and 334.1+ for adjustable or balanced supports and subclass 364 for counterbalance weights.
- 194 Cord and counterweight:**
This subclass is indented under subclass 193. Devices having connected cords and counterweights for holding the sashes in balanced or adjusted position.
- 195 Rack and pinion:**
This subclass is indented under subclass 193. Devices having connected racks and pinions for holding the sashes in balanced or adjusted position.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
201, for springs combined with racks and pinions.
- 196 Sash and cord:**
This subclass is indented under subclass 193. Devices having connected cords or chains combined with pulleys for holding the sashes in balanced or adjusted position.
- 197 Spring:**
This subclass is indented under subclass 193. Devices having springs or the like for holding the sashes in balanced or adjusted position and not otherwise classified.
- 198 Drum and cord:**
This subclass is indented under subclass 197. Devices combined with drum-and-cord devices for holding the sashes in balanced or adjusted position.
- 199 Friction roller:**
This subclass is indented under subclass 197. Devices combined with friction-rollers or the like for holding the sashes in balanced or adjusted position.
- 200 Lever:**
This subclass is indented under subclass 197. Devices combined with lever devices or the like for holding the sashes in balanced or adjusted position.
- 201 Rack and pinion:**
This subclass is indented under subclass 197. Devices combined with rack-and-pinion devices or the like for holding the sashes in balanced or adjusted position.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
193, for rack and pinion balances without spring means.
- 202 SASH-CORD FASTENERS:**
This subclass is indented under the class definition. Fastening devices of sash-cords.
- SEE OR SEARCH CLASS:
24, Buckles, Buttons, Clasps, etc., subclasses 115+ for cord and rope holders of general application.
- 203 Bendable:**
This subclass is indented under subclass 202. Devices composed of bendable or compressible material.
- 204 Chain:**
This subclass is indented under subclass 202. Devices for sash-chains.
- 205 Clamps:**
This subclass is indented under subclass 202. Devices comprising separate movable clamping elements.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
203, for bendable clamps.
- 206 Hooks:**
This subclass is indented under subclass 202. Devices including hooks.
- 207 Knot:**
This subclass is indented under subclass 202. Devices for knotted sash-cords.
- 208 Slack-cord holders:**
This subclass is indented under subclass 202. Devices for temporarily holding sash cords or chains while unfastened from the sashes.
- 209 Weight:**
This subclass is indented under subclass 202. Devices for fastening weights to sash-cords, chains and the like.
- 210 SASH-CORD GUIDES:**
This subclass is indented under the class definition. Devices comprising guide means for sash cords.
- SEE OR SEARCH CLASS:
254, Implements or Apparatus for Applying Pushing or Pulling Force, subclasses 389+ for a device or a member intended to guide a moving cable, the cable is attached to or supports an object being pulled by the cable from one position or location to another.
474, Endless Belt Power Transmission Systems or Components, various subclasses for devices such as pulleys or guide rolls for guiding or tensioning a power transmission belt.
- 211 Casings:**
This subclass is indented under subclass 210. Devices comprising specific casings for sash-cord guide-pulleys.
- 212 Sheet metal, single piece:**
This subclass is indented under subclass 211. Devices constructed from single pieces of sheet metal.
- 213 Multiple wheel:**
This subclass is indented under subclass 210. Devices having two or more guide wheels or pulleys.
- SEE OR SEARCH CLASS:
226, Advancing Material of Indeterminate Length, subclasses 168+ for a roller which advances web or strand material.
- 214 Sliding:**
This subclass is indented under subclass 210. Devices having one or more grooves for guiding the cords.
- 215 Wheel and casing:**
This subclass is indented under subclass 210. Devices comprising specific constructions of combined sash-cord wheels and casings.
- 216 SASH WEIGHTS:**
This subclass is indented under the class definition. Devices comprising weights for balancing sashes.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
403 and 404, for other weights and see the search notes thereunder.
- 217 Composite:**
This subclass is indented under subclass 216. Weights composed of two or more different materials.
- 218 Sectional:**
This subclass is indented under subclass 216. Weights made in removable sections secured together.
- 219 Weight and wheel:**
This subclass is indented under subclass 216. Weights having one or more attached wheels or pulleys.
- 220 WINDOW-BEAD FASTENERS:**
This subclass is indented under the class definition. Devices comprising fastening devices for removably securing window-beads to window frames or casings.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, subclasses 456+ for securing means for a closure guide which permits removal of the guide and closure.

221 HINGE:

This subclass is indented under the class definition. Device for swingably connecting two members and comprising a first portion adapted to engage or be fastened to a first member (e.g., frame, box, sill), and a second portion adapted to engage or be fastened to a second member (e.g., closure).

- (1) Note. Claims which include a nominal recitation of a specific member (e.g., “trunk lid”, “refrigerator door”, etc.) are properly classified in this and indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

49+, for a hinge combined with a check to prevent a closure from slamming, and a means to return the closure to a closed position.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, subclasses 236 and 240 for toilet seat hinges.

24, Buckles, Buttons, Clasps, etc., subclass 33 for hinged belt fasteners; and subclass 598 for headed socket fasteners having a hinged cap plate.

29, Metal Working, subclass 11 for hinge making and assembling.

40, Card, Picture, or Sign Exhibiting, subclass 119 for calendars having hinged leaves; and subclasses 475, 497+ and 530 for changing exhibitors employing hinges.

42, Firearms, subclass 63 for a revolver having a hinged barrel.

49, Movable or Removable Closures, subclasses 208+ for closures mounted for multidirectional or oblique movement; and subclasses 381+ for a closure mounted for swinging movement.

63, Jewelry, subclasses 7+ and 9 for a bracelet having a hinge; and subclass 19 for a locket having a hinged cover.

108, Horizontally Supported Planar Surfaces, subclasses 59+ for tables having hinged leaves; and subclasses 115+ for folding (card) tables.

109, Safes, Bank Protection, or a Related Device, subclasses 69+ for safe closures mounted for plural motions (e.g., sliding and swinging).

114, Ships, subclasses 176 and 178 for hinged port covers.

126, Stoves and Furnaces, subclass 194 for a stove door or window hinge.

150, Purses, Wallets, and Protective Cover, subclasses 120+ for a purse having a hinged lid.

152, Resilient Tires and Wheels, subclass 414 for a wheel rim comprised of hinged sections.

182, Fire Escape, Ladder, or Scaffold, subclasses 165+ for a folding stepladder having hinged sections.

184, Lubrication, subclasses 90+ for hinged oil cup closures.

206, Special Receptacle or Package, subclass 6 for an eyeglass case having hinged sections.

217, Wooden Receptacles, subclass 83 for hinged barrel covers.

220, Receptacles, subclasses 810+ for receptacles of that class having hinged closures.

222, Dispensing, under subclass 221 comprising an element which is designed to either fracture at a predetermined force or to melt at a predetermined temperature.

229, Envelopes, Wrappers, and Paperboard Boxes, subclasses 125.08+ for boxes having hinged closures.

244, Aeronautics and Astronautics, subclass 49 for aircraft having hinged (foldable) wings.

256, Fences, subclass 26 for a fence comprised of hinged panels.

293, Vehicle Fenders, subclasses 44+ for hinged vehicle fenders.

296, Land Vehicles: Bodies and Tops, subclasses 86+ for hinged windshields; and subclass 92 for windshield hinges.

- 301, Land Vehicles: Wheels and Axles, subclass 32 for demountable rims comprised of hinged sections.
- 305, Wheel Substitutes for Land Vehicles, subclasses 185+ for hinge details of vehicle treads.
- 351, Optics: Eye Examining, Vision Testing and Correcting, subclass 121 for spectacle temples with a hinge connector; and subclass 153 for spectacle strap type connectors including a particular hinge. See also (1) Note under subclass 121 for the classification of hinges in spectacles.
- 402, Binder Device Releasably Engaging Aperture or Notch of Sheet, subclasses 26+ for hinged binder rings.
- 403, Joints and Connections, subclasses 52+ for articulated members.
- 404, Road Structure, Process, or Apparatus, subclasses 25+ for a hinged cover (e.g., "grating") spanning an opening in a road or walkway.
- 405, Hydraulic and Earth Engineering, subclass 20 for a revetment comprised of hinged concrete sections.
- 439, Electrical Connectors, subclass 31 for interrelated electrical connectors that are part of a hinge; and subclass 165 for an electrical connector with relatively guided members and an intermediate pliable conductor.
- 602, Surgery: Splint, Brace, or Bandage, subclass 16 for hinged surgical brace.
- 623, Prosthesis (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor, appropriate subclasses for joint structure in an artificial body member.
- 222 Including frangible or fusible portion:**
This subclass is indented under subclass 221. Hinge comprising an element which is designed to either fracture at a predetermined force or to melt at a predetermined temperature.
- 223 With diverse art portion or attachment:**
This subclass is indented under subclass 221. Hinge wherein either a section formed on the hinge or a device attachable thereto is provided for a purpose not associated with or affecting the operation of the hinge or its attachment to a hinged member*.
- (1) Note. The "device" required in the above definition must be other than a hinged member*.
- SEE OR SEARCH CLASS:
248, Supports, subclasses 479+ for a mirror bracket pivotally mounted on an automobile door hinge.
- 224 Ball and socket:**
This subclass is indented under subclass 221. Hinge wherein the structure for swingably connecting the hinged members* comprises a bulbous, substantially spherical portion adapted to be fixed to a first hinged member and to be seated in a corresponding concavity attachable to a second hinged member.
- SEE OR SEARCH CLASS:
285, Pipe Joints or Couplings, subclasses 51 and 261 for a ball and socket connection between pipe sections.
403, Joints and Connections, subclasses 56, 90, and 122+ for a ball and socket connection between two members, wherein an intrinsic property of one of the members is utilized in making the connection (e.g., the "ball" or "socket" is formed directly on the hinged member*).
- 225 Pliant or elastic hinge:**
This subclass is indented under subclass 221. Hinge comprising a section of bendable or resiliently deformable material connecting the two members, and which deforms to allow the members to swing.
- (1) Note. The pliant material must serve as the only connection between the members; therefore, a flat spring connecting two members in conjunction with a knuckle and pintle arrangement is not proper for this subclass (see subclasses 277+ below).
- SEE OR SEARCH THIS CLASS, SUBCLASS:
277+, for a resiliently biased hinge which employs a discrete spring element to bias two hinge portions about a pivotal connection between the portions.

SEE OR SEARCH CLASS:

403, Joints and Connections, subclasses 220+ for flexibly connected rigid members, wherein the connecting means is not readily attached and removed from the rigid members.

226 Metallic:

This subclass is indented under subclass 225. Hinge wherein the bendable or resiliently deformable material connecting the two hinged members* is metal.

227 Snap or X hinge:

This subclass is indented under subclass 225. Hinge wherein either (a) the hinge is biased to both open and closed position by a resiliently biased over-center mechanism, or (b) the hinge comprises two strips of bendable material, with respective first ends secured to opposite sides of one hinged member* and second ends secured to opposite sides of another hinged member, wherein the two strips cross one another at a point intermediate their ends.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

293+, for a hinge having an over-center mechanism which employs a spring element that is distinct from pivotal connecting structure of the hinge.

228 Eyeglass hinge:

This subclass is indented under subclass 221. Hinge peculiarly adapted for swingably connecting two portions of an eyeglass frame.

SEE OR SEARCH CLASS:

2, Apparel, subclasses 426+ for safety goggles.
351, Optics: Eye Examining, Vision Testing and Correcting, subclass 153 for eyeglasses having particular hinge structure.

229 Retractable pintle:

This subclass is indented under subclass 221. Hinge including a hinge pin* carried by one hinged member* and protruding into an opening or recess in a second hinged member, and wherein the means are provided to permit limited axial movement of the hinge pin* with respect to both hinged members to withdraw

the pin from the opening or recess and thereby disconnect the hinged members.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

262+, for hinge pins which are completely removed to separate one hinge section from another, and thereby disjoin the attached hinged members*.

230 Latch hinge:

This subclass is indented under subclass 229. Hinge provided with two noncollinear axially movable hinge pins* protruding from a hinged member* at different locations, whereby the hinged member* may be swung about either hinge pin when the other is retracted.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, subclass 395 for swingably mounted closures having plural latches or locks which are distinct from the hinges.

231 Latch hinge:

This subclass is indented under subclass 221. Hinge including means which facilitates the ready disjoining and joining of the connection between two hinged members*, wherein the hinge is used alternatively as a hinge or fastener, and in conjunction with a similar hinge on an opposite edge of a hinged member whereby the hinged member may be swung about either hinge.

232 Resilient securing means:

This subclass is indented under subclass 231. Hinge wherein the means facilitating the ready disjoining and joining of the connection between hinged members* comprises an element which is elastically deformed when the hinged members are joined or separated.

233 Including lever for shifting one member relative to another:

This subclass is indented under subclass 221. Hinge having structure which permits relative translational movement of the hinged members*, and which includes an elongated rigid element that provides a mechanical advantage through its length when manipulated to cause the movement between the hinged members.

234 Having staggered leaves:

This subclass is indented under subclass 221. Hinge including three or more tandemly arranged leaves* with adjacent ones for attachment to respective hinged members* located on opposite sides of a single hinge axis.

235 Including adjustment for changing relative orientation of hinged members:

This subclass is indented under subclass 221. Hinge including means which permits one hinged member* to be moved and fixed relative to another hinged member.

- (1) Note. The movement referred to above encompasses all translational movement, and pivotal movement other than normal swinging movement of the hinge. Any relative movement which always precedes or follows the normal pivotal movement about the hinge axis is excluded (e.g., relative vertical shifting of the members to engage or release a catch is excluded).

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 252+, for a hinge having a clamp for attachment to a hinged member.
 350+, for a hinge in which the hinged members* are shifted relative to one another to engage or release a catch.
 362+, for a hinge in which the hinged members* are shifted relative to one another, wherein the shifting always precedes, follows, or occurs during swinging movement of a hinged member about the hinge axis*.

236 Having plural independent adjustments:

This subclass is indented under subclass 235. Hinge including first means which permits the hinged members* to be relatively moved and fixed along or about a first axis, and second discrete means allowing the hinged members to be relatively moved and fixed along or about a second axis.

237 All rectilinear:

This subclass is indented under subclass 236. Hinge wherein each of the first and second adjustment means permits relative movement

of the hinged members* back and forth along a straight line.

238 Including screw-operated means to move hinged members:

This subclass is indented under subclass 237. Hinge wherein one of the adjustment means comprises a force multiplier in the form of a helically threaded member which is rotated to move one hinged member* relative to another along a straight line.

239 Pivotal adjustment:

This subclass is indented under subclass 235. Hinge wherein the adjustment means permits one hinge portion to be moved and fixed about an axis relative to another hinge portion.

240 Including screw-operated means to move hinged members:

This subclass is indented under subclass 239. Hinge including a force multiplier in the form of cooperating helically ribbed or grooved members which are relatively rotated to move one hinge portion about an axis relative to another hinge portion.

241 About hinge axis:

This subclass is indented under subclass 240. Hinge wherein the axis about which one hinge portion is moved relative to another is an axis about which a hinged member* rotates during operation of the hinge.

242 Including means to move hinged members:

This subclass is indented under subclass 235. Hinge including a force multiplier or power means which is manipulated or driven to move the hinged members*.

243 Along or parallel to hinge axis:

This subclass is indented under subclass 242. Hinge wherein the force multiplier or power means is arranged to effect relative movement of the hinged members* in the direction of the hinge axis*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 238, for a hinge adjustable in at least two directions, wherein adjustment in at least one direction is effected by screw-threaded means.

- 244 Including threaded hinge pin:**
This subclass is indented under subclass 243. Hinge including an elongated rodlike element about which a hinged member* swings, wherein threads are provided on said element for engagement with a cooperating threaded element to provide the force multiplier for moving one hinged member relative to the other.
- 245 Screw-operated:**
This subclass is indented under subclass 242. Hinge including a force multiplier in the form of a spirally threaded member which is rotated to move the hinged members*.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
238, for a hinge adjustable in at least two directions, wherein adjustment in at least one direction is affected by screw-threaded means.
- 246 To shift plate toward or away from hinged member:**
This subclass is indented under subclass 245. Hinge including a planar portion adapted to overlie a hinged member*, wherein rotation of the spirally threaded member moves the planar portion toward or away from the hinged member to which it is secured.
- 247 Having adjustable spacer between leaf and hinged member (e.g., shim):**
This subclass is indented under subclass 235. Hinge comprising an element interposed between a hinge leaf* and its associated member*, wherein said element is movable or interchangeable to vary the distance between the leaf and member.
- (1) Note. It is not a requirement that the spacer directly contact the member or leaf.
- 248 Adjustable along or parallel to hinge axis:**
This subclass is indented under subclass 235. Hinge wherein the adjustment means permits relative translation of the hinged members* in the direction of the hinge axis*.
- 249 Having interdigitated surfaces or slot for hinge-to-member fastener:**
This subclass is indented under subclass 235. Hinge wherein the means which permits one hinged member* to be moved and fixed relative to another hinged member comprises either (a) two cooperating portions having protrusions and recesses which are adapted to mesh in any of a plurality of relative positions corresponding to various relative positions of the hinged members, or (b) a laterally elongated aperture in the hinge and along which a fastener secured to one hinged member is confined to travel as the hinged members are adjusted.
- 250 Having cover:**
This subclass is indented under subclass 221. Hinge including a shroud for covering all or a portion of the hinge structure to protect the hinge or its surroundings, or to increase its aesthetic value.
- 251 Leaf cover:**
This subclass is indented under subclass 250. Hinge including a rod or platelike portion by which the hinge is adapted to be secured to a hinged member*, wherein the shroud overlies and is substantially coextensive with the rod or platelike portion.
- SEE OR SEARCH CLASS:
D8, Tools and Hardware, subclasses 323+ for designs for hinges.
- 252 Having clamp for attaching hinge to member:**
This subclass is indented under subclass 221. Hinge including means to permit the ready removal or replacement of the hinge from a hinged member* and comprising either (a) two opposing surfaces movable toward and away from one another for engaging and disengaging the hinged member, or (b) an element forming a constrictable opening adapted to encircle the hinged member or a portion thereof.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
235+, for a hinge having a clamp for fixing or releasing one hinge portion relative to another for the purpose of adjusting the hinged members.

- 390, for a hinge leaf having opposed parallel surfaces with no means being claimed to force the surfaces toward one another.
- 253 Circumferential clamp:**
This subclass is indented under subclass 252. Hinge comprising either a constrictable element or two opposing clamping surfaces adapted to substantially surround the perimeter of a hinged member*.
- 254 Having means to facilitate assembly and disassembly of hinge sections to join or disjoin members:**
This subclass is indented under subclass 221. Hinge wherein means are provided to permit the ready removal and replacement of one portion of a hinge from another portion whereby the two hinged members* are disconnected or connected.

SEE OR SEARCH THIS CLASS, SUBCLASS:
229+, for a hinge having a pintle which is retractable to release the hinge from a hinged member.
231+, for a combination latch and hinge, i.e., wherein the hinge is adapted to be used alternatively as a hinge or fastener and in conjunction with a similar hinge on an opposite edge of a hinged member* such that the hinged member may be swung about either hinge.
252+, for a hinge including opposing clamping surfaces to secure the hinge directly to a hinged member.
382+, for a hinge provided with specific means (other than a clamp) to secure a leaf to a hinged member.
- 255 Resiliently biased hinge:**
This subclass is indented under subclass 254. Hinge further comprising an element which when deformed elastically exerts a force upon one of the hinged members* tending to swing the member about the hinge axis.
- 256 Having helical spring along hinge axis:**
This subclass is indented under subclass 255. Hinge wherein the elastically deformable element comprises a helix whose convolutions are formed about the hinge axis*.
- 257 Resiliently biased retaining means:**
This subclass is indented under subclass 254. Hinge wherein the means which permits the ready removal and replacement of one hinge portion from another includes an element which is deformed elastically whenever the hinge portions are assembled or disassembled.
- 258 Having discrete latch and spring to slide or pivot latch:**
This subclass is indented under subclass 257. Hinge wherein the elastically deformable element biases a second individually distinct element to move along a surface or about an axis into or out of engagement with cooperating structure, thereby retaining or releasing the hinge portions.

SEE OR SEARCH THIS CLASS, SUBCLASS:
229+, for a hinge provided with a retractable pintle.
- 259 Discrete retaining means for pivotal contacting surfaces:**
This subclass is indented under subclass 257. Hinge wherein the two hinge portions which may be assembled or disassembled include respective surface areas which have mutual sliding or pivotal contact during swinging movement of a hinged member* about the hinge axis*. Therein the surfaces are kept in assembled relationship by an individually distinct elastically deformable means.
- 260 Separation of pivotal contacting surfaces:**
This subclass is indented under subclass 254. Hinge wherein the two hinge portions which may be assembled or disassembled include respective surface areas which are engaged during assembly or disengaged during disassembly, wherein sliding or pivotal contact between the surface areas is manifested during swinging of a hinged member* about the hinge axis.
- 261 Having movable or removable connector:**
This subclass is indented under subclass 260. Hinge including a discrete element for retaining the hinge portions in their assembled relationship wherein said element is either moved with respect to both portions or is completely

disassociated from both portions to disassemble said portions from one another.

- 262 Pintle removable from remainder of hinge:**
This subclass is indented under subclass 261. Hinge wherein the discrete element is the hinge pin* and the hinge portions are disassembled by completely disassociating the hinge pin* from both hinge portions.

SEE OR SEARCH THIS CLASS, SUBCLASS:

229+, for a hinge having a pintle that is retracted to separate two hinged members.

380+, for a hinge having specific means to retain the pintle therein, wherein the pintle is not readily removable from the remainder of the hinge.

- 263 And additional connector or separate pintle sections:**

This subclass is indented under subclass 262. Hinge wherein either (a) a discrete fastener is provided for retaining the hinge pin* and the hinge portions in assembled relationship, or (b) the hinge pin comprises plural separable segments which are disassociated to allow the hinge portions to be separated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

380+, for a pintle connector which is not readily removable to disassemble the hinge.

- 264 Screw-threaded connector:**
This subclass is indented under subclass 261. Hinge wherein the discrete element for retaining the hinge portions in their assembled relationship includes a helically threaded section which cooperates with a similarly threaded section or element to retain the hinge portions in their assembled relationship.

- 265 Axially shifting hinge sections:**
This subclass is indented under subclass 260. Hinge wherein the two hinge portions are separated by moving them relatively in the direction of the hinge axis*.

(1) Note. Included herein are hinges in which a hinge portion is initially moved

axially, and then moved transversely to the axis to separate the portions.

- 266 At specific angular orientation of hinge sections:**

This subclass is indented under subclass 265. Hinge wherein the two hinge portions may be moved relatively in the direction of the hinge axis* only when placed in predetermined relative position about the hinge axis.

- 267 Hook and pin:**

This subclass is indented under subclass 260. Hinge wherein the surface areas which are engaged or disengaged during assembly or disassembly of the hinge portions comprise an open curve having a reentrant end section on one hinge portion and adapted to partially surround a hinge pin* on the other hinge portion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

356, for a hinge comprised of two nested open curved portions which move along one another and about a hinge pin, but not readily assembled and disassembled.

- 268 Hook in aperture:**

This subclass is indented under subclass 260. Hinge wherein the surface areas which are engaged or disengaged during assembly or disassembly of the hinge portions comprise an open curve having a reentrant end section on one hinge portion, and is adapted to pass through an opening in the other hinge portion.

- 269 Hook to hook:**

This subclass is indented under subclass 260. Hinge wherein the surface areas which are engaged or disengaged during assembly or disassembly of the hinge portions each comprise an open curve having a reentrant end section.

SEE OR SEARCH THIS CLASS, SUBCLASS:

355+, for a hinge comprised of two nested open curved portions which move along one another, but not readily assembled or disassembled.

270 And discrete movable or removable connector to fasten one hinge section to another:

This subclass is indented under subclass 254. Hinge including an element individually distinct from either hinge portion and which serves to retain the hinge portions in assembled relationship, wherein said element is either moved with respect to both portions, or is completely disassociated from both portions to disassemble said portions from one another.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

261+, for a hinge having a discrete movable or removable connector for retaining the pivotal contacting surfaces of the hinge.

271 By relatively sliding connection (e.g., dovetail):

This subclass is indented under subclass 254. Hinge wherein the means to permit the ready removal or replacement of one hinge portion from another comprises cooperating interfitting structure on the respective portions which is initially engaged and then locked into assembled relationship by translating one portion relative to the other portion.

272 Including receiving connector attachable to hinged member:

This subclass is indented under subclass 271. Hinge wherein the cooperating interfitting structure comprises a first element or portion adapted to be fixed to a hinged member*, and having means for accommodating a substantial part of a second element or portion which slides into the first element or portion.

273 Having means to reduce friction between hinge parts:

This subclass is indented under subclass 221. Hinge including means specifically provided for lessening the surface friction between two opposing surfaces which are caused to move over one another as the hinged members* are swung about the hinge axis*.

274 By fluid lubricant:

This subclass is indented under subclass 273. Hinge wherein the means for lessening the surface friction comprises a supply or a passage-

way for applying a friction reducing fluid to the surfaces.

275 Ball or roller bearing:

This subclass is indented under subclass 273. Hinge wherein the surface friction between the two opposing surfaces is reduced by interposing a plurality of rolling elements between the surfaces, whereby rolling rather than sliding contact occurs.

(1) Note. A rolling cam follower is not considered to be a bearing as defined above.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

224, for a ball and socket hinge.

313+, for a gravitating hinge having roller which rides along a camming surface as the hinged members* swing relative to one another.

276 Circularly distributed balls or rollers:

This subclass is indented under subclass 275. Hinge including a plurality of rolling elements arranged through a complete circle about the hinge axis*.

277 Resiliently biased hinge:

This subclass is indented under subclass 221. Hinge including, in addition to the structure for swingably connecting the hinged members*, an element which is elastically deformed to exert a force upon a hinged member tending to swing the member about the hinge axis*.

(1) Note. The elastically deformable element must provide bias through a substantial arc during swinging movement of the hinged member* about the hinge axis*.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

225+, for a resiliently biased hinge wherein the elastically deformable element is the only structure which connects the hinged members*.

255+, for a resiliently biased hinge which is readily assembled or disassembled.

321+, for a hinge having a resiliently biased catch by which a hinged member* "snaps" into open or closed position,

but is not biased during the remainder of the swing.

278 Including means to render spring ineffective through all or a portion of swing:

This subclass is indented under subclass 277. Hinge wherein either (a) selectively actuated means are provided to release the hinged member* to swing without bias from the elastically deformable element, or (b) the hinge member swings under bias from the elastically deformable element through a first arc about the hinge axis*, and then swings without bias from the elastically deformable element through a second adjacent arc, or vice versa.

- (1) Note. The elastically deformable element must provide bias through a substantial arc during swinging movement of the hinged member* about the hinge axis*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

255+, for a hinge having a resiliently biased catch by which a hinged member* “snaps” into open or closed position, but is not biased during the remainder of the swing.

279 Comprising manipulatable element or portion:

This subclass is indented under subclass 278. Hinge wherein a selectively actuated means is provided to release the hinged member* to swing without bias from the elastically deformable element.

280 Biased from either direction toward neutral position (e.g., double acting):

This subclass is indented under subclass 277. Hinge wherein one or more elastically deformable elements are arranged to urge one of the hinged members* to swing about the hinge axis* toward an equilibrium position from either side of said equilibrium position, at which the net force tending to swing the member is zero.

SEE OR SEARCH THIS CLASS, SUBCLASS:

291, for a hinge in which a helical spring transverse to the hinge axis* biases a

hinged member* in either direction away from a dead center position.

293+, for a hinge in which a spring other than a coil transverse to the hinge axis* biases a hinged member* in either direction away from a dead center position.

281 Helical spring transverse to hinge axis:

This subclass is indented under subclass 280. Hinge wherein the hinged member* is swung about the hinge axis* by an elastically deformable element comprising a coil spring in the form of a helix and arranged on the hinge such that the axis of the helix is orthogonal with the hinge axis.

282 Plural hinge axes (e.g., multiple pintle):

This subclass is indented under subclass 280. Hinge wherein one of the hinged members* rotates about a first hinge axis* on one side of the equilibrium position and about a second hinge axis on the other side of the equilibrium position.

283 And barrels for helical springs on separate axes:

This subclass is indented under subclass 282. Hinge comprising two elastically deformable elements in the form of helices, each being arranged about a separate hinge axis* and surrounded by a coaxial cylindrical cover.

284 Resiliently biased rolling or sliding cam surface:

This subclass is indented under subclass 280. Hinge wherein an elastically deformable element is arranged to cause a first surface associated with a hinged member* to slide or roll over a second cooperating surface, whereby the hinged member is caused to swing about the hinge axis* from either side of the equilibrium position due to the relative curvature of the surfaces.

SEE OR SEARCH THIS CLASS, SUBCLASS:

303, for a hinge in which a hinged member* is caused to swing in only one direction by an axially biased cam surface.

- 285 By helical spring along hinge axis:**
This subclass is indented under subclass 280. Hinge wherein the elastically deformable element is in the form of a helix arranged about and coaxial with the hinge axis*.
- 286 Having transverse helical spring or elastic strip:**
This subclass is indented under subclass 277. Hinge wherein a hinged member* is swung about the hinge axis* by an elastically deformable element comprising either (a) a coil spring in the form of a helix, or (b) a length of resilient material adapted to be stretched in the direction of its length, wherein either the axis of the helix or the length of the resilient material is orthogonal with the hinge axis.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
281, for a hinge which employs a coil spring transverse to the hinge axis* to bias a hinged member* from either side of a neutral position toward the neutral position.
- 287 Plural hinge axes (e.g., multiple pintle):**
This subclass is indented under subclass 286. Hinge wherein the structure which swingably connects the two hinged members* defines two or more distinct axes about which the hinged members* pivot relative to one another.
- (1) Note. The pivotal movement may occur alternately about each axis or simultaneously about both axes.
- 288 Four or more axes:**
This subclass is indented under subclass 287. Hinge wherein the structure which swingably connects the two hinged members* defines four or more distinct axes about which the hinged members pivot relative to one another.
- 289 To counterbalance weight of hinged member (e.g., closure biased to open position):**
This subclass is indented under subclass 286. Hinge wherein the elastically deformable element is arranged to offset the weight of a hinged member* as the member is swung about the hinge axis*.
- 290 Including pivoted coaxial spring retaining bar:**
This subclass is indented under subclass 289. Hinge including an elongated cylindrical rod extending through the length of the elastically deformable element to retain the element in an axially compressed state, wherein the rod is mounted for swinging movement with respect to both hinged members* as one hinged member swings relative to the other about the hinge axis*.
- 291 Over-center spring or linkage travel (e.g., "holdback hinge"):**
This subclass is indented under subclass 286. Hinge including means which first causes the elastically deformable element to reach a point of maximum deflection as a hinged member* reaches a particular position in its swing about the hinge axis*, and then allows the element to retreat from the point of maximum deflection as the hinged member continues to swing past the position.
- (1) Note. Included herein are hinges having a toggle linkage which serves to bias a hinged member* about a single hinge axis* toward the open and closed positions.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
323, for hinges having a spring-biased toggle catch, but wherein the hinged members* are not biased resiliently about the hinged axis*.
- 292 Having means to hold hinged members against pivotal movement about hinge axis (i.e., catch):**
This subclass is indented under subclass 286. Hinge including means to secure the hinged members* to prevent them from swinging about the hinge axis*.
- (1) Note. The members must be secured against swinging movement in both directions, i.e., an abutment stop, per se, is excluded.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
374+, for a hinge having a stop or abutment.

- 293 Over-center spring or linkage travel (e.g., “holdback hinge”):**
This subclass is indented under subclass 277. Hinge including means which first causes the elastically deformable element to reach a point of maximum deflection as a hinged member* reaches a particular position in its swing about the hinge axis*, and then allows the element to retreat from the point of maximum deflection as the hinged member continues to swing past the position.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
291, for a hinge having a helical spring or elastic strip which is oriented transversely to the hinge axis* and which comprises an over-center mechanism.
323, for a hinge which included a toggle-actuated catch to fix the hinged members* in a particular relative position, but having no means to bias the hinged members about the hinge axis*.
- 294 Plural hinge axes:**
This subclass is indented under subclass 293. Hinge wherein the structure which swingably connects the two hinged members* defines two or more distinct axes about which the hinged members pivot relative to one another.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
282+, for a double-acting spring biased hinge having plural hinge axes*.
287+, for a hinge biased by a helical spring or an elastic strip acting transversely to one of a plurality of hinge axes.
- 295 Coil spring having axis along or parallel to hinge axis:**
This subclass is indented under subclass 293. Hinge wherein the elastically deformable element comprises a helix or a flat spiral whose convolutions are formed about an axis extending in the direction of the hinge axis*.
- 296 Including camming or sliding surface to deflect spring perpendicularly to the hinge axis:**
This subclass is indented under subclass 293. Hinge wherein a portion of the elastically deformable element is displaced at a right angle to the hinge axis* by a contacting surface which moves along a surface of the element.
- 297 Having means to hold hinged members against pivotal movement about hinge axis (e.g., catch):**
This subclass is indented under subclass 277. Hinge including means to secure the hinged members* to prevent any swinging of the members about the hinge axis*.
- (1) Note. The members must be secured against swinging movement in both directions, i.e., an abutment stop, per se, is excluded.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
292, for a hinge having a catch and biased by a coil spring oriented transversely to the hinge axis*.
374+, for a hinge having a stop or abutment.
- 298 Having force adjustment:**
This subclass is indented under subclass 277. Hinge including means by which the force exerted by the resiliently deformable element to swing the hinged members* may be varied while the hinged members remain at a constant relative position about the hinge axis*.
- 299 Rotatable spring-engaging collar:**
This subclass is indented under subclass 298. Hinge including a cylinder or annulus which is connected to the resiliently deformable member and is rotated about the hinge axis* to vary the force exerted on the hinged members*.
- 300 Having detention aperture or protuberance:**
This subclass is indented under subclass 299. Hinge wherein the cylinder or annulus is held in adjusted position by a depression, hole, or projection which engages cooperating structure on the remainder of the hinge.

- 301 Having tool receiving aperture:**
This subclass is indented under subclass 299. Hinge wherein the cylinder or annulus has formed therein an opening into which is engaged a tool to turn the cylinder or collar.
- 302 Plural hinge axes (e.g., multiple pintle):**
This subclass is indented under subclass 277. Hinge wherein the structure which swingably connects the two hinged members* defines two or more distinct axes about which the hinged members pivot relative to one another.
- (1) Note. The pivotal movement may occur alternately about either axis or simultaneously about two or more axes.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
282+, for a double-acting hinge having plural hinge axes*.
287+, for a hinge having plural hinge axes* and biased by a coil oriented transversely to a hinge axis*.
294, for a hinge having plural hinge axes* and provided with an over-center travelling spring or linkage.
- 303 Having axially biased camming surface:**
This subclass is indented under subclass 277. Hinge wherein an elastically deformable element is arranged to force a first surface associated with a hinged member* in a direction along or parallel to the hinge axis* toward a second surface, wherein the curvature of one of the surfaces results in pivotal movement of the hinged member about the hinge axis.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
284, for similarly operated hinges in which a hinged member* is biased from either side of an equilibrium position toward the position.
- 304 Coil:**
This subclass is indented under subclass 277. Hinge wherein the resiliently deformable element comprises a helix or a flat spiral.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
280+, for a double-acting spring hinge which employs a torsion coil spring.
286+, for a hinge having a helical spring arranged transversely to the hinge axis.
- 305 Plural coils:**
This subclass is indented under subclass 304. Hinge including two distinct helices or flat spirals.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
282+, for a double-acting spring hinge employing two spaced hinge axes with a coil spring associated with each axis.
- 306 To counterbalance weight of hinged member (e.g., horizontal closure biased to open position):**
This subclass is indented under subclass 304. Hinge wherein the torsion of the elastically deformable helix or flat spiral is arranged to offset the weight of a hinged member* as the member is swung about the hinge axis*.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
289+, for a hinge in which the weight of a hinged member* is offset by compression or extension of a helical spring oriented transversely to the hinge axis*.
- 307 On pintle:**
This subclass is indented under subclass 304. Hinge including a hinge pin* and wherein the helical spring or flat spiral is placed about the hinge pin.
- 308 Torsion spring:**
This subclass is indented under subclass 277. Hinge wherein the resiliently deformable element comprises a length of material the end portions of which are relatively twisted in opposite directions about its axis or its length, wherein the force tending to restore the length of material to its original state is employed to pivot a hinged member* about the hinge axis*.

- 309 Gravitating hinge having vertical axis:**
This subclass is indented under subclass 221. Hinge wherein all or a portion of a hinged member* moves upwardly along a substantially vertical hinge axis* as it is swung about said axis in one direction, wherein the resulting potential energy is utilized to swing said hinged member in the opposite direction about the hinge axis to thereby return the hinged member to its original position.
- SEE OR SEARCH CLASS:
49, Movable or Removable Closures, subclasses 236+ for gravity actuated closures.
- 310 Having lift rod:**
This subclass is indented under subclass 309. Hinge including an elongated rigid element connected at one end to a first hinged member* and at the other end to a second hinged member for raising the first hinged member as it is swung in one direction about the hinge axis*.
- 311 Having plural spaced hinge axes:**
This subclass is indented under subclass 309. Hinge wherein the structure swingably connecting the hinged members* defines two or more distinct axes about which the hinged members pivot.
- 312 Including cam surface and follower:**
This subclass is indented under subclass 309. Hinge including a sloped or curved surface fixed with respect to one hinged member* and a follower associated with a second hinge member and engaging the sloped or curved surface, whereby relative swinging movement of the hinged members results in the lifting of one hinged member relative to the other.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
284, for a hinge which is biased in either direction by a resiliently biased cam surface.
303, for a hinge which is biased in one direction only by a resiliently biased cam surface.
- 313 And rolling element:**
This subclass is indented under subclass 312. Hinge wherein the follower associated with the second hinged member* comprises an element rotatable about an axis and which has rolling contact with the sloped or curved surface.
- 314 Between opposing surfaces:**
This subclass is indented under subclass 313. Hinge wherein the rotatable element is confined to travel between two facing sloped or curved surfaces defining a path therebetween.
- 315 And detent in cam surface:**
This subclass is indented under subclass 313. Hinge wherein the vertically sloped or curved surface includes a discrete depression, hole, or protuberance adapted to be engaged by the follower to fix the relative position of the hinged members* about the hinge axis*.
- (1) Note. The detent must be in addition to the valley or trough between oppositely sloped surfaces of a double-acting gravitating hinge.
- 316 On axially twisted or helically fluted element:**
This subclass is indented under subclass 312. Hinge wherein the vertically sloped or curved surface is formed on an elongated element oriented along the hinge axis*, and having helical convolutions about its longitudinal axis.
- 317 Including means to hold hinged members against pivotal movement:**
This subclass is indented under subclass 312. Hinge including means to secure the hinge members* to prevent any swinging of the hinged members relative to one another.
- 318 Having aperture for slidably receiving pintle (e.g., camming knuckle):**
This subclass is indented under subclass 312. Hinge wherein the vertically sloped or curved surface surrounds an opening through which a hinge pin* is guided for sliding movement as one hinge member* moves up or down relative to the other.

319 Including means to hold or retard hinged members against pivotal movement(e.g., catch):

This subclass is indented under subclass 221. Hinge including either means to secure the hinged members* to prevent any swinging or means for producing a drag and thereby preventing the members from swinging freely about the hinge axis*.

- (1) Note. The members must be secured against swinging movement in both directions, i.e., an abutment stop, per se, is excluded.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 292, for a hinge biased by a transverse helical spring and having a catch.
297, for a spring hinge having a catch.
317, for a gravitating hinge having a catch.
374+, for a hinge having a stop or abutment.

SEE OR SEARCH CLASS:

- 292, Closure Fasteners, appropriate subclasses for a device for securing a closure element in closed or adjusted position, and not associated with hinge structure.
403, Joints and Connections, subclass 84 for articulated members which are lockable at selected angles.

320 Magnetic:

This subclass is indented under subclass 319. Hinge wherein a magnetic field is employed either to secure or to produce a drag upon the hinged members*.

321 Resiliently biased catch:

This subclass is indented under subclass 319. Hinge having means to secure the hinged members* in a specific relative position about the hinge axis*, the means including two cooperating elements or portions, and elastically deformable means which acts to move or force one of the elements or portions relative to the other to hold the hinged members in the specific position.

- (1) Note. A portion of the elastically deformable means (spring) may serve as a cooperating portion.

- (2) Note. A resiliently biased friction pad by which the hinged members may be fixed at any position during their swing about the hinge axis is excluded.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 337+, for a hinge having a friction drag or a resiliently biased friction pad as specified in (2) Note above.

322 Having spring force adjustment:

This subclass is indented under subclass 321. Hinge including means by which the force exerted by the elastically deformable means to move the two elements or portions may be varied.

323 Including toggle linkage:

This subclass is indented under subclass 321. Hinge including two elements pivotally connected to one another, and respectively pivoted at spaced points to other hinge structure, the elements being resiliently biased whereby pivotal movement of the elements fixes the hinged members* in position about the hinge axis*.

324 Having discrete manipulatable release means (e.g., lever):

This subclass is indented under subclass 321. Hinge having means, individually distinct from the two elements or portions, adapted to be engaged by an operator and which effects relative movement between the two elements or portions to free the hinged members* for swinging movement about the hinge axis*.

325 Including cam or eccentric:

This subclass is indented under subclass 324. Hinge wherein the release means includes a rotatable member having a surface which is so arranged about the rotational axis as to slidably engage and cause a second member to be reciprocated.

- (1) Note. The "second member" may or may not be one of the cooperating elements or portions.

326 Sliding release means or lever-actuated sliding catch:

This subclass is indented under subclass 324. Hinge wherein either (a) the discrete release means is constrained to translate along a surface to effect relative movement between the two cooperating elements or portions, or (b) one of the cooperating elements or portions is constrained to translate along a surface into or out of engagement with the other cooperating element or portion, and an elongated pivoted member is included to engage the sliding element or portion and provide a mechanical advantage to cause the same to translate along the surface.

327 Sliding:

This subclass is indented under subclass 321. Hinge wherein one of the cooperating elements or portions comprises a part which is individually distinct from the elastically deformable means and is constrained to translate along a surface into or out of engagement with the other cooperating element or portion.

328 Movement along or parallel to hinge axis:

This subclass is indented under subclass 327. Hinge wherein the two cooperating elements or portions are biased to move relative to one another in the direction of the hinge axis*.

329 Interdigitated or plural sockets:

This subclass is indented under subclass 328. Hinge wherein one of the cooperating elements or portions includes a series of protuberances or recesses which are adapted to intermesh with or be engaged by cooperating structure on the other element or hinge portion.

- (1) Note. The hinged members* are correspondingly held in one of a plurality of positions about the hinge axis*.

330 Opposed interdigitated sliding collars on hinge axis:

This subclass is indented under subclass 329. Hinge wherein the cooperating elements comprise two substantially annular or cylindrical portions whose axes coincide with the hinge axis*, along which the cooperating elements are constrained to translate toward and away from each other, wherein cooperating protuber-

ances and recesses are provided on an axial face of each annular or cylindrical portion.

331 And catch receiving socket:

This subclass is indented under subclass 328. Hinge wherein one of the cooperating elements or portions includes a hole or depression which is adapted to receive the other element or portion to hold the hinge members* against pivotal movement about the hinge axis*.

332 And catch receiving socket:

This subclass is indented under subclass 327. Hinge wherein one of the cooperating elements or portions includes a hole or depression which is adapted to receive the other element or portion to fix the hinge members* against pivotal movement about the hinge axis*.

333 Pivoted:

This subclass is indented under subclass 321. Hinge wherein one of the cooperating elements or portions is mounted on the hinge for swinging movement about a pivot axis, wherein the elastically deformable means acts to swing said element or portion about its pivot axis into engagement with the other cooperating element or portion.

SEE OR SEARCH CLASS:

292, Closure Fasteners, subclasses 219+ for a spring projected, pivoted bolt.

334 Plural alternately useable detents:

This subclass is indented under subclass 321. Hinge wherein one of the cooperating elements or portions comprises a plurality of discrete depressions, holes or protuberances, any one of which may be selectively engaged by the other cooperating element or portion whereby the hinged members* are correspondingly fixed in one of a plurality of positions about the hinge axis*.

335 Spring arm:

This subclass is indented under subclass 321. Hinge wherein the elastically deformable means comprises a length of self-sustaining resilient material fixed to the hinge in cantilever fashion, and which is deflected in a direction perpendicular to its length when the cooperating elements or portions are moved relative to one another.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 296, for a spring biased hinge employing a spring arm in an over-center mechanism.
 297, for a hinge having a spring arm catch and wherein the hinged members* are continuously biased about the hinge axis by either the spring arm or a separate spring.
- 336 Plural opposed arms:**
 This subclass is indented under subclass 335. Hinge comprising two generally parallel lengths of self-sustaining resilient material which are deflected toward or away from one another by one or more cooperating elements or portions.
- 337 By friction:**
 This subclass is indented under subclass 319. Hinge including two opposing surfaces, each of which is formed on or connected to a respective hinged member* and wherein movement of the hinged members is prevented or retarded due to the frictional resistance to movement of one surface over the other.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 321+, for a resiliently biased catch which fixes the hinged members in a specific relative position by engaging cooperating structure at a specific point during the swinging movement of the hinged members.
- 338 Screw-threaded adjustment:**
 This subclass is indented under subclass 337. Hinge wherein a helically threaded element is provided for varying the pressure between the two opposing surfaces to control the frictional resistance to movement of one surface over the other.
- 339 Along or parallel to hinge axis:**
 This subclass is indented under subclass 338. Hinge wherein the frictional resistance is varied by moving the opposing surfaces toward or away from one another in the direction of the hinge axis*.
- 340 Threaded pintle:**
 This subclass is indented under subclass 339. Hinge wherein the helically threaded member comprises a hinge pin*.
- 341 Cam or wedge actuator:**
 This subclass is indented under subclass 337. Hinge including an element having either an inclined or curved surface wherein translation or pivotal movement of the element along or about an axis supplies a force perpendicular to the movement of the surface which results in increased pressure between the opposing frictional surfaces.
- (1) Note. The inclined or curved surface may or may not serve as one of the opposing frictional surfaces.
- 342 On hinge pin or between surfaces surrounding hinge axis:**
 This subclass is indented under subclass 337. Hinge wherein either (a) one of the opposing surfaces consists of a rodlike element about which a hinge member* swings, or (b) the two opposing surfaces encircle the hinge axis*.
- 343 Pivoted:**
 This subclass is indented under subclass 319. Hinge wherein the means to fix or retard the hinged members* against swinging movement about the hinge axis* comprises a first element or portion swingably mounted with respect to both hinged members and into engagement with a second cooperating element or portion.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 333, for a spring biased pivoted catch.
- 344 Plural alternately useable detents:**
 This subclass is indented under subclass 343. Hinge including a plurality of holes or depressions, any one of which may be selectively engaged by the pivoted element to secure the hinged members* in one of a plurality of corresponding relative positions about the hinge axis*.
- 345 And sliding:**
 This subclass is indented under subclass 343. Hinge wherein the swingably mounted element is mounted for movement along a surface,

- whereby the pivotal axis of the element to translate with respect to a hinged member*.
- 346 Serially connected pivoted arms between leaves (e.g., brace):**
This subclass is indented under subclass 343. Hinge wherein the two cooperating elements or portions comprise two swinging elongated elements, each pivoted at one end to a respective hinge leaf* and at the opposite end to the other element.
- 347 About axis along or parallel to hinge axis:**
This subclass is indented under subclass 343. Hinge wherein the first element or portion swings about an axis which either coincides with or is parallel to an axis about which a hinged member* swings.
- 348 By transversely moving pin in slot:**
This subclass is indented under subclass 319. Hinge wherein the means to fix or retard the movement of the hinged members* comprises an element which protrudes into and is guided by a laterally elongated aperture in the hinge, whereby the element is confined to laterally traverse said aperture as a hinged member swings about the hinge axis*.
- (1) Note. The aperture typically has a recess formed along its length into which the pin is moved to fix the hinged members* in relative position.
- 349 Having discrete manipulatable release means (e.g., lever operated):**
This subclass is indented under subclass 319. Hinge including means adapted to be directly engaged and manipulated by an operator to deactivate the member-fixing or drag-producing means, thereby enabling a hinged member* to swing freely about the hinge axis*.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
324, for a similar release mechanism for a spring-biased catch.
- 350 By shifting hinged members:**
This subclass is indented under subclass 319. Hinge wherein the means to fix or retard the movement of the hinged members* comprises cooperating portions which are engaged or disengaged by relative movement of the hinged members other than pivotal movement about the hinge axis*.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
233, for a hinge having a lever for shifting one hinged member* relative to another.
235+, for a hinge having means permitting the relative adjustment of the hinged members, wherein the hinged members are fixed in each position of adjustment.
362+, for a hinge having means which permits sliding movement between hinged members other than for engaging or disengaging a catch or drag.
- 351 Along hinge axis:**
This subclass is indented under subclass 350. Hinge wherein the cooperating portions are engaged or disengaged by moving the hinged members* relative to one another in the direction of the hinge axis*.
- 352 Sliding:**
This subclass is indented under subclass 319. Hinge wherein the means to secure the hinged members* or to produce a drag against their movement about the hinge axis comprises two cooperating elements or portions, one of which is constrained to translate along a surface into or out of engagement with the other.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
327+, for a spring-biased sliding catch.
- 353 Along or parallel to hinge axis:**
This subclass is indented under subclass 352. Hinge wherein one of the cooperating elements or portions moves relative to the other along a line which either coincides with or is parallel to an axis about which a hinged member* swings.
- 354 Including toothed gear:**
This subclass is indented under subclass 221. Hinge including a rotatably mounted annular or cylindrical element having a plurality of teeth arranged about the axis of rotation of the element and adapted to drive or be driven by an additional element engaging said teeth as a hinged member* swings about the hinge axis*.

355 Comprising nested open curved portions attached to hinged members:

This subclass is indented under subclass 221. Hinge wherein the device for swingably connecting two hinged members* comprises two interengaged portions secured to or formed on the respective hinged members and curved in a section about the hinge axis*, each portion having a concave surface and a convex surface, wherein the convex surface of one portion is adapted to move along the concave surface of the other portion as the hinged members* swing about the hinge axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

260+, for a hinge comprising nested open curved portions which are engaged or disengaged to join or disjoin the hinged members*.

356 Including hinge pin:

This subclass is indented under subclass 355. Hinge including an elongated rodlike element about which a hinged member* swings.

- (1) Note. The rodlike element may be either a discrete element or a distinct section formed on one of the open curved portions.

357 Including transversely moving pin in slot:

This subclass is indented under subclass 221. Hinge comprising an element which extends into an aperture or groove which is elongated in a direction transverse to the hinge axis*, wherein the element moves laterally along the aperture or groove as one hinged member* is swung relative to the other about the hinge axis*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

348, for hinges provided with a recess along the slot into which pin is moved to fix the hinged members* in relative position.

358 Plural noncollinear pins and slots:

This subclass is indented under subclass 357. Hinge including two discrete elements, each of which extends through and moves laterally along a separate elongated aperture or groove

as a hinged member* is swung about the hinge axis*, wherein the longitudinal axes of the elements define separate lines.

359 Parallel slots:

This subclass is indented under subclass 358. Hinge wherein the distance between the centers of the two separate elongated apertures or grooves is constant along their length.

360 Having pin fixed to pivoted arm or plate:

This subclass is indented under subclass 357. Hinge wherein the element which moves along the elongated aperture or groove is attached to a component which is swingably mounted with respect to both hinged members*.

361 Hinge pin movable along slot:

This subclass is indented under subclass 357. Hinge wherein the element which moves along the elongated aperture or groove comprises a rodlike element which defines the sole axis about which a hinged member* swings.

362 Including sliding surfaces to permit relative translation of hinged members:

This subclass is indented under subclass 221. Hinge including first and second surfaces secured to respective hinged members*, and which engage one another in sliding contact to guide the hinged members in displacement relative to one another along a straight or curved line.

- (1) Note. The hinges found in this and indented subclasses differ from adjustable hinges in that the former function in such a manner that the shifting of the hinged members occurs as either a prerequisite or a consequence of the pivotal movement of the hinged members* about the hinge axis*, whereas in the latter, the hinged members are moved and fixed independently of their pivotal movement.

SEE OR SEARCH THIS CLASS, SUBCLASS:

233, for a hinge having a lever for shifting one hinged member* relative to one another.

235+, for adjustable hinges (see (1) Note supra).

350+, for a hinge having a rigid catch, and means which permits relative translation of the hinged members to engage or disengage the catch.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, subclasses 250+ for a closure swingable about plural axes and combined with a slide for guiding movement of the closure.

109, Safes, Bank Protection, or a Related Device, subclass 70 for safe closures mounted for sliding and swinging movement.

363 And stop or abutment for pivotal movement:

This subclass is indented under subclass 362. Hinge including structure for limiting the swinging movement of a hinged member* in one direction about the hinge axis*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

350+, for a hinge having a catch, i.e., means to fix a hinged member against movement in either direction about the hinge axis*, wherein the catch is engaged or disengaged by shifting one hinged member relative to the other.

364 Movement transverse to hinge axis:

This subclass is indented under subclass 362. Hinge wherein the sliding surfaces permit relative displacement of the hinged members* in a direction perpendicular to the hinge axis*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

235+, for an adjustable hinge having means which permits one hinged member to be moved and fixed relative to the other hinged member.

357+, for a hinge which includes a pin movable transversely along a slot to permit the hinged members* to be displaced relative to one another.

365 Three-hinged members:

This subclass is indented under subclass 221. Hinge including a third portion adapted to engage or be fastened to a third-hinged member*.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, subclass 236 for a hinge for connecting a toilet bowl, seat, and cover.

366 Having plural hinge axes (e.g., multiple pin-tle):

This subclass is indented under subclass 221. Hinge wherein the structure which swingably connects the two hinged members* defines two or more distinct axes about which the hinged members pivot relative to one another.

(1) Note. The pivotal movement may occur alternately about each axis or simultaneously about both axes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

239+, for a hinge having means which permits pivotal adjustment of the hinged members* about an axis other than the hinge axis*.

282+, for a double-acting resiliently biased hinge having plural hinge axes.

287+, for resiliently biased hinge which employs a helical spring oriented transversely to plural hinge axes.

311, for a gravitating hinge having plural hinge axes.

SEE OR SEARCH CLASS:

403, Joints and Connections, subclasses 52+ for articulated members having plural distinct articulation axes.

367 Having transverse or skewed axes:

This subclass is indented under subclass 366. Hinge including structure which permits the hinged members* to swing about two discrete intersecting or obliquely oriented axes.

368 Connected by serially arranged pivoted links between hinged members:

This subclass is indented under subclass 366. Hinge comprising two arms or plates swingably connected together at or adjacent one end and swingably connected to respective hinged members* at the opposite end.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
346, for a hinge having a brace in the form of serially connected pivoted links spaced from the hinge axis.
- 369 Plural sets of serially arranged pivoted links:**
This subclass is indented under subclass 368. Hinge comprising a second discrete pair of arms or plates swingably connected together at or adjacent one end and having their opposite ends swingably connected to respective hinged members*.
- 370 Four or more axes:**
This subclass is indented under subclass 366. Hinge wherein the structure which swingably connects the two hinged members* defines four or more distinct axes about which the hinged members pivot relative to one another.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
288, for hinge having four or more hinge axes* and a coil spring oriented transversely to at least one axis.
- 371 Including stop or latch:**
This subclass is indented under subclass 366. Hinge including either (a) specific structure for limiting the angular displacement of a hinged member about a hinge axis*, or (b) means for securing a hinged member* to prevent it from swinging about one of the hinge axes.
- 372 Including laminated leaf:**
This subclass is indented under subclass 221. Hinge including a portion by which the hinge is adapted to be secured to a hinged member* and consisting of superposed flat layers.
- 373 Wire hinge:**
This subclass is indented under subclass 221. Hinge a substantial portion of which is formed from a material in the shape of a very elongated slender strand or rod.
- 374 Having stop or abutment:**
This subclass is indented under subclass 221. Hinge including structure for limiting the angular displacement about the hinge axis* of one hinged member* relative to another.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
319+, for a hinge which includes structure for fixing the hinged members* against movement in either direction about the hinge axis*.
- 357+, for a stop in the form of a pin movable transversely along a slot.
- 363, for a hinge having structure which serves as a stop or abutment after one hinged member* is shifted relative to another.
- 375 Adjustable or resilient:**
This subclass is indented under subclass 374. Hinge wherein either (a) means are provided which permit the position of the limiting structure to be changed, or (b) the limiting structure is formed from an elastically deformable material.
- 376 Comprising relieved axially opposed relatively rotating surfaces:**
This subclass is indented under subclass 374. Hinge including first and second surfaces which face one another and are perpendicular to the hinge axis and rotatable with the respective hinged members*, wherein the structure for limiting the angular displacement of one hinge member relative to the other comprises engageable protrusions or walls of recesses on the respective surfaces.
- 377 Comprising platelike bearing portion curved about hinge axis:**
This subclass is indented under subclass 374. Hinge wherein the structure for limiting the angular displacement of a hinged member* about the hinge axis* comprises an edge or face of a sheet of material fixed with respect to a hinged member, and deformed in the direction of its thickness to circle a hinge pin*, and serve as a bearing surface during pivotal movement of the hinged member about the hinge axis.
- 378 Hinge axis passes through hinged member (e.g., floor hinge):**
This subclass is indented under subclass 221. Hinge wherein the axis about which a hinged member* rotates during operation of the hinge defines a line which passes through the interior of the hinged member*.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
277+, for resiliently biased floor hinges.
- 379 Pintle or pivot concealed in hinged member:**
This subclass is indented under subclass 378. Hinge wherein mutually contacting pivotal surfaces of the hinge lie entirely within a cavity in one of the hinged members* in at least one relative position of the hinged members about the hinge axis*.
- 380 Including means to retain pintle in hinge (e.g., tamper proof, nonrising pintle, etc.):**
This subclass is indented under subclass 221. Hinge comprising an elongated cylindrical or rodlike element about which a hinged member* rotates, wherein means are provided to prevent the element from moving axially with respect to the remainder of the hinge.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
262+, for a hinge having a pintle which may be readily assembled and disassembled from the hinge.
- 381 Threaded or slotted pintle or knuckle:**
This subclass is indented under subclass 380. Hinge wherein the means to prevent axial movement of the elongated cylindrical or rodlike element comprises a groove in either the element or in a bearing surface surrounding the element.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
262+, for a hinge having a readily removable and replaceable threaded pintle.
- 382 Including means to fasten leaf to member:**
This subclass is indented under subclass 221. Hinge including a rod or platelike portion protruding from the hinge axis* and adapted to be secured to a hinged member*, wherein means are provided to secure the rod or platelike portion to the hinged member.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
252+, for a hinge having a clamp for attachment to a hinged member* and comprising either two opposing surfaces or a constrictable opening.
- 254+, for a hinge having means to facilitate assembly and disassembly of hinge sections to permit hinged members to be joined or separated.
- 383 By expandable connector:**
This subclass is indented under subclass 382. Hinge wherein the means for securing the platelike portion to the hinged member* comprises an element adapted to be inserted into the hinged member and having portions which move outwardly to retain the element in the hinged member.
- SEE OR SEARCH CLASS:
411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, subclasses 15+ for expandable fasteners, per se.
- 384 Self-penetrating fastener:**
This subclass is indented under subclass 382. Hinge wherein the means for securing the platelike portion to the hinged member* comprises an element which is driven into the hinged member.
- SEE OR SEARCH CLASS:
411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, appropriate subclasses for screws, nails, and other driven fasteners, per se.
- 385 Specified material:**
This subclass is indented under subclass 221. Hinge wherein significance is attributed to the particular substance from which the hinge is formed.
- (1) Note. A nominally recited hinge formed from a particular substance is properly classified with the substance and cross-referenced to this subclass.
- 386 Specific pintle structure:**
This subclass is indented under subclass 221. Hinge including a rodlike element of specified construction about which a hinged member* swings.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 223, for a pintle portion or attachment which is unrelated to the hinge function (e.g., coat hanger, net support, etc.).
- 244, for a pintle having means for adjusting the hinged member* relative to one another.
- 262+, for a pintle removable from the remainder of the hinge.
- 265+, for hinges which separate at the pintle, the pintle remaining attached to one hinge section.
- 273+, for a pintle having a lubricating feature.
- 340, for a hinge having a threaded pintle drag adjustment.
- 374+, for a pintle having structure which serves as a limit stop for the hinged members.
- 380+, for a pintle provided with means to retain it in the hinge.
- 385, for a pintle formed from a specific material.
- 387 Specific leaf structure:**
This subclass is indented under subclass 221. Hinge including a rodlike or platelike portion of specified construction by which the hinge is adapted to be secured to a hinged member*.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 246, for a hinge leaf provided with means for adjustment toward and away from a hinged member*.
- 251, for a hinge leaf cover.
- 252+, for a hinge leaf having a clamp for attachment to a hinged member.
- 254+, for a leaf provided with means to facilitate ready assembly and disassembly with a hinged member.
- 372, for a laminated leaf.
- 373, for a leaf formed substantially from wire.
- 374+, for a leaf having a limit stop for movement about the hinge axis*.
- 385, for a leaf formed from a specified material.
- 388 Having prongs or cooperating structure on leaf:**
This subclass is indented under subclass 387. Hinge wherein the platelike portion includes either (a) a self-piercing protrusion, or (b) structure adapted to engage cooperating structure on another hinge leaf.
- 389 Angular leaf sections:**
This subclass is indented under subclass 387. Hinge including a plurality of distinct contiguous rodlike or platelike sections adapted to be secured to a hinged member*, wherein the sides of adjacent sections intersect to form corners.
- 390 Parallel sections:**
This subclass is indented under subclass 389. Hinge wherein two of the rodlike or platelike sections have opposing faces or longitudinal axes which are everywhere equidistant.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 252+, for a clamping leaf having parallel sections and means to force the sections toward one another.
- 391 Coplanar sections:**
This subclass is indented under subclass 389. Hinge wherein all rodlike or platelike sections lie in the same plane.
- 392 Including planar section perpendicular to hinge axis:**
This subclass is indented under subclass 389. Hinge including a platelike section lying in a plane which is orthogonal with the axis about which a hinged member* rotates.
- 400 COUNTERBALANCE DEVICE, PER SE:**
Subject matter under the subclass definition comprising a counterpoise to negate or minimize a force.
- (1) Note. Included in this subclass is a counterbalance device, where the counterpoise is connected to the force by a pulley or system of pulleys.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 401, for a spring counterbalance device.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, for a counterbalance device claimed in conjunction with a door, especially subclasses 20, 119+, 150+, 429+, and 445+.

401 Spring:

This subclass is indented under subclass 400. Counterbalance device, wherein the counterpoise comprises a resilient member stressed within its elastic limit.

(1) Note. A helical or torsion springs are included herein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

400, for a counterbalance device, per se.

402 DOOR ESCUTCHEON OR SIMILAR ELEMENT:

This subclass is indented under the class definition. Subject matter providing an article of hardware for a door not provided for elsewhere, having a protective plate (e.g., kickplate), an ornamental covering (i.e., the type which surrounds a keyhole), a doorknob cover, or other such component.

(1) Note. Included herein is an attaching element specifically claimed for use with a door associated device, e.g., check or hinge, where no more of the device is recited than is necessary to support the attaching element.

(2) Note. A device surrounding a latch or handle claiming such uses as protecting the door from scratching or fingerprints is appropriate matter for this subclass.

(3) Note. This subclass is not intended for a device constituting an arrangement of working parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

49+, for a check, closure, or other multi component door mechanism and especially subclasses 119+, 150+, 200+, 429+ and 445+ for a counterbalance device in combination with a door.

71+, for a closure.
82+, for a closure check.
116, for a handle with an associated insulating pad.
221+, for hinge structure.
400+, for a counterbalance device, per se, not claimed in conjunction with a door.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, especially subclasses 460+ for a handle protector.
150, Purses, Wallets, and Protective Covers, subclass 155 for a doorknob cover constructed of flexible materials.
296, Land Vehicles: Bodies and Tops, especially subclasses 199+ for a scuff plate for the sill or other body structure of a land vehicle.

403 Paper weight:

This subclass is indented under the class definition. Element intended to be placed on a sheet of paper to secure the paper in place.

(1) Note. The paper weight of this subclass may be small, heavy, or decorative.

SEE OR SEARCH THIS CLASS, SUBCLASS:

4+, for a weight intended to hold a carpet or rug in position.

SEE OR SEARCH CLASS:

248, Supports, subclass 504 for paperweights with a support structure or framework associated with the paper retaining means.
D19, Office Supplies; Artists' and Teachers' Materials, for pertinent subclass(es) as determined by schedule review.

404 MISCELLANEOUS ELEMENT OR ATTACHMENT:

Miscellaneous Articles, not classifiable in any of the other subclasses of this class or any other class, which is a stationary attachment or accessory.

(1) Note. This subclass is not intended for device constituting an arrangement of working parts.

- (2) Note. A miscellaneous weight with or without its supporting means is found herein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 216, through 219, for sash weights.
403, for a paper weight.

SEE OR SEARCH CLASS:

- 2, Apparel, subclass 273 for a dress weight.
12, Boot and Shoe Making, especially subclass 1 for a miscellaneous article and 128 for a shoe form.
24, Buckles, Buttons, Clasps, etc., subclasses 115+ for a cord and/or rope holder; subclasses 455+ for a clasp, and subclasses 572+ for a separable fastener.
30, Cutlery, subclass 235 for a drilling machine-frame combined with a counter-weight.
33, Geometrical Instruments, subclasses 392+ for a plumb bob and subclass 720 for a sounding device of the line and lead sinker type or for such a sinker, per se.
38, Textiles: Ironing or Smoothing, subclass 98 for a weight increasing attachment for a textile smoothing implement.
40, Card, Picture, or Sign Exhibiting, subclasses 700+ for picture frames, subclass 358 for a paperweight combined with means to display a card, picture or sign (e.g.; calendar), and subclasses 584+ for a sign.
49, Movable or Removable Closures, subclasses 460+ for a kickplate in combination with the closure on which it is mounted.
74, Machine Element or Mechanism, subclass 572.2 for flywheel.
119, Animal Husbandry, subclasses 769 and 816 for a weight type animal restraining means.
160, Flexible or Portable Closure, Partition, or Panel, subclass 349.1 for a bottom weight for a hanging or draping fabric.
164, Metal Founding, subclass 412 for a mold to form weights.

- 168, Farriery, subclass 25 for a horse shoe weight.
177, Weighing Scales, subclass 264 for a weighing scale weight.
211, Supports: Racks, subclasses 51+ for a support including a weight or a spring-pressed mass to overlie and thereby retain a stack of sheets.
248, Supports, subclasses 114+, for a support for a watch or clock combined with a mirror, subclass 364 for a counter-balance for a support; subclasses 441.1+ for easel type picture or mirror supports and subclass 549 for a mirror or picture support comprising a frangible or deformable component.
254, Implements or Apparatus for Applying Pushing or Pulling Force, subclasses 389+ for a device or a member intended to guide a moving cable, the cable being attached to or supports an object being pulled by the cable from one position or location to another.
280, Land Vehicles, subclass 187 for a weight for vehicle restraining means.
292, Closure Fasteners, subclass 344 for a weight adapted as closure fasteners.
301, Land Vehicles: Wheels and Axles, subclasses 5.21+ for a wheel balancing weight.
359, Optical: Systems and Elements, subclasses 515+ for a signal reflectors and subclasses 838+ for a mirror or reflective element, particularly subclasses 871+ for a mirror with a support.
411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, for a headed fastener, generally including a nail, stud, or rivet.
482, Exercise Devices, particularly subclasses 93+ for a weight manipulated by a user for exercise.

405 Extensible handle:

This subclass is indented under subclass 114.1. Subject matter wherein the graspable element has a mechanism connected therewith to provide extension thereof to a carrying position and for collapsing said element for storage or non-use.

406 Detachable handle

This subclass is indented under subclass 114.1. Subject matter wherein the handle is constructed to be removably attached to the body of the carried container or article.

407 Welded or adhesively attached handle:

This subclass is indented under subclass 114.1. Subject matter wherein the handle includes a portion which is joined to the carried article by physical or chemical bonding means.

SEE OR SEARCH CLASS:

383, Flexible Bags, subclasses 6+ for handle, etc.

408 Swinging handle

This subclass is indented under subclass 114.1. Subject matter wherein the handle is attached to the article body such that it may move in an arc about an axis lying along the handles median longitudinal plane.

(1) Note. A briefcase handle so attached, for example, may swing from its carrying position to a rest position against the side of the case.

409 With means permanently connecting the handle to a carried article:

This subclass is indented under subclass 408. Subject matter including handle attachment means which nonseparably engage and join the handle and article.

410 With means permanently connecting the handle to a carried article:

This subclass is indented under subclass 114.1. Subject matter including handle attachment means which nonseparably engage and join the handle and article.

411 With carrier handle including a user enhanced grip attachment:

This subclass is indented under subclass 114.1. Subject matter wherein a device connects to a handle surface to provide an improved gripping function (e.g., a wire bail snap-on handguard).

412 Door handle:

This subclass is indented under subclass 110.1. Subject matter including a handle attached, or intended to be attached, to a usually swinging

or sliding barrier for manipulation of such barrier by which an entry is opened or closed.

(1) Note. In certain instances the handle may be manipulated by the feet, or other body part, instead of or as well as the hand.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7, for door opening apparatus.

413 Detachable handle:

This subclass is indented under subclass 413. Subject matter wherein the handle is constructed to be removably attached to the door.

414 Knob type:

This subclass is indented under subclass 412. Subject matter wherein the door handle has the shape of a usually rounded grippable protuberance.

415 Drawer pull:

This subclass is indented under subclass 110.1. Subject matter wherein the handle is connected to a receptacle that is usually slideable by pulling out of and pushing into a case or cabinet type holder.

SEE OR SEARCH CLASS:

312, Supports: Cabinet Structure, subclasses 330.1+ for drawer structure.

416 Lift:

This subclass is indented under subclass 415. Subject matter wherein the drawer pull comprises a finger engaging means which is often indented and positioned to provide at least a partial lifting direction to the manual force applied to the drawer.

417 Knob type:

This subclass is indented under subclass 415. Subject matter wherein the drawer pull comprises a grippable protuberance.

418 Swinging:

This subclass is indented under subclass 417. Subject matter wherein the knob is mounted for suspended movement.

- 419 Loop type:**
This subclass is indented under subclass 415. Subject matter wherein the drawer pull comprises a generally curved hand-gripping portion which the fingers may pass through.
- 420 Ring type:**
This subclass is indented under subclass 415. Subject matter wherein the drawer pull has the shape of a substantially continuous grippable annulus.
- 421 Handle having mounted grip means (e.g., bicycle handlebar grips, etc.):**
This subclass is indented under subclass 110.1. Subject matter including a handle with a portion receiving a hand graspable attachment.
- SEE OR SEARCH CLASS:
74, Machine Element or Mechanism, subclasses 551.1+ for handlebars and related structure.
- 422 Detachable handle:**
This subclass is indented under subclass 110.1. Subject matter wherein the handle is constructed to be removably attached to and separable from the item it may manipulate.
- 423 For battery:**
This subclass is indented under subclass 422. Subject matter wherein the manipulated item comprises one or more electrical producing cells.
- SEE OR SEARCH CLASS:
294, Handling: Hand and Hoist-Line Implements, appropriate subclasses, particularly 903 for battery carrier.
- 424 For Casket:**
This subclass is indented under subclass 422. Subject matter wherein the handle is mounted on a coffin.
- SEE OR SEARCH CLASS:
27, Undertaking, subclasses 2+ for coffin structure.
- 425 For container:**
This subclass is indented under subclass 422. Subject matter wherein manipulated item comprises a general receptacle.
- SEE OR SEARCH CLASS:
220, Receptacles, subclass 759 for general container having detachable handle.
- 426 Auxiliary handle:**
This subclass is indented under subclass 422. Subject matter including a primary handle and at least one supplementary handle.
- 427 Extension:**
This subclass is indented under subclass 422. Subject matter including a structure that serves as a lengthening or enlargement of a primary handle
- 428 Cord or rope related:**
This subclass is indented under subclass 422. Subject matter wherein the handle is connected with slender flexible material usually consisting of strands of twisted fibers.
- 429 Extensible handle:**
This subclass is indented under subclass 110.1. Subject matter wherein the handle has a mechanism connected therewith to provide extension thereof to an operative position and for returning such to a storage or non-use position.
- 430 Handle with ergonomic structure (e.g., finger engagement structure such as indents, grooves, etc., and handle user-interaction (human engineering) enhancements such as improved handle dimensions and positioning):**
This subclass is indented under subclass 110.1. Subject matter comprising a handle that coacts with the human hand and body providing more effective manipulative operation and other functions such as safety and comfort for the user (see examples in title).
- (1) Note. The particular ergonomic structure and advantages are often discussed in the disclosures of the patents classified herein.
- 431 Insulated handle:**
This subclass is indented under subclass 430. Subject matter wherein the handle is constructed to isolate a portion thereof, such as a gripping portion, from uncomfortable or harmful transfer of sensual phenomena such as heat, cold, vibration, electricity, etc.

- 432 Handwheel:**
This subclass is indented under subclass 431. Subject matter wherein the handle comprises a substantially circular shaped device turned by torque applied by a human hand usually to operate a valve, or the like.
- 433 Knob type:**
This subclass is indented under subclass 431. Subject matter wherein the handle has the shape of a usually rounded grippable protuberance.
- 434 Wire type:**
This subclass is indented under subclass 431. Subject matter wherein the handle comprises shaped metal in the form of a flexible thread or slender rod.
- 435 Unshaped or unattached pad:**
This subclass is indented under subclass 431. Subject matter including an item such as a pot holder which may be flexible to allow the manipulation of a heated cooking vessel, or the like, while insulating the user.
- SEE OR SEARCH CLASS:
294, Handling: Hand and Hoist-Line Implements, subclass 25 for hand and finger attachments.
- 436 Bar-type handle:**
This subclass is indented under subclass 110.1. Subject matter wherein the handle is an elongated body mounted to be gripped along its length for manipulation therewith.
- SEE OR SEARCH CLASS:
81, Tools, appropriate subclasses, and particularly subclasses 177.1+ for wrench handle and shanks, subclasses 427.5 for plier handles, and subclasses 489+ for a general tool handle which is not disclosed for use with a particular type of hand tool.
- 437 For lawnmower:**
This subclass is indented under subclass 436. Subject matter wherein the handle is for a device utilized for cutting grass, or the like.
- SEE OR SEARCH CLASS:
56, Harvester, subclasses 239+ for hand-operated cutter.
- 438 Swinging:**
This subclass is indented under subclass 436. Subject matter wherein the handle is mounted for use such that at least a portion thereof is movable through an arc.
- 439 Casket handle:**
This subclass is indented under subclass 438. Subject matter wherein the handle is mounted on a coffin.
- SEE OR SEARCH CLASS:
27, Undertaking, subclasses 2+ for coffin structure.
- 440 Braced handle:**
This subclass is indented under subclass 110.1. Subject matter wherein the handle has means to more rigidly connect it in its working position.
- 441 Knob-type handle:**
This subclass is indented under subclass 440. Subject matter wherein the handle has the shape of a usually rounded grippable protuberance.
- 442 With flexible suspending means:**
This subclass is indented under subclass 442. Subject matter wherein the knob is yieldingly fastened or hung as mounted for use.
- SEE OR SEARCH CLASS:
248, Supports, subclasses 251+ for rod - type supports for rollers and curtains etc.
- 443 Lift:**
This subclass is indented under subclass 110.1. Subject matter wherein the handle comprises a finger engaging means which is often indented and positioned to provide at least a partial lifting direction to the manual force applied to the handle.
- 444 Loop-type handle:**
This subclass is indented under subclass 110.1. Subject matter comprising a generally C-shaped handle having a finger accessible grip-

pable central portion and end portions anchored to an article or device.

445 Swinging:

This subclass is indented under subclass 444. Subject matter including a pivotally attached hand-grippable portion providing an oscillating grip.

446 Ring-type handle:

This subclass is indented under subclass 110.1. Subject matter wherein the handle has the shape of a substantially continuous grippable annulus.

CROSS-REFERENCE ART COLLECTIONS

900 Handle with angularly adjustable component:

This subclass is indented under the class definition. Subject matter wherein a section of handle is movable such that it is measurably turned relative to another handle section or to a member being manipulated.

901 Handle with manipulation by human body part other than the hand:

This subclass is indented under the class definition. Subject matter including a handle device for utilization by a foot, forearm, toe, etc.

902 Unitary handle composed of different cooperating materials:

Manipulative device utilizing distinctive substances having jointly enhancing properties.

903 Handle with diverse art enhancement (illuminator, heater, etc.):

Manipulative device including a distinctive use enhancing application.

904 Handle means having sanitary characteristic (e.g., to prevent transmission of germs, etc.):

Manipulative device including such elements as a throwaway or replaceable cover or placement of device to enhance hygienic use thereof.

905 Toilet seat lifter:

Device including an extension or various aids for raising a water closet seat.

906 Light handle cover:

Device including disposable means engaging the hand of the person manipulating the light during use thereof.

FOREIGN ART COLLECTIONS

The definitions below correspond to abolished subclasses from which these collections were formed. See the Foreign Art Collection schedule of this class for specific correspondences. [Note: The titles and definitions for *indented* art collections include all the details of the one(s) that are hierarchically superior.]

FOR 100 MISCELLANEOUS:

Foreign art collection not classifiable in any of the other subclasses of this class.

FOR 102 BRUSHING OR LINING THIMBLES:

Foreign art collection comprising bushings and socket devices to line openings or sockets to reinforce the same and/or to provide a smooth surface to prevent abrasion of elements passing therethrough or thereinto.

FOR 103 Wooden receptacle:

Foreign art collection for lining openings into wooden receptacles.

END