

CLASS 114, SHIPS**SECTION I - CLASS DEFINITION**

This class includes marine vehicles and accessories, as merchant vessels, warships, submarines, torpedoboats, etc., their spars, sails, and fittings specific thereto and not otherwise classifiable.

SECTION II - REFERENCES TO OTHER CLASSES**SEE OR SEARCH CLASS:**

- 33, Geometrical Instruments, subclasses 713 through 731, and see the notes thereto for depth sounding devices and related art.
- 182, Fire Escape, Ladder, or Scaffold, subclass 1 for a horizontally pivoted ladder wherein a step remains level, subclasses 83-86 for a wall attached platform and ladder, and subclasses 93-99 for a wall attached ladder.
- 244, Aeronautics and Astronautics, subclasses 3.1 through 3.3 for control or stabilizing means for missiles and subclasses 75.1-99.9 for apparatus and devices for controlling aircraft generally of the manned typed. Subclasses 76-82 is the generic subclass for the automatic steering of mobile craft in two and three dimensions. See subclasses 175-197 and the classes specified in the notes thereto for the classes which provide for electrically controlled or actuated apparatus for automatically controlling the motion and/or steering of mobile craft and for a statement as to the line between the classes.
- 440, Marine Propulsion, appropriate subclasses for marine vehicle propulsion devices, per se, and especially subclasses 38 through 47 for marine jet drive propulsion and subclasses 49-83 for screw propeller-type propulsion.
- 441, Buoys, Rafts, and Aquatic Devices, appropriate subclasses for rafts.
- 505, Superconductor Technology: Apparatus, Material, Process, subclasses 150 through 239 for high temperature ($T_c > 30$ K) superconducting systems or devices, particularly subclass 164 for projectile or launching device or system.

SUBCLASSES

- 1 WARSHIPS:**
This subclass is indented under the class definition. Ships and similar structures for offensive and defensive purposes, elements or details specific thereto, and inventions relating to the construction and building of such vessels not otherwise classifiable.
- 2 Rams:**
This subclass is indented under subclass 1. Vessels provided with bow or stern extensions below the waterline for ramming purposes or ships having battering-rams or augers.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
41, for rams used in ice-breaking.
- 3 Battering:**
This subclass is indented under subclass 2. Vessels having reciprocating or thrusting rams designed to batter in or puncture the hull of a vessel; also vessels provided with augers or boring devices to effect the same ends.
- SEE OR SEARCH CLASS:
81, Tools, subclass 463 and see the notes thereto for other impact tools.
- 4 Floating batteries:**
This subclass is indented under subclass 1. Floating forts designed to be anchored in harbors usually of circular section and cylindrical or globular in form, and though such forts may have means of propulsion they differ from the general type of warships and form a distinctive class.
- (1) Note. These devices differ from turrets in that turrets are fortified structures mounted upon, rotating with, or being elevated upon other structures, while floating batteries form a single structure, being rotated or elevated as a whole.
- 5 Turret:**
This subclass is indented under subclass 1. Warships having mounted thereon an armored short or flat tower, generally cylindrical or conical in shape within which guns are operated. These structures usually rotate upon or are elevated or lowered on the vessel carrying them.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
4, for revolving vessels.
- SEE OR SEARCH CLASS:
89, Ordnance, subclass 36.13 for turret-type shields.
- 6 Combined elevating and rotary:**
This subclass is indented under subclass 5. Warships provided with revoluble turrets that may be elevated or depressed at will.
- 7 Elevating:**
This subclass is indented under subclass 5. Turrets that may be elevated or depressed on the vessel that supports them.
- 8 Rotary:**
This subclass is indented under subclass 5. Turrets that are revoluble upon the vessel supporting them.
- 9 Armored:**
This subclass is indented under subclass 1. Miscellaneous armor-clad vessels in which turret features are not claimed and which involve novelty in protected hulls or decks, etc., either through belts or sheathing of armor-plate which may be placed to form deflecting-surfaces or by means of temporary shields and screens.
- SEE OR SEARCH CLASS:
109, Safes, Bank Protection, or a Related Device, appropriate subclasses, particularly subclass 49.5 for nonvehicular screens or shields for persons; subclass 58.5 for gun ports, and subclasses 78-85 for penetration-resistive rigid wall structures not involving a combination with a gun or gun mount.
428, Stock Material or Miscellaneous Articles, appropriate subclasses for a stock material product in the form of a single or plural layer web or sheet, and especially subclasses 457 through 472.3 for a composite product including a layer of metal, and subclasses 615-686 for a metallic composite defined in terms of the composition of its components.
- 10 Deflectors:**
This subclass is indented under subclass 9. Devices for protecting warships by means of armor arranged to form deflecting-surfaces to receive the impact of projectiles and cause their rebound.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
5, through 8, for turrets.
- 11 Belting and plating:**
This subclass is indented under subclass 9. Inventions in protecting warships by armor, involving the structure, assembling, and securing of armor-plates or equivalent upon the hull, decks, or elsewhere to form sheaths or belts.
- 12 Compound:**
This subclass is indented under subclass 11. Armor-plating composed of a plurality of superposed parts jointed or locked together to form an integral plate or in which the belting or plating is of a compound character formed of different materials, including buffers or equivalent, or structurally united or in which the plating is composed of a plurality of layers of plates.
- 13 Buffers:**
This subclass is indented under subclass 12. Armor belting and plating in which yielding or elastic means are provided either at the backing or supports or between the elements of the compound armor or plates.
- 14 Screens and shields:**
This subclass is indented under subclass 9. Devices in which protection is secured to the vessel or crew by means of a screen or shield secured to the vessel or which is portable.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
174, for stoppers.
175, for gun port.
- SEE OR SEARCH CLASS:
89, Ordnance, subclass 36.12 for shields of gun-mounts.

- 109, Safes, Bank Protection, or a Related Device, appropriate subclasses, particularly subclass 49.5 for nonvehicular screens or shields for persons; subclass 58.5 for gun ports and subclasses 78-85 for rigid penetration-resistant walls or armor not involving a combination with a gun or gun mount.
- 428, Stock Material or Miscellaneous Articles, appropriate subclasses for a single or plural layer web or sheet stock material, and especially subclass 911 (a cross-reference art collection) for such product having a penetration resistant layer.
- 15 Concealment:**
This subclass is indented under subclass 1. Means for rendering a warship invisible or indistinguishable at a distance by particular combinations of paints or through resemblance to surroundings.
- 18 TORPEDO BOATS:**
This subclass is indented under the class definition. Torpedo-boats that run on the surface or awash and that are not submergible. All have means for placing, launching, or discharging torpedoes or are themselves the carrier of the explosive.
- (1) Note. Torpedoboats differ from torpedoes in that they are manned and controlled by a crew while torpedoes carry no crew, are not designed for such purpose and are much smaller.
- 19 Spar:**
This subclass is indented under subclass 18. Torpedoboats carrying torpedoes at the end of a spar, the torpedo being exploded on contracting the hull of the vessel toward which it is directed, being launched from the spar toward the hull, or discharged at will.
- 20.1 TORPEDOES:**
This subclass is indented under the class definition. Subject matter including fish or automobile torpedoes, the power or propulsion being self-contained and nearly always actuating screw-propellers, which propel the torpedo on the surface or at any desired depth.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
238, for torpedo launching.
- SEE OR SEARCH CLASS:
102, Ammunition and Explosives, subclasses 406 through 423 for submarine mines; subclasses 347-352 for pyrotechnic rockets, and subclasses 374-381 for aerial missiles having a reaction motor propulsion means.
- 318, Electricity: Motive Power Systems, appropriate subclasses for electric motor systems which might be used to either steer or propel a torpedo, particularly subclasses 580 through 589, and 648-649 for automatic control of electric motors in response to direction, inclination, or angular position.
- 20.2 With power plants:**
This subclass is indented under subclass 20.1. Subject matter wherein means are provided for driving the torpedo through the water.
- 20.3 With net cutting:**
This subclass is indented under subclass 20.1. Subject matter wherein means are provided for cutting a net.
- 21.1 With external control:**
This subclass is indented under subclass 20.1. Subject matter including fish or automobile torpedoes controlled from a shore or other station by electrical or radiant energy means, e.g., radio, electric conductors, etc., for steering.
- (1) Note. This subclass is the generic subclass in Class 114 for the electrical control of movable bodies which are classified in Class 114, e.g., ships and torpedoes, etc., and provides for such inventions where the device claimed is not limited to being a device other than a torpedo.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
144 through 172, for mechanism for controlling the direction or motion of a ship by means of rudders, speed-retarders, etc.

SEE OR SEARCH CLASS:

244, Aeronautics, subclasses 175 through 197 and the classes specified in the Notes thereto for electrically actuated or controlled apparatus and devices for automatically controlling the motion and/or steering of mobile devices, and for a statement as to the line between the classes.

318, Electricity: Motive Power Systems, appropriate subclasses for electric motor systems which might be used to either steer or propel a cable controlled torpedo.

21.2 With remote control:

This subclass is indented under subclass 21.1. Subject matter wherein means are provided for controlling the device remotely.

21.3 With homing means:

This subclass is indented under subclass 20.1. Subject matter wherein means are provided with some type of homing features.

22 Separable sections:

This subclass is indented under subclass 20.1. Fish-torpedoes formed of a plurality of separable sections or parts, one of which contains the explosive, the remaining sections being capable of a subsequent use.

23 Steering mechanism:

This subclass is indented under subclass 20.1. Torpedoes of this type wherein the invention relates to the steering mechanism.

SEE OR SEARCH THIS CLASS, SUBCLASS:

21, for other than automatic or self-contained devices.

SEE OR SEARCH CLASS:

318, Electricity: Motive Power Systems, appropriate subclasses for electric motor systems which might be used to steer a torpedo.

24 Gyroscope:

This subclass is indented under subclass 23. Steering mechanisms for fish-torpedoes in which a gyroscope disk or wheel controls the

steadiness of the torpedo's course, direction, speed, etc.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclasses 5 through 5.9 for gyroscopes of general application.

25 Depth regulation:

This subclass is indented under subclass 20.1. Devices for keeping torpedoes at a predetermined depth below the surface while on its course or flight.

SEE OR SEARCH THIS CLASS, SUBCLASS:

312, through 342, for such regulating devices as are applicable to submarines.

SEE OR SEARCH CLASS:

102, Ammunition and Explosives, subclass 414 for submarine mines having depth regulation means responsive to hydrostatic pressure.

26 SCOWS:

This subclass is indented under the class definition. Vessels of the well-known type approximately flat-bottomed or square-ended; also oyster-floats.

27 Dumping and unloading:

This subclass is indented under subclass 26. Scows having means for discharging a load by overturning, opening doors at bottom or sides, by tilting platforms, by conveyers, carriers, by sectional, hinged, or separable parts, or by flooding or washing away, etc.

SEE OR SEARCH CLASS:

414, Material or Article Handling, subclasses 137.1 through 143.2 for means to load a scow or means to unload a scow other than by dumping into the water; subclasses 137.7-137.8 for the combination of means to load a scow with means to dump the load into the water; and subclass 140.06 for means to bodily lift a vessel out of the water onto land and then dumping the vessel.

- 28 Sectional:**
This subclass is indented under subclass 27. Scows formed of a plurality of sections, hulls, or parts.
- 29 Hinged:**
This subclass is indented under subclass 28. Dumping-scows in which the sections are hinged together and hold the load when united and dump it when separated, the sections turning on the hinges usually placed amid-ships.
- 30 Separable:**
This subclass is indented under subclass 28. Dumping and sectional scows, the load being dumped by the separation of the sections.
- 31 Platform:**
This subclass is indented under subclass 27. Scows carrying loads on platforms or decks rather than in holds and having means or structure to facilitate dumping or unloading.
- SEE OR SEARCH CLASS:
414, Material or Article Handling, subclasses 137.1 through 143.2 as explained in subclass 27 of this class (114), and subclasses 467-559 for a self-loading or unloading vehicle, i.e., a vehicle having a load receiving portion and a means to move a load thereto or therefrom.
- 32 Tilting:**
This subclass is indented under subclass 31. Scows in which a platform carrying the load is adapted to be tilted and dumped the load.
- SEE OR SEARCH CLASS:
414, Material or Article Handling, subclasses 467 through 559 as explained in subclass 31 of this class (114), and particularly subclasses 469-497 thereunder; also, subclasses 628-629 and 639-656 for an elevator having a tiltable carrier, and subclasses 697-717 and 743 for a vertically swinging load support having a tiltable means for engaging the load.
- 33 Carriers:**
This subclass is indented under subclass 32. Scows having tilting platforms which are movable laterally before tilting, affording greater facility in tilting the platform to discharge the load overboard.
- 34 Conveyors:**
This subclass is indented under subclass 31. Scows of this type in which an endless belt, carrier, conveyer, or equivalent conveys and discharges the load by its movement.
- 35 Side doors:**
This subclass is indented under subclass 31. Scows wherein the load is discharged by opening doors or gates at the sides of the scow, the platform usually being inclined and the load held in place by the closed gates.
- 36 Bottom doors:**
This subclass is indented under subclass 27. Dumping-scows discharging loads by the opening of doors or gates in the bottom of the scow.
- 37 Flooding gates:**
This subclass is indented under subclass 36. Dumping-scows having bottom doors and additional gates for admission of water to flood the load and facilitate dumping or discharge.
- 38 Turnover:**
This subclass is indented under subclass 27. Scows adapted to be reversed or turned over to dump the load.
- 39.11 METHOD OF SAILING SAILPOWERED WATERCRAFT:**
This subclass is indented under the class definition. Process for navigating a marine vehicle propelled by the wind, the vehicle having (a) a portion which furnishes buoyancy when in contact with the water and to which the main supporting surfaces and other parts are attached, i.e., hull, (b) in combination with either (1) an extent of material by which the wind is used to propel the marine vehicle through the water, i.e., sail, (2) mast, (3) spar, or (4) rigging.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 39.12, for a sailboard hull and rig means apparatus.
- 39.21 through 39.32, for apparatus for sail powered propulsion of a marine vehicle in combination with a buoyant hull.
- 271 through 292, for a planing-type hull, per se.

39.12 SAILBOARD AND RIG MEANS THEREFOR:

This subclass is indented under the class definition. Subject matter wherein the marine vehicle includes (a) a portion which furnishes buoyancy when in contact with the water and to which the main supporting surfaces and other parts are attached, i.e., hull, (b) the buoyant hull being elongated and of a width comparable to the shoulder width of a user, intended to be propelled by the wind, and supporting the user, and (c) the user supporting wind affected structure, e.g., mast, boom, sail, etc., for propulsion and navigation of the hull.

- (1) Note. Many of the marine vehicles included herein have a mast and a boom with a sail attached thereto connected to, but unsupported by the hull deck such that the vehicle's user must directly grasp and manipulate the boom in order to erect the mast and sail and thereby navigate the vehicle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 39.21 through 39.32, for a buoyant hull propelled by the wind, but with the mast and sail supported by the hull and not the rider.
- 89 through 101, for a sailboat or sailboard mast or spar, per se.
- 102.1 through 115, for sailboat rigging, per se.
- 102.29 through 102.33, for a sail, per se.

SEE OR SEARCH CLASS:

- 441, Buoys, Rafts, and Aquatic Devices, subclasses 65 through 79 for the sailboard hull in the absence of rig means, i.e., surfboards, and subclass 74 for a sailboard hull, per se.

39.13 With rig means providing vertical lift:

This subclass is indented under subclass 39.12. Subject matter wherein the arrangement of the wind affected structure, e.g., mast, spar, sail, etc., on the buoyant hull causes an upward force having a component at right angles to the horizon to be imparted to the hull by the wind.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 39.21 through 39.32, for a buoyant hull propelled by the wind, but with the mast and sail supported by the hull and not the rider.

39.14 Having specific board shape or construction:

This subclass is indented under subclass 39.12. Subject matter wherein a particular structural aspect of the configuration of the buoyant hull or its composition is detailed.

SEE OR SEARCH CLASS:

- 441, Buoys, Rafts, and Aquatic Devices, subclass 74 for a sailboard hull, per se.

39.15 With hydrofoil (e.g., keel, skeg, rudder, etc.):

This subclass is indented under subclass 39.12. Subject matter wherein the buoyant hull is provided with a blade projecting downwardly into the water which creates a thrust against the water in a direction perpendicular to the plane approximated by the blade.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 39.24, for a sailboat having a hydrofoil which provides vertical lift to the hull.

39.16 APPARATUS HELD BY OR ATTACHED TO RIDER TO CONTROL SAILBOARD OR SAILBOARD RIG:

This subclass is indented under the class definition. Subject matter wherein structure intended to be propelled by the wind is (a) supported by or (b) connected to the user and (c) utilized to manipulate either (1) an elongated buoyant hull of a width comparable to the shoulder width of a user, with the hull supporting the user and the user supporting wind affected structure, e.g., mast, boom, sail, etc., for propulsion and navigation of the hull, i.e.,

sailboard, or (2) wind affected structure, e.g., mast, sail, or spar, etc., therefor.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.12 through 39.15, for a sailboard and rig means therefor.

39.17 Rig righting device:

This subclass is indented under subclass 39.16. Subject matter wherein structure is provided for the user to grasp to restore the wind affected structure to a position in which the sail is upright.

39.18 Harness means:

This subclass is indented under subclass 39.16. Subject matter wherein the structure is an arrangement engaging a portion of the body of a user and connected to the wind affected structure, e.g., sail, mast, spar, etc., which is used for propulsion and navigation of the hull.

SEE OR SEARCH CLASS:

244, Aeronautics and Astronautics, subclass 151 for a parachute harness.

39.19 Foot strap means:

This subclass is indented under subclass 39.16. Subject matter wherein the buoyant hull has structure on an upper surface thereof which extends upwardly to encircle a portion of the foot of a user.

39.21 WATERCRAFT WITH MEANS USED IN PROVIDING SAILPOWER:

This subclass is indented under the class definition. Subject matter wherein (a) the marine vehicle includes a portion which furnishes buoyancy when in contact with the water and to which the main supporting surfaces and other parts are attached, i.e., hull, and (b) the hull which is propelled by the wind being in combination with either (1) an extent of material by which wind is used to propel the marine vehicle through the water, i.e., sail, (2) mast, (3) spar, or (4) rigging.

- (1) Note. The mere mention of a sailboat without at least a nominal recitation of a hull will be insufficient for placement in this and the indented subclasses and such subject matter will be found elsewhere in the class.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.25, for a specific sailboat hull shape, per se.

89 through 101, for a sailboat mast or spar, per se.

102.1 through 115, for sailboat rigging, per se.

102.29 through 102.33, for a sail, per se.

39.22 With means used for converting from non-sailing watercraft:

This subclass is indented under subclass 39.21. Subject matter wherein the marine vehicle includes rearrangeable elements for transforming it from a marine vehicle to a marine vehicle propelled by the wind.

SEE OR SEARCH CLASS:

440, Marine Propulsion, subclasses 12.5 through 12.7, for a self-propelled vehicle having land and water propulsion means.

39.23 With means for uprighting capsized watercraft:

This subclass is indented under subclass 39.21. Subject matter wherein the marine vehicle has a mechanism for restoring it to a position in the water with an upper surface of the hull horizontal from a position in which the hull was overturned.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

61.11, for means for uprighting a multiple displacement hull marine vehicle.

39.24 With hydrofoil for providing vertical lift to hull:

This subclass is indented under subclass 39.21. Subject matter wherein the hull is provided with a blade which is (a) horizontal or at a small angle to a horizontal plane and (b) aligned with the direction of travel such that when the hull is in motion, the force of the water striking the blade creates a resultant upward force that raises the hull with respect to the water surface.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.15, for a sailboard having a hydrofoil.

- 274 through 282, for a planing-type hull having a hydrofoil.
- 39.25 Having specifically defined hull shape:**
This subclass is indented under subclass 39.21. Subject matter wherein a particular structural aspect, e.g., shape, contour, etc., of the (a) perimeter or (b) cross section of the hull is detailed.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
56.1 through 63, for a displacement-type hull having a specifically defined hull shape.
271 through 292, for a planing-type hull having a specifically defined hull shape.
- 39.26 Multiple hulls:**
This subclass is indented under subclass 39.21. Subject matter wherein the marine vehicle has a plurality of distinct hulls.
- (1) Note. The multiple hull marine vehicles in this and the indented subclasses need not have all hulls normally traveling on the surface of the water, but also include one hull on the water surface and one submerged hull.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
61.1 through 61.25, for a ship having multiple displacement-type hulls.
271 through 292, for a ship having multiple planing-type hulls.
- 39.27 With connecting means as three-dimensional frame with vertically spaced apex (e.g., tetrahedral frame, etc.):**
This subclass is indented under subclass 39.26. Subject matter wherein the hulls are interconnected by an arrangement of elongate members forming a polyhedron having a peak spaced above a base.
- 39.28 With connecting means permitting relative movement between hulls:**
This subclass is indented under subclass 39.26. Subject matter wherein structure interconnecting one hull with another allows displacement of one hull with respect to the other.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
61.15 through 61.19, for a ship having multiple displacement-type hulls and connecting means permitting relative movement between hulls.
283, for a ship having multiple planing-type hulls and connecting means permitting relative movement between hulls.
- 39.29 With specific means acted upon by wind to provide sailpower:**
This subclass is indented under subclass 39.21. Subject matter wherein a particular structural aspect, e.g., shape, contour, etc., of the extent of material by which the wind is used to propel the hull through the water, i.e., sail, is detailed.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
102.29 through 102.33, for a sail, per se.
- 39.3 Reaction rotor-type (e.g., Magnus effect, etc.):**
This subclass is indented under subclass 39.29. Subject matter wherein the extent of material by which the wind is used to propel the hull through the water is an airfoil rotating through more than 360 degrees about an axis.
- (1) Note. The airfoil may be of the type having a single element rotated about a central longitudinal axis or may be a plurality of integral elements rotated about a common axis.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
102.29 through 102.33, for a reaction rotor-type sail for a marine vehicle.
- SEE OR SEARCH CLASS:
244, Aeronautics and Astronautics, especially subclasses 10 and 21 for a heavier-than-air aircraft having a cylindrical rotor.
416, Fluid Reaction Surfaces (I.E., Impellers), especially subclass 4 for a rotary fluid reaction surface, e.g., Magnus effect, etc., per se, and subclass 55 for an impeller combined with a vehicle.

- 39.31 Having spaced sail surfaces defining airfoil:**
This subclass is indented under subclass 39.29. Subject matter wherein the extent of material by which the wind is used to propel the hull through the water is a plurality of separated elements.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
102.32, for a sail constructed from a plurality of connected panels movable relative to each other.
102.33, for a sail constructed from a plurality of edge connected panels.
- 39.32 Having specific mast mounting means:**
This subclass is indented under subclass 39.21. Subject matter wherein a particular structural aspect of a device for connecting to the hull a tall vertical spar that rises from the hull to support the extent of material by which the wind is used to propel the hull through the water is detailed.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
90 through 94, for a mast, per se.
93, for a mast step.
- 40 ICE BREAKERS:**
This subclass is indented under the class definition. Vessels or boats designed and operated to break and cut up ice-floes or to open channels for the passage of vessels.
- 41 Rams:**
This subclass is indented under subclass 40. Ice-breakers adapted to break up the ice by ramming, the bow or stern structure being designed for that purpose, the cutting being produced by the blows and wedging caused by the speed and impact of the vessel.
- 42 Cutters:**
This subclass is indented under subclass 40. Ice-breakers having saws or cutters for disrupting the ice, usually actuated by means independent of the speed of the boat or not due to the momentum of the vessel.
- SEE OR SEARCH CLASS:
299, Mining or In Situ Disintegration of Hard Material, subclasses 24 through 28 for apparatus of general utility for mining or disintegrating ice in a naturally occurring location.
- 43 ICE BOATS:**
This subclass is indented under the class definition. Boats or vessels designed to be used on water or ice and sometimes land; the boat's structure is essential.
- SEE OR SEARCH CLASS:
280, Land Vehicles, subclasses 841 through 11.36 for skates; 809-826 for skis; and 845-28.18, for sleds.
- 44 VESSEL RAISING AND DOCKING:**
This subclass is indented under the class definition. Miscellaneous means or devices for raising sunken or submerged vessels, floating dry-docks, or devices specific to such use.
- 45 Floating dry docks:**
This subclass is indented under subclass 44. Means for raising vessels by use of semi-submersible docks, nearly all of which are floating vessels and constructed to receive the vessel upon its bottom or upon a platform or equivalent way, the dock being raised by changing the line of flotation through buoyancy by ejecting or pumping water from the water-tanks or by changing ballast.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
49, and 53, for structures that are to be entirely submerged.
258, through 263, for mother ship, floating landing platform, and harbor.
- SEE OR SEARCH CLASS:
405, Hydraulic and Earth Engineering, subclass 4 for stationary or land dry docks.
- 46 Sectional:**
This subclass is indented under subclass 45. Floating drydocks formed of a plurality of movable and independent sections that united form the dock or in which one or more sections may be used to dock other sections or vessels.

- 47 End gates:**
This subclass is indented under subclass 45. Integral structures provided with gates or caissons adapted to be closed and inclose the vessel in a dock, from which the water may be expelled to expose the hull of the vessel.
- SEE OR SEARCH CLASS:
405, Hydraulic and Earth Engineering, subclass 6 for gates associated with stationary or land dry docks.
- 48 Elevators:**
This subclass is indented under subclass 45. Floating drydocks having a platform upon which the hull of the vessel is supported and which is elevated or depressed upon the dock by buoyant action secured by emptying water-tanks or by hoisting.
- SEE OR SEARCH CLASS:
405, Hydraulic and Earth Engineering, subclass 3 for elevators in stationary or land dry docks in which the elevator is usually raised by hoisting.
- 49 Camels, caissons, and pontoons:**
This subclass is indented under subclass 53. Devices between which a vessel is raised by their buoyant action, the structures not being designed to be sunk (see search notes, below).
- (1) Note. The camels, caissons, or pontoons are partially submerged by opening watervalves and the vessels secured by straps, chains, etc., and by changing the buoyancy of the structures by expelling water from tanks or on rise of tide the vessel is raised.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
53, for similar structures designed to be sunk and secured to sunken or submerged vessels.
- SEE OR SEARCH CLASS:
441, Buoys, Rafts, and Aquatic Devices, subclasses 35 through 54 for rafts.
- 50 Submerged:**
This subclass is indented under subclass 44. Devices for raising sunken vessels; also means for forcing air into a vessel and expelling the water after sealing up openings.
- 51 Hoisting:**
This subclass is indented under subclass 50. Means for raising sunken vessels by hoisting or for hauling vessels off shoals or bars. The sunken vessel is hoisted toward some floating vessel which supports the hoisting apparatus.
- SEE OR SEARCH CLASS:
254, Implements or Apparatus for Applying Pushing or Pulling Force, subclasses 264 through 386 for a driven, cable-pulling device for hauling or hoisting a load.
- 52 Air tanks:**
This subclass is indented under subclass 50. Vessels, tanks, or receptacles for containing air adapted when filled to raise a sunken vessel by their combined buoyant force.
- 53 Camels, caissons, and pontoons:**
This subclass is indented under subclass 52. Structures adapted to receive water and be sunk, attached to sunken vessels, and have the water expelled, thus raising the vessel by buoyant force.
- 54 Inflatable bags:**
This subclass is indented under subclass 52. Bags or receptacles for containing air adapted to be attached or secured to or in sunken vessels when empty and by inflation raise the same by buoyancy.
- 55 Sand and mud loosening:**
This subclass is indented under subclass 50. Devices or means for removing the sand or mud about a submerged hull.
- 55.5 MOTORIZED SELF-PROPELLED WATER-SKI OR WATERSCOOTER-TYPE VEHICLE (E.G., PERSONAL WATER-CRAFT, ETC.):**
This subclass is indented under the class definition. Subject matter wherein the marine vehicle (a) includes a portion which furnishes buoyancy when in contact with the water and

to which the main supporting surfaces and other parts are attached, i.e., hull, (b) the buoyant hull is capable of supporting a user, and propelled to skim over the surface of the water by a motor carried by the vehicle, (c) the motor being operatively connected to propelling means below the surface of the water, (d) the buoyant hull being steered by the user, and (e) wherein a length of the hull is comparable to the body length of a user and the width of the hull is either somewhat greater than the user's foot but much narrower than the shoulder width of the user, e.g., water-ski, etc., or comparable to the shoulder width of the user, e.g., waterscooter, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 39.12 through 39.15, for a sailboard, or a sail propelled marine vehicle.
343 through 364, for a boat, per se.

SEE OR SEARCH CLASS:

- 280, Land Vehicles, subclasses 845 through 28.18 for a land vehicle provided with a surface slidably engaging the supporting surface over which the vehicle moves.
440, Marine Propulsion, appropriate subclasses for marine vehicle propulsion devices, per se, and especially subclasses 38 through 47 for marine jet drive propulsion and subclasses 49-83 for screw propeller-type propulsion.
441, Buoys, Rafts, and Aquatic Devices, subclasses 65 through 79 for a non-self-propelled water skimming device, and especially subclasses 68-73 for a water ski, per se, and subclass 74 for a surfboard.

55.51 Having hull compartment drain or vent:

This subclass is indented under subclass 55.5. Subject matter wherein the hull includes means (a) to permit the escape of liquid from an enclosed area in the hull or (b) to permit the ingress or egress of a gas, e.g., air, etc.

- (1) Note. An exhaust gas pipe coupled to the engine and extending from a compartment housing the engine is not considered a vent.

SEE OR SEARCH CLASS:

- 440, Marine Propulsion, subclasses 40 through 43 for direction control for a marine fluid jet-type drive, subclass 88 for means for handling engine fluids, and subclass 89 for means for handling engine exhaust gas.

55.52 Having pivoted steering and towing mast for rider:

This subclass is indented under subclass 55.5. Subject matter wherein the marine vehicle has (a) a control handle for controlling the direction of travel of the vehicle, (b) the handle is connected to the hull to permit rotation about a horizontal axis and (c) the handle when grasped by a user transmitting pulling force from the hull to the user.

- (1) Note. Many of the marine vehicles classified herein are designed to accommodate a standing or kneeling user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 144 through 172, for a ship steering mechanism, per se.

SEE OR SEARCH CLASS:

- 280, Land Vehicles, subclasses 845 through 28.18 for a runner supported land vehicle, and subclasses 14.21-14.28 for a runner supported land vehicle having a steering handle accommodating a standing occupant.
440, Marine Propulsion, subclasses 40 through 43 for direction control for a marine fluid jet-type drive.

55.53 Having releasable hull compartment cover:

This subclass is indented under subclass 55.5. Subject matter wherein the marine vehicle has an enclosed area within the hull, an opening of which has an overlying moveable lid for access to the enclosed area.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 201 through 203, for a hatch or cover for a deck opening of a ship.

SEE OR SEARCH CLASS:

- 49, Movable or Removable Closures, appropriate subclasses for a movable or removable closure, per se.
- 160, Flexible or Portable Closure, Partition, or Panel, appropriate subclasses for a hatch in the form of flexible and portable panels, including those of flexible material and of plural strips, slats, or panels which are interconnected for relative movement.
- 296, Land Vehicles: Bodies and Tops, appropriate subclasses, especially subclasses 37.1 through 37.16 for an auxiliary article compartment for a vehicle traveling on land.

55.54 With ski, pontoon, or hydrofoil providing vertical lift:

This subclass is indented under subclass 55.5. Subject matter wherein the hull is provided with either (a) an elongated boardlike member having a width somewhat greater than a user's foot and a normally upturned leading edge, (b) an elongated floating member or, (c) a blade projecting into the water which creates a force against the water in a direction perpendicular to the plane approximated by the boardlike member, floating member, or blade when the vehicle is traveling through the water to raise the hull with respect to the water.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 39.15, for a sailboard having a hydrofoil.
- 39.24, for a sailboat having a hydrofoil.

SEE OR SEARCH CLASS:

- 441, Buoys, Rafts, and Aquatic Devices, subclasses 68 through 73 for a water ski, per se.

55.55 And rider straddles seat:

This subclass is indented under subclass 55.54. Subject matter wherein the user rides the vehicle with one leg on each side of the part on which the user sits.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 363, for a seat support for a rider of a boat.

SEE OR SEARCH CLASS:

- 180, Motor Vehicles, subclass 9.25 for an endless track propelled vehicle wherein the attendant straddles the seat and subclasses 190-193 for a snowmobile.
- 280, Land Vehicles, appropriate subclasses especially subclasses 845 through 28.18 for a land vehicle having a runner.
- 297, Chairs and Seats, appropriate subclasses for a seat, per se.

55.56 Having standing rider:

This subclass is indented under subclass 55.5. Subject matter wherein the user rides the vehicle while in an upright position with the user's weight supported by the user's feet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 363, for a foot support for a rider of a boat.

SEE OR SEARCH CLASS:

- 180, Motor Vehicles, subclasses 9.1 through 9.64 for an endless track propelled vehicle and subclasses 190-193 for a snowmobile.
- 280, Land Vehicles, subclasses 14.21 through 14.28 for a runner supported land vehicle wherein the occupant stands.

55.57 Having rider straddling seat:

This subclass is indented under subclass 55.5. Subject matter wherein the user rides the vehicle with one leg on each side of the part on which the user sits.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 363, for a seat support for a rider of a boat.

SEE OR SEARCH CLASS:

- 180, Motor Vehicles, subclass 9.25 for an endless track propelled vehicle wherein the attendant straddles the seat and subclasses 190-193 for a snowmobile.
- 280, Land Vehicles, appropriate subclasses, especially subclasses 845 through 28.18 for a land vehicle having a runner.

297, Chairs and Seats, appropriate subclasses for a seat, per se.

55.58 Rider is prone or supine:

This subclass is indented under subclass 55.5. Subject matter wherein the user rides the vehicle in a lying down position with either (a) the front or (b) the back of the user's body turned toward the surface it rests on.

SEE OR SEARCH CLASS:

280, Land Vehicles, subclasses 845 through 28.18 for a land vehicle having a runner.
441, Buoys, Rafts, and Aquatic Devices, subclass 74 for a surfboard.

56.1 DISPLACEMENT-TYPE HULL (E.G., SPECIFIC AFTBODY, ETC.):

This subclass is indented under the class definition. Subject matter wherein (a) a particular structural aspect, e.g., shape, cross-section, contour, etc., of that portion of the marine vehicle which furnishes buoyancy when in contact with the water and to which the main supporting surface, e.g., deck, etc., and other parts are attached, i.e., hull, is detailed, and (b) the marine vehicle when in contact with the water is at all times only supported by the volume of water moved out of its proper place by the hull.

- (1) Note. In the marine vehicles classified herein, the hull or an attachment to the hull is such that as the hull moves through or across the surface of the water, a force is not generated tending to either raise the vehicle out of the water or to change the fore and aft drafts of the vehicle relative to each other.
- (2) Note. In the marine vehicles classified herein, some portion of a hull extends above the surface of the water when the vehicle is in use.
- (3) Note. This and the indented subclasses deal with a specific detail of the shape, cross-section, contour, etc., of the water-contacting surface of a marine vehicle hull. All of the original patents within the scope of this project have been placed in compliance with this line. However, the patents currently found in other subclasses, not included within the

scope of this project, have not been checked for compliance with this line and will be screened at a later date.

SEE OR SEARCH THIS CLASS, SUBCLASS:

39.25, for a sailpowered watercraft having a specifically defined hull shape.
65 through 88, for the construction of the hull of a marine vehicle or of a non-hull marine vehicle component, e.g., cabin, bulkhead, decking, etc.
271 through 292, for planing-type hulls or hull attachments which alter trim or provide a dynamic lift to the marine vehicle.
355 through 359, for a method for constructing or making the hull of a boat or the structure of the boat hull.

SEE OR SEARCH CLASS:

244, Aeronautics and Astronautics, subclasses 105 through 107 for air ships adapted to marine use.
440, Marine Propulsion, appropriate subclasses for specific features involved in marine vehicle propulsion.

57 Screw propeller type:

This subclass is indented under subclass 56.1. Inventions in the exterior form of vessels propelled by screw-propellers.

58 Paddle wheelers:

This subclass is indented under subclass 56.1. Inventions in the form of vessels propelled by wheels.

59 Spindle:

This subclass is indented under subclass 56.1. Vessels of spindle form having nearly circular cross-section amidships and tapering toward bow and stern.

60 Canal and ferry boats:

This subclass is indented under subclass 56.1. Inventions relating to the form of vessels designed for canal, ferry, or tow service.

SEE OR SEARCH CLASS:

440, Marine Propulsion, subclasses 33 through 36 for towing devices.

61.1 Multiple hulls:

This subclass is indented under subclass 56.1. Subject matter wherein the marine vehicle has a plurality of distinct hulls.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.26 through 39.28, for a sailpowered watercraft having multiple hulls.
62, for a hull having a concave bottom.

61.11 With capsizing prevention or uprighting means:

This subclass is indented under subclass 61.1. Subject matter wherein the marine vehicle has a mechanism (a) for inhibiting the hull from moving from a position in the water in which the hull has an upper surface horizontal to an overturned position or (b) for restoring it to a position in the water with an upper surface of the hull horizontal from a position in which the hull was overturned.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.23, for means for uprighting a sailpowered watercraft.
121 through 126, for ship ballasting, per se.
283, for a planing-type hull having a laterally disposed skid or pontoon.
360, for a boat with means to prevent capsizing or sinking.

61.12 Including a submerged hull (e.g., semisubmerged watercraft, etc.):

This subclass is indented under subclass 61.1. Subject matter wherein the marine vehicle includes a hull immersed, i.e., completely covered, in the water.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

121 through 126, for ship ballasting, per se.
244 through 245, for a submersible towed object.
256, for a floating or semisubmersible storage vessel.
257, for submersible storage tanks.
274 through 282, for a planing-type hull having a hydrofoil.

283, for a planing-type hull having a laterally disposed skid or pontoon.

312 through 342, for submersible devices, e.g., habitats, independently propelled submersible vessels, etc.

61.13 Vertically spaced from another submerged or semisubmerged hull:

This subclass is indented under subclass 61.12. Subject matter wherein each immersed hull is separated from and positioned at a different water level above or below either (a) another immersed hull, or (b) another hull which has a portion below the surface of the water.

(1) Note. The submerged hull may be at the same water level as another submerged or semi-submerged hull, but must be at a different water level with respect to some other submerged or semi-submerged hull.

61.14 Having plural spaced struts connecting each submerged hull and platform:

This subclass is indented under subclass 61.12. Subject matter wherein each immersed hull is attached to a raised horizontal surface by a support positioned a distance apart from another support.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

264 through 266, for a floating platform having multiple support legs or a float assembly.
274 through 282, for a planing-type hull having a hydrofoil.

61.15 With connecting means permitting relative movement between hulls:

This subclass is indented under subclass 61.1. Subject matter wherein structure interconnecting one hull with another allows displacement of one hull with respect to the another.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.28, for sailpowered watercraft having connecting means permitting relative movement between hulls.
123, for a ship ballasting float.
283, for a ship having multiple planing-type hulls and connecting means per-

mitting relative movement between hulls.

61.16 Connecting means is pivotable arm:

This subclass is indented under subclass 61.15. Subject matter wherein the means interconnecting one hull with another is a member which is either (a) rotatable about or (b) angularly moveable about an axis.

61.17 Arm pivots about a vertical axis:

This subclass is indented under subclass 61.16. Subject matter wherein the member is rotatable about or angularly moveable about a line perpendicular to a horizontal plane.

61.18 Connecting means permits transverse linear horizontal movement of hulls toward each other:

This subclass is indented under subclass 61.15. Subject matter wherein the means interconnecting one hull with another limits movement of the hulls laterally toward or away from each other to a straight line in a plane parallel to the horizon.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

123, for a ballasting float for a ship.
283, for a planing-type hull having a laterally disposed skid or pontoon.
352 through 353, for a sectional boat.

61.19 Hull pivots about a vertical axis:

This subclass is indented under subclass 61.15. Subject matter wherein the hull is rotatable about or angularly movable about a line perpendicular to a horizontal plane.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

123, for a ballasting float for a ship.
283, for a planing-type hull having a laterally disposed skid or pontoon.
352 through 353, for a sectional boat.

61.2 Having a specifically defined hull shape:

This subclass is indented under subclass 61.1. Subject matter wherein a particular structural aspect, e.g., shape, contour, etc., of the (1) perimeter or (2) cross-section of the hull is detailed.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.14, for a sailpowered sailboard having a specific board shape or construction.
39.25, for a sailpowered watercraft having a specific hull shape.
61.27 through 61.3, for a specific hull shape of a non-multiple-hull-type marine vehicle.
271 through 292, for a planing-type hull having a specific shape.

SEE OR SEARCH CLASS:

D12, Transportation, subclasses 300 through 318 for watercraft hull designs.

61.21 Having lower hull portion asymmetrical with respect to a central vertical plane through that particular hull:

This subclass is indented under subclass 61.2. Subject matter wherein the hull has a lower part at or below the surface of the water which is lopsided with respect to a flat surface perpendicular to the horizontal, the flat surface extending fore and aft and passing through the center of that hull.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

61.27 through 61.3, for a specific hull shape of a non-multiple-hull-type marine vehicle.
271 through 292, for a planing-type hull having a specific shape.

SEE OR SEARCH CLASS:

D12, Transportation, subclasses 300 through 318 for watercraft hull designs.

61.22 Having plural crossbeams supporting rigid deck means:

This subclass is indented under subclass 61.1. Subject matter wherein more than one transverse strut connects and sustains a stiff platform and each of the struts extends horizontally from one hull to another.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

343 through 364, for a boat, per se.

61.23 Trampoline-type deck means:

This subclass is indented under subclass 61.1. Subject matter wherein a platform for supporting a user extends horizontally between hulls and is constructed from flexible material which is stretched taut.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.26 through 39.28, for a sailpowered watercraft having multiple hulls.

SEE OR SEARCH CLASS:

482, Exercise Devices, subclasses 27 through 29 for a trampoline, per se.
D12, Transportation, subclass 304 for sailboat designs having plural hulls.

61.24 Having seat:

This subclass is indented under subclass 61.1. Subject matter wherein the marine vehicle has a structure primarily designed for supporting a user in a sitting position.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

363, for a seat support for a boat.

SEE OR SEARCH CLASS:

297, Chairs and Seats, appropriate subclasses, for seats, per se.

61.25 Inflatable-type hull:

This subclass is indented under subclass 61.1. Subject matter wherein the hull has a compartment which is capable of being filled up by a gas.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

345, for an inflatable boat.

SEE OR SEARCH CLASS:

441, Buoys, Rafts, And Aquatic Devices, subclasses 40 through 42 for an inflatable raft.

61.26 Having specific dimensional or speed ratio (e.g., Froude number, etc.):

This subclass is indented under subclass 56.1. Subject matter wherein a particular structural aspect of the hull in terms of a proportion of either (a) its physical measurements, e.g.,

length, width at its widest point, depth taken one to another, etc. or (b) its maximum displacement in a linear direction per unit of time taken to one of its physical measurements, e.g., square root of its maximum length, etc., is detailed.

61.27 Having specific forebody:

This subclass is indented under subclass 56.1. Subject matter wherein a particular structural aspect, e.g., shape, contour, cross-section, etc., of a front portion, e.g., bow, etc., of the hull is detailed.

(1) Note. The juncture between the forebody and the midbody, and between the midbody and aftbody usually occurs at a point of pronounced change of curvature of the hull as viewed in plan view.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

61.2 through 61.21, for a specifically defined hull shape of a marine vehicle having multiple displacement hulls.

65 through 88, for the construction of the hull of a marine vehicle or of a non-hull marine vehicle component e.g., cabin, bulkhead, decking, etc.

271 through 292, for specific details of a planing-type hull.

290, for a ship keel, per se.

355 through 359, for a method for constructing or making the hull of a boat or the structure of the boat hull.

SEE OR SEARCH CLASS:

D12, Transportation, subclasses 300 through 318 for watercraft hull designs.

61.28 Including bulb:

This subclass is indented under subclass 61.27. Subject matter wherein the front portion of the hull includes a forwardly projecting bulge which contacts the water.

(1) Note. Many of the bow bulbs classified herein extend both above and below the waterline of the marine vehicle.

61.29 And specific aftbody:

This subclass is indented under subclass 61.27. Subject matter wherein a particular structural aspect, e.g., shape, contour, cross-section, etc., of a rear portion, e.g., stern, etc., of the hull is detailed.

61.3 And specific midbody (e.g., waist, etc.):

This subclass is indented under subclass 61.29. Subject matter wherein a particular structural aspect, e.g., shape, contour, cross-section, etc., of a middle portion, i.e., that portion of the hull extending between the front portion and rear portion, of the hull is detailed.

- (1) Note. The juncture between the forebody and the midbody, and between the midbody and aftbody usually occurs at a point of pronounced change of curvature of the hull as viewed in plan view.

SEE OR SEARCH THIS CLASS, SUBCLASS:

61.31, for a non-multiple-hull marine vehicle having a specific midbody detailed.

61.31 Having specific midbody (e.g., waist, etc.):

This subclass is indented under subclass 56.1. Subject matter wherein a particular structural aspect, e.g., shape, contour, cross-section, etc., of a middle portion, i.e., that portion of the hull extending between the front portion and rear portion, of the hull is detailed.

- (1) Note. The juncture between the forebody and the midbody, and between the midbody and aftbody usually occurs at a point of pronounced change of curvature of the hull as viewed in plan view.

SEE OR SEARCH THIS CLASS, SUBCLASS:

61.2 through 61.21, for a specifically defined hull shape of a marine vehicle having multiple displacement hulls.

61.3, for a nonmultiple hull marine vehicle having a specific forebody, midbody and aftbody.

65 through 88, for the construction of the hull of a marine vehicle or of a non-hull marine vehicle component e.g., cabin, bulkhead, decking, etc.

271 through 292, for specific details of a planing-type hull.

290, for a ship keel, per se.

355 through 359, for a method for constructing or making the hull of a boat, or the structure of the boat hull.

SEE OR SEARCH CLASS:

D12, Transportation, subclasses 300 through 318 for designs of a watercraft or hull.

61.32 Having specific bottom:

This subclass is indented under subclass 56.1. Subject matter wherein a particular structural aspect (e.g., shape, contour, cross-section) of that part of the hull which is below the waterline from bilge to bilge is detailed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

61.2 through 61.21, for a specifically defined hull shape of a marine vehicle having multiple displacement hulls.

65 through 88, for the construction of the hull of a marine vehicle or of a non-hull marine vehicle component e.g., cabin, bulkhead, decking, etc.

271 through 292, for specific details of a planing-type hull.

290, for a ship keel, per se.

355 through 359, for a method for constructing or making the hull of a boat or the structure of the boat hull.

SEE OR SEARCH CLASS:

D12, Transportation, subclasses 300 through 318 for designs of a watercraft or hull.

61.33 V-shaped bottom:

This subclass is indented under subclass 61.32. Subject matter wherein that part of the hull which is below the waterline from bilge to bilge has a transverse cross-section configuration of V-shape.

62 Concave bottom:

This subclass is indented under subclass 61.32. Forms of hull presenting a more or less concave surface to the water from bilge to bilge, bilges to keel, or longitudinally.

- 63 Flat bottom:**
This subclass is indented under subclass 61.32. Inventions in ship's forms in which flat bottoms are used with or without keels or in which the bottom is nearly flat or horizontal.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
26 through 38, for flat bottom scows.
- 65 BUILDING:**
This subclass is indented under the class definition. Inventions relating to the construction of vessels except warships or submarine types and not otherwise classifiable.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
56.1 through 63, for inventions in external form or water-resistance surface.
343 through 364, for small boats.
- 66 Observation boats:**
This subclass is indented under subclass 65. Boats having glass bottoms or windows for the purpose of viewing marine life and scenery.
- 67 Antifriction surfaces:**
This subclass is indented under subclass 65. Devices providing means for diminishing the resistance between the water and the vessel when moving through the water and effective in increasing the speed. The present types comprise friction-roller surfaces, conveyers, and air-distributing means or attachments to produce a better cutting edge.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
232, and 233, for devices for distributing oils or liquids between the ship's skin and the water.
- SEE OR SEARCH CLASS:
440, Marine Propulsion, subclasses 38 through 47 for vessels having means to expel air or water about the surface of the submerged hull with sufficient effect and force to propel the vessel.
- 68 Insubmergible vessels:**
This subclass is indented under subclass 65. Vessels provided with means for preventing a vessel from sinking, involving sufficient bulkheads or compartments to keep it afloat or providing impenetrable or puncture-proof skins or sides with or without linings or fillings of waterproof or leak stopping character.
- 69 Linings and fillings:**
This subclass is indented under subclass 68. Vessels of insubmergible or nonsinkable type having linings or fillings in the sheathing that through yielding surfaces, waterproof, or leak stopping qualities prevent the admission of water.
- 70 Canal and ferry boats:**
This subclass is indented under subclass 65. Vessels designed and constructed for the above service and including those carrying trains and cars.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
60, for form of boats.
- 71 Cabins:**
This subclass is indented under subclass 65. Inventions relating to vessels having cabin structures or means for supporting them.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
189, for separate structures.
- 72 Freighters:**
This subclass is indented under subclass 65. Vessels designed for carrying, securing, and preserving freight or cargo.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
26, for scows.
70, for canal and ferry boats.
258 through 263, for vessels designed to accommodate watercraft or aircraft.
- SEE OR SEARCH CLASS:
410, Freight Accommodation on Freight Carrier, appropriate subclass for accommodation of lading on a freight carrier, which could be a ship; particu-

larly subclasses 52-95 for accommodation of a load bearer, e.g., a container or pallet, etc., thereon board.

73 Bulk cargo:

This subclass is indented under subclass 72. Vessels constructed to carry cargo in bulk, as ore, grain, coal, etc., whether of the hopper type or otherwise.

74 Liquid:

This subclass is indented under subclass 73. Bulk cargo freighter vessels, constructed to carry liquid or gaseous fluids. Waterborne tanks which are tight and not obviously unseaworthy are included.

SEE OR SEARCH THIS CLASS, SUBCLASS:

256, for marine storage tanks not adapted for towing or other transportation movement. Examples of structure considered to be excluded from subclass 74 under this note are: (1) exterior form not tanker or boat-like; (2) obviously unseaworthy, as entirely open bottom; (3) free interchange between contents between contents of tank and ambient buoying liquid.

75 Antishifting devices:

This subclass is indented under subclass 73. Inventions relating to means for keeping the cargo from moving about during the movements of the vessel.

SEE OR SEARCH CLASS:

410, Freight Accommodation on Freight Carrier, appropriate subclass for accommodation of lading on a freight carrier, which could be a ship; subclasses 52 through 95, particularly for inventions in means in engagement between the freight carrier and a load bearer, e.g., container, etc., to inhibit shifting during transit, particularly subclasses 70-95 for securingly retaining the load bearer on the freight carrier under such condition.

76 Ceilings and floors:

This subclass is indented under subclass 73. Devices for sustaining and covering cargoes, preventing access of water or moisture, etc.

77 Sectional:

This subclass is indented under subclass 65. Composite vessels constructed of a plurality of independent parts structurally united or decked to form a single vessel.

SEE OR SEARCH THIS CLASS, SUBCLASS:

352 through 353, for sectional boats.

78 Bulkhead and compartment:

This subclass is indented under subclass 65. Vessels having bulkheads or compartments as elements of combinations.

SEE OR SEARCH THIS CLASS, SUBCLASS:

116 through 120, for bulkheads, per se, and doors.

79 Iron:

This subclass is indented under subclass 65. Various types of construction for iron vessels or in which iron or metal is an essential element of the hull structure.

80 Corrugated:

This subclass is indented under subclass 79. Ships in which corrugated iron is used.

81 Tubular:

This subclass is indented under subclass 79. Ships in which iron tubes are used in construction.

82 Wood:

This subclass is indented under subclass 65. Vessels in which wood is the principal material used in construction.

83 Bracing and staying:

This subclass is indented under subclass 65. Means for bracing, staying, trussing, etc., the timbers, frames, sheathing, and decks of vessels.

- 84 Sheathing and planking:**
This subclass is indented under subclass 65. Various means and methods of constructing the sides of vessels, involving the use of planks or sheaths or placing additional sheaths or linings thereon or therein.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
11, and indented subclasses for metal or armor belts or sheaths.
- 85 Decks:**
This subclass is indented under subclass 65. Methods and means for constructing vessels' decks or relating thereto.
- SEE OR SEARCH CLASS:
404, Road Structure, Process, or Apparatus, appropriate subclasses for process and apparatus for making similar walkway and deck-like structure.
- 86 Calking and seaming:**
This subclass is indented under subclass 65. Methods and means for filling or closing the seams between planking, etc., and making them watertight.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
224, for tools, implements, and machines for putting in the calking material and paying or puttying seams.
- 87 Knees:**
This subclass is indented under subclass 65. Braces or knees used in shipbuilding.
- 88 Joints:**
This subclass is indented under subclass 65. Specific means or devices for uniting timbers, plates, frames, seats, and thwarts, etc.
- SEE OR SEARCH CLASS:
403, Joints and Connections, appropriate subclasses for joints of general utility.
- 89 SPARS:**
This subclass is indented under the class definition. Inventions in ships' spars, e.g., masts, yards, booms, gaffs, etc., their attachments, connections, and manner of mounting, raising, and securing them.
- 90 Masts and masting:**
This subclass is indented under subclass 89. Inventions in masts, their material, form, construction, and position, and means for securing them.
- 91 Swinging:**
This subclass is indented under subclass 90. Devices for pivoting masts, adapting them to be turned down, up, around at will, or automatically.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
39, for swinging masts.
143, for swinging masts with rocking keels.
- 92 Cross and trestle trees:**
This subclass is indented under subclass 90. Inventions in the above-mentioned devices or their equivalents, trestle-trees being defined as fore-and-aft pieces secured on each side of a mast or resting on the hounds to support the rigging, cross-trees, etc.
- (1) Note. Cross-trees are athwartships timbers supported by bibs and trestle-trees to sustain top frames or extend topgalant shrouds.
- 93 Coats, shields, and steps:**
This subclass is indented under subclass 90. Devices for protecting a mast or the deck through which it passes, rendering the joint impervious to water, and devices or means for securing the heel or foot of the mast to the ship's timbers, keel, or keelson, etc., and fastening it in place.
- 94 Heads and irons:**
This subclass is indented under subclass 90. Caps and trucks or structure of the upper end or head of the mast and the various types of metal bands or irons, etc., that are secured to masts not otherwise classifiable.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
98, for "irons," e.g., pivoted gaffs, booms, etc.

- 95 Yards:**
This subclass is indented under subclass 89. Inventions in the horizontally-disposed spars extending athwartships to which the sails of square-rigged vessels are secured, as courses, topsails, topgallant, and royal sails.
- 96 Trusses and parrels:**
This subclass is indented under subclass 95. Devices for hanging, supporting, or securing the yards of vessels, trusses usually being of iron, to which the lower yard is pivoted or secured, and parrels being hoops, rings, or chains encircling the mast and secured to the yards.
- 97 Gaffs, booms, etc.:**
This subclass is indented under subclass 89. All ship-spars except masts and yards (separately classified) and their connections to masts or yards.
- 98 Pivoted:**
This subclass is indented under subclass 97. Gaffs, booms, etc., which are pivoted or the means or devices for pivoting them to the masts or other supports.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
19, for torpedoboats carrying torpedoes at the end of a spar.
- 99 Crotches and supports:**
This subclass is indented under subclass 97. Devices for supporting booms, usually a support having a crotch in its upper end in which the boom rests.
- 100 Spar irons:**
This subclass is indented under subclass 89. Bands or irons of various types which are attached or secured to yards, booms, gaffs, etc., and which are not classifiable in subclasses 94, 96, 98, 101, 112, and 218.
- 101 Fair leaders and chocks:**
This subclass is indented under subclass 89. Devices to secure the free running of ropes, cables, etc., adapted to be secured to spars or ship-timbers or structurally a part of spars or attached to tops, cross-trees, decks, pinrails, etc.
- 102.1 SAIL OR CONTROL MEANS THEREFOR:**
This subclass is indented under the class definition. Subject matter having (a) an extent of material by which wind is used to propel the marine vehicle through the water or (b) apparatus for manipulating the extent of material with respect to other marine vehicle structure.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
39.11, for a sailboard hun and rig means to provide navigation and propulsion thereof.
39.12 through 39.15, for a sailboard hun and rig means to provide navigation and propulsion thereof.
39.21 through 39.32, for a marine vehicle hull and means to propel the hull by sailpower.
39.29 through 39.31, for a marine vehicle hull in combination with specific sail structure.
- 102.11 Sail assembly freely held by rider:**
This subclass is indented under subclass 102.1. Subject matter wherein both the extent of material by which wind is used to propel the marine vehicle through the water and the apparatus for manipulating the extent of material are supported with respect to the vehicle solely by the user.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
39.16 through 39.19, for an apparatus held by or attached to a rider to control a sailboard or a sailboard rig.
- SEE OR SEARCH CLASS:
244, Aeronautics and Astronautics, subclass 16 for glider-type aircraft, subclasses 153-155 for kites, and subclass 902 for parachute-type wings.
280, Land Vehicles, subclass 810 for a wind sail for propelling or braking a skier or skater.
- 102.12 Having means to tension or stretch sail:**
This subclass is indented under subclass 102.1. Subject matter having apparatus to either (a) pull on, or (b) apply stress to the extent of

material by which wind is used to propel the marine vehicle through the water.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.29 through 39.31, for a marine vehicle hull in combination with specific sail structure.

102.13 Having airflow control device for sail:

This subclass is indented under subclass 102.1. Subject matter wherein structure is provided to (a) direct a portion of the wind before, or (b) redirect a portion of the wind after it has contacted the extent of material by which the wind is used to propel the marine vehicle through the water from the wind's normal path to enhance the wind's affect on the extent of material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

39.29 through 39.31, for a marine vehicle hull in combination with specific sail structure.

102.16 through 102.21, for means to orient the sail with respect to the marine vehicle.

102.22 through 102.27, for means to vary the shape or camber of the sail.

102.14 Fairing:

This subclass is indented under subclass 102.13. Subject matter wherein the structure provided to direct or redirect a portion of the wind is a member or formation the primary purpose of which is to produce an aerodynamic leading edge to the extent of material for propelling the marine vehicle through the water.

102.15 Having means to stow, load, or unload sail:

This subclass is indented under subclass 102.1. Subject matter wherein apparatus is provided to facilitate either (a) storage of the extent of material, or (b) connection of the extent of material to in-use supporting structure, or (c) removal of the extent of material by which the wind is used to propel the marine vehicle through the water from its in-use supporting structure.

- (1) Note. Many of the patents found herein provide apparatus for shifting the sail from its use position where it is connected to and supported by a mast, spar,

or cable, i.e., stay, to a compartment for non-use storage or from such a compartment to its connected and supported use position.

102.16 Including means to orient sail:

This subclass is indented under subclass 102.1. Subject matter wherein there is a mechanism to adjust the alignment of a straight line, i.e., chord line, joining trailing and leading edges of the extent of material with respect to the marine vehicle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

102.13 through 102.14, for airflow control means for a sail.

102.22 through 102.27, for means to vary the shape of a sail.

102.17 Having gearing:

This subclass is indented under subclass 102.16. Subject matter wherein the mechanism used to adjust the alignment of the straight line, i.e., chord line, connecting the leading and trailing edges of the extent of material includes a system having (a) a toothed (1) wheel, (2) cylinder, or (3) other machine element, that meshes with (b) another toothed (1) wheel, (2) cylinder, or (3) machine element to transmit motion, or to change speed or direction of the mechanism.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, appropriate subclasses for power transmission mechanisms involving gearing, per se.

102.18 Having rope or line (e.g., sheet, etc.):

This subclass is indented under subclass 102.16. Subject matter wherein the mechanism includes a flaccid, elongated element which can transmit force only when under tension.

102.19 And traveler:

This subclass is indented under subclass 102.18. Subject matter wherein the mechanism has (a) an apparatus fixed with respect to a hull of the marine vehicle and (b) an element slidably connected to the apparatus for movement therealong, (c) the slidable element being operatively connected to the extent of material

through the flaccid, elongated element for adjusting its alignment.

- (1) Note. Many of the patents found herein have the fixed apparatus fastened transversely to the deck aft of a fore-and-aft sail with the slidable element operatively connected to the sail, and the slidable element moved along the fixed apparatus by the user of the marine vehicle.
- (2) Note. Many of the patents found herein have a means for selectively fixing the position of the slidable element with respect to the fixed apparatus.

SEE OR SEARCH THIS CLASS, SUBCLASS:
204 through 205, for travelers, per se.

102.2 And winch (e.g., capstan, driven pulley, windlass, etc.):

This subclass is indented under subclass 102.18. Subject matter wherein the mechanism has (a) a rotatable drum which is caused to turn about its axis of rotation by a source of power, (b) the flaccid, elongated element being wound around the drum and (c) the drum applying a tensioning force to the flaccid, elongated element.

- (1) Note. The winch may be of the line accumulating type or of the line traction type.

SEE OR SEARCH CLASS:
254, Implements or Apparatus for Applying Pushing or Pulling Force, appropriate subclasses for winches and winching arrangements, per se.

102.21 And sheave or pulley:

This subclass is indented under subclass 102.18. Subject matter also including an element having a generally circular perimeter which (a) engages the flaccid, elongated element and (b) is freely, i.e., nonpowered, rotatable about an axis through its center in response to movement of the flaccid, elongated element over its perimeter.

102.22 Having means to vary shape of sail (e.g., camber, etc.):

This subclass is indented under subclass 102.1. Subject matter having structure to change the surface contour, e.g., curvature, etc. of the extent of material by which the wind is used to propel the marine vehicle through the water.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 39.29 through 39.31, for a marine vehicle hull in combination with specific sail structure.
- 102.13 through 102.14, for airflow control means for a sail.
- 102.16 through 102.21, for means to orient the sail with respect to the marine vehicle.

SEE OR SEARCH CLASS:

- 244, Aeronautics and Astronautics, appropriate subclasses for means to vary the shape of an airfoil for aircraft.

102.23 Inflatable-type:

This subclass is indented under subclass 102.22. Subject matter wherein the extent of material has a compartment which is capable of being filled up by a gas.

102.24 Batten:

This subclass is indented under subclass 102.22. Subject matter wherein the structure to change the surface contour is a strip of flexible material extending from a trailing edge toward a leading edge of the extent of material for rigidifying a portion thereof.

- (1) Note. Many of the patents have the battens received in pockets which extend from the trailing edge toward the leading edge of the extent of material.

102.25 Having separate adjustment means for batten:

This subclass is indented under subclass 102.24. Subject matter wherein the strip of flexible material has a mechanism which acts on it to permit the strip's effect on the extent of material to be varied.

102.26 For plural battens in a horizontal plane:

This subclass is indented under subclass 102.25. Subject matter provided with an additional strip of flexible material, extending from a trailing edge toward a leading edge of the extent of material for rigidifying a portion thereof, which is disposed at a common vertical level with respect to the horizon.

102.27 Having specific construction:

This subclass is indented under subclass 102.24. Subject matter wherein a particular structural aspect of the strip of flexible material is detailed.

102.28 Spinnaker pole:

This subclass is indented under subclass 102.1. Subject matter wherein (a) a long, slender element, e.g., boom, spar, etc., is detailed which is connectable (1) at one of its ends to a mast, and (2) at its opposite end supports one corner of a triangular extent of material for propelling the marine vehicle through the water, (b) the extent of material having (1) an apex, (2) a base, (3) two equal length sides and (4) supported only at its corners and apex, i.e., spinnaker.

SEE OR SEARCH THIS CLASS, SUBCLASS:

89 through 101, for masts or spars, per se.

102.29 Specific sail structure or arrangement:

This subclass is indented under subclass 102.1. Subject matter wherein a particular structural aspect or configuration of the extent of material by which the wind is used to propel the marine vehicle through the water is detailed.

(1) Note. This and the indented subclasses deal with a specific detail of the structure or configuration of a marine vehicle sail.

SEE OR SEARCH THIS CLASS, SUBCLASS:

39.29 through 39.31, for a marine vehicle hull in combination with specific sail structure.

104 through 107, for a specific sail arrangement and reefing or furling of the sail.

SEE OR SEARCH CLASS:

139, Textiles: Weaving, appropriate subclasses for weaving of fabric material, and woven fabrics, per se.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for manufacturing processes and apparatus including a step of adhesively bonding parts together.

244, Aeronautics and Astronautics, subclasses 142 through 152, for a parachute and subclass 145 for parachute canopy construction.

428, Stock Material or Miscellaneous Articles, appropriate subclasses for stock material composites, per se.

102.3 Spinnaker:

This subclass is indented under subclass 102.29. Subject matter wherein the extent of material is triangular in shape having (a) an apex, (b) a base, (c) two equal length sides, and (d) is supported only at its two corners and apex.

(1) Note. Many of the spinnaker sails classified herein have the apex connected to the mast and the other corners supported by a spar or boom connected to the mast.

102.31 Of laminate or composite construction:

This subclass is indented under subclass 102.29. Subject matter wherein the extent of material is fabricated either from (a) a plurality of layers bonded together one over the other, or (b) a layer of material having a plurality of flexible pliant elements which run along stress lines of the extent of material in an unwoven manner, i.e., on a surface of the fabric, in addition to the normal fabric threads.

SEE OR SEARCH CLASS:

139, Textiles: Weaving, appropriate subclasses for weaving of fabric material, and woven fabrics, per se.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for manufacturing processes and apparatus including a step of adhesively bonding parts together.

- 428, Stock Material or Miscellaneous Articles, appropriate subclasses for stock material composites, per se.
- 102.32 Constructed from a plurality of connected panels movable relative to each other:**
This subclass is indented under subclass 102.29. Subject matter wherein the extent of material is fabricated from a number of sections, each section being connected to and shiftable one with respect to another.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
102.33, for a sail constructed from a plurality of edge connected panels fixedly connected to each other.
- SEE OR SEARCH CLASS:
139, Textiles: Weaving, appropriate subclasses for weaving of fabric material, and woven fabrics, per se.
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for manufacturing processes and apparatus including a step of adhesively bonding parts together.
- 102.33 Constructed from a plurality of edge connected panels:**
This subclass is indented under subclass 102.29. Subject matter wherein the extent of material is fabricated from a number of sections, each section being connected to and shiftable one with respect to another.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
102.32, for a sail constructed from a plurality of panels connected to and moveable relative to each other.
- SEE OR SEARCH CLASS:
139, Textiles: Weaving, appropriate subclasses for weaving of fabric material, and woven fabrics, per se.
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for manufacturing processes and apparatus including a step of adhesively bonding parts together.
- 104 Reefing and furling:**
This subclass is indented under subclass 102.1. Inventions for taking in or shortening sail.
- 105 Fore-and-aft sails:**
This subclass is indented under subclass 104. Means and methods of reefing and furling those sails which are set normally in a fore-and-aft line, as jibs, stay-sails, spankers, and sails of the sloop or schooner rig types.
- 106 Rolling:**
This subclass is indented under subclass 105. Devices for shortening fore-and-aft sails by rolling them upon rollers, said rollers being the booms, gaffs, etc., or rollers attached thereto or to stays, etc.
- 107 Rolling:**
This subclass is indented under subclass 104. Devices for shortening the sails of other than fore-and-aft types on rollers, the rollers being the yards or attached thereto or to the masts.
- 108 Fastening device for sail:**
This subclass is indented under subclass 102.1. Mechanical devices, usually metallic, by means of which sails are secured to their support, these devices usually being secured to the sail, and which are not classifiable in subclasses 112, 113, 114, and 115.
- 109 Rigging screws and stretchers:**
This subclass is indented under subclass 102.1. Means for tightening up or shortening shrouds or other standing rigging and permanently placed, the turning of screw producing greater tension between the ends of shrouds, etc.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
223, for portable rigging-screws.
- SEE OR SEARCH CLASS:
254, Implements or Apparatus for Applying Pushing or Pulling Force, subclasses 199-263 for portable implements or apparatus for tensioning flexible material from which the implements or apparatus are detached after the material is tensioned.

- 111 Running rigging:**
This subclass is indented under subclass 102.1. Means for making or setting sails, hoisting means, or relating thereto.
- 112 Mast travelers:**
This subclass is indented under subclass 102.1. Devices by which the hoops or sail-fasteners are made to travel up and down on masts and longitudinally on yards or spars when the sails are being set or furled, etc., the sail-fastening device having an element movable in a guide, slot, or iron attached to or structurally a part of the mast or spar.
- (1) Note. This subclass includes all travelers attached to spars or which are not secured to the rail or deck.
- 113 Hoops and connections:**
This subclass is indented under subclass 102.1. The title is self-explanatory, the connections usually being a part of the hoop rather than a sail-fastener, the latter forming a part of or secured to the sail or its bolt-rope.
- 114 Cringles and hanks:**
This subclass is indented under subclass 102.1. Eyes, loops, grommets, etc., or their metal equivalents worked in or secured to the sides or leaches of sails at the bolt-ropes, the eye or loop adapted to receive the hook of a tackle or equivalent or to sail-fastening devices secured to jibs and stay-sails or fore-and-aft sails and having a plurality of loops, one for the stay, another for the bolt-rope of sails, and which are usually in the same plane and adapted to secure the free running of the sail on its stay or support.
- 115 Clews:**
This subclass is indented under subclass 102.1. So-called "spectacle" or other irons or devices secured to the lower corners of sails to which the sheets are attached.
- (1) Note. The spectacle-iron or iron clew is usually formed with three eyes, to which the leach-rope, the foot-rope of the sail, and the sheet or sheet-block are attached.
- SEE OR SEARCH CLASS:**
403, Joints and Connections, subclass 210 for eye-forming thimbles on the end of a rope or cable.
- 116 BULKHEADS AND DOORS:**
This subclass is indented under the class definition. Inventions in bulkheads usually adapted to form watertight compartments of vessels.
- 117 Doors:**
This subclass is indented under subclass 116. Bulkheads provided with doors.
- SEE OR SEARCH CLASS:**
48, Gas: Heating and Illuminating, subclass 124 for doors for closing the mouth of retorts.
49, Movable or Removable Closures, appropriate subclasses for closures of the type provided for and see the search notes in section IV, References to Other Classes of Class 49 for the loci of closures in other classes.
91, Motors: Expandible Chamber Type, appropriate subclasses.
109, Safes, Bank Protection, or a Related Device, subclasses 58 through 87 for wall and panel structures, closures, and closure adjuncts.
144, Woodworking, subclass 271 for a wood-bending steamer.
160, Flexible or Portable Closure, Partition, or Panel, appropriate subclasses for doors or flexible material and doors made of plural strips, slats, or panels interconnected for relative motion.
418, Rotary Expandible Chamber Devices, appropriate subclasses for rotary expandible chamber devices, per se.
422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 310 through 312 for elements or adjuncts.
- 118 Automatic:**
This subclass is indented under subclass 117. Doors of bulkheads adapted for self-closure or in which the closing is automatic, as on the entry of water to a certain height, the doors being closed by swinging or rotating.

- SEE OR SEARCH CLASS:
49, Movable or Removable Closures, subclasses 10 through 12 for a stream spanning closure responsive to the amount or velocity of water in the stream and subclasses 21-23 for a closure released for movement or directly actuated by an ambient fluid, e.g., rain or snow, etc.
- 119 Sliding:**
This subclass is indented under subclass 118. Automatic closing doors of the bulkheads, said doors being sliding.
- 120 Sliding:**
This subclass is indented under subclass 117. Bulkhead-doors which close by sliding.
- SEE OR SEARCH CLASS:
49, Movable or Removable Closures, subclasses 404 through 459 for a closure mounted for sliding movement.
- 121 BALLASTING:**
This subclass is indented under the class definition. Devices designed to steady and trim vessels, prevent careening, rolling, pitching, etc.
- 122 Antirolling:**
This subclass is indented under subclass 121. Means to prevent the rolling, pitching, etc., due to wave motion.
- 123 Floats:**
This subclass is indented under subclass 121. Means providing buoyant floats, caissons, etc., secured to the vessel and floating alongside, preventing careening, capsizing, etc.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
39.11 through 39.32, for combinations with boats, spars, sails, etc.
- 124 Shifting weights:**
This subclass is indented under subclass 121. Devices in which weights are adapted to move about or to be moved to distribute the weight and change the position of the center of gravity to steady, trim, or ballast a vessel when sailing or in a seaway.
- 125 Water tanks:**
This subclass is indented under subclass 121. Devices in which ballasting is secured by watertanks adapted to be filled or emptied, thereby distributing weight, which steadies and trims the vessel in sailing, etc.
- 126 Fins and boards:**
This subclass is indented under subclass 121. Ballasting devices in which lee or weather boards or fins, plated, blades, etc., are adapted to project from the vessel's sides or keel laterally, obliquely, or horizontally to form a resistance-surface to prevent careening or capsizing and to enable a vessel to point or sail closer to the wind and prevent making leeway.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
135, and 142, for center-boards, lateral, which partake of the nature of fins and leeboards, though used as center-boards or keels.
152, for diving-fins.
- 127 CENTERBOARDS:**
This subclass is indented under the class definition. Vessels having boards, plates, planks, etc., placed longitudinally amidships and projecting in line with the keel or approximate thereto and adapted to be raised or lowered to increase the resistance-surface and prevent capsizing or sudden careening, thereby steadying and trimming the vessel, usually preventing making to leeward, and enabling a vessel to point or sail closer to the wind. Centerboards are usually short in length and move in a recess or casing formed in the bottom of the vessel and raised, lowered, or adjusted at will.
- 128 Steering:**
This subclass is indented under subclass 127. Centerboards adapted to be turned more or less obliquely or athwartships and capable or adapted to be used for steering.
- (1) Note. The devices of this type are centerboards in that they are adapted to be lowered as centerboards and serve the purpose of such or are too long to be considered as mere rudders.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
149, for rudders placed upon or in line with the keel and not adapted to be raised or lowered as centerboards, or the invention relates to the means for steering rather than to the principles of centerboards.
- 129 Multiple:**
This subclass is indented under subclass 127. Devices in which more than one centerboard is used and in line with the keel longitudinally.
- 130 Vertical drop and pivoted swing:**
This subclass is indented under subclass 127. Devices in which the centerboard is adapted to be lowered vertically and then swung down to greater depth at will or tilted or turned transversely athwartships.
- 131 Sectional:**
This subclass is indented under subclass 130. Centerboards of vertical drop and swing type and made of a plurality of movable parts.
- 132 Pivoted:**
This subclass is indented under subclass 127. Centerboards pivoted at or near one end, adapted to swing down to greater or less depth, and adjustable at will.
- 133 Sectional:**
This subclass is indented under subclass 132. Pivoted centerboards composed of a plurality of separate parts usually movable or pivotally connected.
- 134 Fan:**
This subclass is indented under subclass 133. Folding sectional boards in which the parts fold together fan-like and having a common pivot on which the sections turn.
- 135 Lateral:**
This subclass is indented under subclass 132. Centerboards displaced laterally from the keel and not in line therewith.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
126, for fins and boards.
- 136 Lateral swing:**
This subclass is indented under subclass 132. Centerboards adapted to be swung obliquely across the line of the keel, but not primarily for steering.
- 137 Lateral tilt:**
This subclass is indented under subclass 132. Centerboards that are adapted to tilt horizontally or obliquely up or down against the keel, being usually hinged at or in line therewith.
- 138 Vertical drop:**
This subclass is indented under subclass 127. Centerboards that are adapted to be raised or lowered vertically, both ends being adjustable at will either separately or simultaneously, and in most cases the centerboard is moved as a whole and not merely one end.
- 139 Sectional:**
This subclass is indented under subclass 138. Centerboards adapted to be moved vertically and composed of a plurality of movable parts.
- 140 KEELS:**
This subclass is indented under the class definition. Keels and their structure and means and methods of securing them, whether fixed or movable.
- (1) Note. Keels differ from centerboards in being longer, being usually the length of the boat, or being, when short, immovably fixed to the hull.
- 141 Vertical adjustment:**
This subclass is indented under subclass 140. Keel structures which are adapted to be moved vertically as a whole and which extend from bow to stern and not merely centerboards.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
130, 131, 138, and 139, for centerboards.
- 142 Bilge:**
This subclass is indented under subclass 140. Keels laterally displaced from the true keel, i.e., located upon the sides or bilge of the vessel's bottom.

143 Rocking:

This subclass is indented under subclass 140. Keel structures that are adapted to rock or swing upon pivots laterally or longitudinally and which are keels rather than centerboards.

144 STEERING MECHANISM:

This subclass is indented under the class definition. Devices for changing the direction or speed of a vessel's motion by means of rudders, brakes, speed-retarders, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

21, and 23-24, for torpedoes with steering control means.
162, for tillers.
293 through 311, for drag anchors for speed-retarding and steering.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, appropriate subclasses under Mechanical Movements.
91, Motors: Expansible Chamber Type, appropriate subclasses for expansible chamber motors for operating steering mechanism.
180, Motor Vehicles, subclasses 6.2 through 6.7 for a motor vehicle which is steered by creating a difference between the driving effort developed by one or more traction elements located on one side of the vehicle and the driving effort developed by one or more traction elements located on the other side thereof; and subclasses 400-449 for a motor vehicle having means for guiding it.
244, Aeronautics and Astronautics, subclasses 75.1 through 99.9 for apparatus and devices for controlling aircraft. Subclasses 76-82 is the generic subclass for the automatic steering of mobile craft in two and three dimensions. See subclass 175 and the classes specified in the notes thereto for the classes which provide for electrically controlled or actuated apparatus for controlling the motion and/or steering of mobile devices and for a statement as to the line between the classes.

280, Land Vehicles, subclasses 263 through 280 and 771-93.515 for occupant steered vehicles.

318, Electricity: Motive Power Systems, appropriate subclasses for electric motor systems which might be used to steer a vessel, particularly subclasses 580 through 589 and 648-649 for automatic control of electric motors in response to direction, inclination or angular position.

440, Marine Propulsion, subclasses 12, 13-32, 40-43, 53-65, 90-93, and 95-97 for various types of steering-gear involved in and combined with propelling devices.

145 Speed retarders:

This subclass is indented under subclass 144. Brakes or devices for retarding a ship's motion through the water and also adapted for steering when used separately, usually rudders or projecting plates attached to the vessel's sides.

SEE OR SEARCH THIS CLASS, SUBCLASS:

293, through 311, for checking headway by drags.

146 Auxiliary:

This subclass is indented under subclass 144. Inventions in steering apparatus having a plurality of devices for operating the rudder or steering means, one auxiliary to the other for simultaneous use, or as an aid to that in general use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

163, for multiple rudders.
164, for auxiliary rudders.

147 Paddles and wheels:

This subclass is indented under subclass 144. Devices in which paddle-wheels or screw-propellers, etc., are used to effect a change of direction, such devices being used for steering and not primarily for propulsion.

SEE OR SEARCH CLASS:

440, Marine Propulsion, subclasses 53 through 65 and 90-93 for combined steering and propelling screws or wheels.

148 Channels:

This subclass is indented under subclass 147. Wheels or propellers placed in channels or waterways formed in the ship's side or hull to effect changes in direction by propulsion, the wheels or propellers located in the channels setting in motion a column of water or jet which by reaction changes direction of course.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

151, for steering devices in which a mere jet is used without the use of wheels, etc.

SEE OR SEARCH CLASS:

440, Marine Propulsion, subclasses 40 through 43 for combinations of propulsion and steering wheels in channels, subclasses 53-65 and 90-93 for screws or wheels in channels or waterways.

149 Keel:

This subclass is indented under subclass 144. Rudders or equivalent which are located upon or below the keel and partaking of the nature of centerboards and adapted to be turned across the keel, but not adjustable vertically.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

128, for centerboards used for steering.
129, for multiple centerboard devices.

150 Fluid pressure:

This subclass is indented under subclass 144. Steering mechanism in which fluid-pressure is used to control the rudder, tiller, or steering wheel, etc., or to react upon the water through which the vessel moves.

(1) Note. It includes all pneumatic, steam, and hydraulic means specific to ships and their structure and not so claimed as to be of general application in steam steering.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

146, for devices in which either hand or fluid pressure steering powers are used independently or simultaneously

or for means for coupling one to the other.

SEE OR SEARCH CLASS:

91, Motors: Expansible Chamber Type, appropriate subclasses for expansible chamber motors for operating steering mechanism.

418, Rotary Expansible Chamber Devices, appropriate subclasses for rotary expansible chamber motors for operating steering mechanism.

151 Jet:

This subclass is indented under subclass 150. Devices in which a jet of fluid, usually water, is thrown out approximately athwartships or obliquely to the keel at bow or stern, turning a vessel by the reaction due to jet propulsion.

SEE OR SEARCH CLASS:

60, Power Plants, subclasses 221 through 222 for reaction motors which obtain a thrust by the ejection of water and having means to eject water in a plurality of directions to obtain a resultant variation in thrust direction, and subclasses 228-232 for reaction motors which eject fluids other than water and are provided with thrust direction modifying means.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 127.1 through 127.3, 265.23, and 265.33-265.43 for a reaction motor discharge nozzle whose direction of stream discharge may be varied for steering a vehicle with which it may be associated.

440, Marine Propulsion, subclasses 40 through 43 for combined propulsion and steering jets.

152 Fins:

This subclass is indented under subclass 144. Structures located at ships' ends designed to effect diving, or similar devices at the sides of vessels, any of which may be used for steering, but which are not rudders in the ordinary means, their action and position being similar to those of the fins of fishes.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

126, for ballasting-fins.

- 153 Foot:**
This subclass is indented under subclass 144. Means for steering operated by the foot or feet.
- 154 Wheel-shaft gearing:**
This subclass is indented under subclass 144. Combinations of the ordinary steering wheel or equivalent and its shaft with gears for operating the rudder, but not involving a wheel and drum.
- 155 Screw:**
This subclass is indented under subclass 154. Wheel-shaft gearing in which screws or worms are used, also including multiple screw devices in which a plurality of screws or worms is used, provided one of them is upon the wheel-shaft and said shaft turns another through intermediate gear, all screws being of the same type.
- 156 Intermediate gear:**
This subclass is indented under subclass 155. Screw-shaft gearing in which other gears are placed between the steering wheel shaft and the screws or worms.
- (1) Note. In the miscellaneous subclass 155, the screw or worm is located upon the wheel-shaft.
- 157 Right and left:**
This subclass is indented under subclass 155. Wheel-shaft gearing involving right and left screws or worms operating the rudder, one or both of the screws being upon the wheel-shaft.
- 158 Intermediate gear:**
This subclass is indented under subclass 157. Steering mechanisms of the above-mentioned type in which other gearing is placed between the wheel-shaft and the screws or worms, which are geared to control the rudder.
- 159 Segmental rack:**
This subclass is indented under subclass 154. Wheel-shaft gearing operating a rack of segmental shape or equivalent located upon the rudderhead and turning therewith.
- 160 Wheel and drum:**
This subclass is indented under subclass 144. Steering mechanism comprising a wheel and a drum, upon which the steering ropes or chains are wound.
- 161 Intermediate gear:**
This subclass is indented under subclass 160. Wheel and drum steering means in which gears or mechanical elements are placed between the wheel or axle and the drum.
- 162 Rudders:**
This subclass is indented under subclass 144. Miscellaneous forms of rudders, not otherwise classifiable; also includes "tillers".
- 163 Multiple:**
This subclass is indented under subclass 162. Steering mechanisms in which a plurality of rudders is used.
- 164 Auxiliary:**
This subclass is indented under subclass 162. Rudders of permanent nature brought into use upon loss of the usual rudder, which are movable into position, but are not portable, as are jury rudders.
- 165 Hanging and shipping:**
This subclass is indented under subclass 162. Means for pivoting, securing, or supporting the rudder or its post in the bearings in combination with stern or stem posts, keel, or keelson, and devices for shipping or unshipping the rudder from its hanging or support.
- 166 Tubular:**
This subclass is indented under subclass 162. Rudders of tubular shape through which the propeller forces a jet or through which water reacts to move the stern.
- SEE OR SEARCH CLASS:
440, Marine Propulsion, subclasses 53 through 65 for propulsion unit steering or tilting, and subclasses 76-78 for propulsion unit casing.

167 Sectional:

This subclass is indented under subclass 162. Rudders composed of a plurality of rudders, parts, extensions, or blades designed to increase resistance-surface.

168 Jury:

This subclass is indented under subclass 162. Portable and temporary devices designed to serve as a steering means when the usual rudders have been lost or rendered inoperative.

SEE OR SEARCH THIS CLASS, SUBCLASS:

293 through 311, for drag-anchors.

169 Post bearings and heads:

This subclass is indented under subclass 162. The title is self-explanatory.

170 Brakes:

This subclass is indented under subclass 162. Devices for relieving strain on the helmsman or rudder, adapted to yield gradually to the force of the waves, thereby preventing the breaking of the rudder or its connections.

171 Hydraulic:

This subclass is indented under subclass 170. Brakes in which tension is relieved through fluid resistance, the fluid being compressed or retarded in its flow.

172 Locks:

This subclass is indented under subclass 162. Devices for securing the steering mechanism or rudder in fixed position, and controllable at will.

173 PORTS:

This subclass is indented under the class definition. Devices including openings through ships' sides or decks not otherwise classifiable, and stoppers, shutters, and shields for closing the same.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, appropriate subclasses for closures of the type provided for and see the search notes in section IV, References to Other Classes, of Class 49 for the loci of closures in other classes.

160, Flexible or Portable Closure, Partition, or Panel, appropriate subclasses for closures of flexible material and closures made of plural strips, slats, or panels interconnected for relative motion.

174 Stoppers:

This subclass is indented under subclass 173. Covers, doors, etc., for closing ports, differing from the covers of the light and air ports principally in the use to which said port is adapted and being generally larger and of rectangular construction, while the light and air ports are usually circular.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 124 for doors for closing the mouth of retorts.

109, Safes, Bank Protection, or a Related Device, subclasses 58 through 87 for wall and panel structures, closures, and closure adjuncts.

144, Woodworking, subclass 271 for a wood-bending steamer.

404, Road Structure, Process, or Apparatus, subclasses 25 through 26 for pavement with a vault cover-closure.

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 310 through 312 for elements or adjuncts.

175 Gun port:

This subclass is indented under subclass 174. Port-stoppers specially adapted for ports through which the gun is pointed, the stoppers fitting the muzzle of the gun or forming a shield or protector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

238, for torpedo launching.

SEE OR SEARCH CLASS:

89, Ordnance, subclass 5 for stoppers for submarine ordnance, and subclass 36.14 for protectors that close the port, but are structurally a part of the gun-mount.

109, Safes, Bank Protection, or a Related Device, subclass 58.5 for other gun ports not for ships and not involving a

combination with the gun or gun mount.

176 Hinged:

This subclass is indented under subclass 174. Port-stoppers in which the cover or stopper is hinged or pivoted in or to the port.

SEE OR SEARCH THIS CLASS, SUBCLASS:

175, for hinged gunport stoppers and shields, and 178 for hinged covers for light and air ports.

178, for hinged covers for light and air ports.

177 Light and air:

This subclass is indented under subclass 173. Ports, usually of circular shape, designed to secure light and air, and smaller than cargo or gun ports.

178 Hinged covers:

This subclass is indented under subclass 177. Light and air ports provided with hinged, pivoted, or swinging covers for closing the same, usually forming air and water tight joints when closed.

179 HAWSE PIPES:

This subclass is indented under the class definition. Devices involving openings or passages in a vessel's bow or stern or sides to permit cables or hawsers to run through.

180 Stoppers and covers:

This subclass is indented under subclass 179. Hawse-pipes having means of closure.

181 Friction rollers:

This subclass is indented under subclass 179. Hawse-holes having friction rollers or pulleys to facilitate the running out or heaving in of the cable.

182 SCUPPERS:

This subclass is indented under the class definition. Devices involving passages or holes from the decks through the ship's side to permit water accumulating on the decks to run out.

183 BILGE DISCHARGE:

This subclass is indented under the class definition. Devices for expelling bilgewater, ash, or refuse from a ship's bilge or hold, including ejectors or other devices operated by the movement of the vessel in the water, or specific to ship use or structure.

SEE OR SEARCH CLASS:

185, Motors: Spring, Weight, or Animal Powered, subclasses 29 and 30 for oscillating weight motors which may be operated by a rolling vessel.

406, Conveyors: Fluid Current, appropriate subclasses for a fluid current conveyor which expels material from a ship's bilge by water, steam injection, etc., where no ship structure is recited.

417, Pumps, subclass 328 for pumps operated by weights which are caused to oscillate by the rolling of a vessel, and subclass 334 for pumps operated by fluid current motors of the type which may be attached to or towed by a moving vessel.

184 Ejectors:

This subclass is indented under subclass 183. Devices for entraining water or ashes, etc., by the motion of the ship through the water, water being injected to entrain the former or by suction produced by shape of discharge orifice or its position in the bottom of the vessel.

185 Ships motion:

This subclass is indented under subclass 184. Ejectors which take in water forward or acting by suction due to the shape of the discharge orifice or its position, either type being operative only when the ship is moving through the water or when a current is flowing and the vessel is stationary.

186 Ash:

This subclass is indented under subclass 184. Ejectors including hoppers or other means for dumping and expelling ashes through water or steam injection, etc.

187 SMOKESTACKS:

This subclass is indented under the class definition. Steamboat stacks or chimneys specially adapted to use on vessels, mostly swinging or

- telescopic in structure and having no application elsewhere.
- SEE OR SEARCH CLASS:
110, Furnaces, subclass 184 for metal smoke stacks of locomotives and portable boilers.
- 188 FURNITURE:**
This subclass is indented under the class definition. Furniture and furnishings of ships not classifiable elsewhere because of special fitness to use on ships.
- 189 Cabins and staterooms:**
This subclass is indented under subclass 188. Devices or arrangements of cabins and staterooms to secure light, ventilation, comfort, and economy of space and usually separate structures rather than permanent structures in shipbuilding.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
71, for permanent structures in shipbuilding.
- 190 Life-preserver racks:**
This subclass is indented under subclass 188. Devices for holding or supporting life preservers on vessels and specific thereto.
- 191 Self-leveling:**
This subclass is indented under subclass 188. Furniture that is specific to use on ships, automatic in operation, maintaining a level surface during rolling and tossing of the vessel.
- 192 Berths:**
This subclass is indented under subclass 191. Berths providing for single or double swing, etc., during the rolling and pitching of the vessel, maintaining a level surface, and devices to steady berths during the rise and fall of the vessel.
- 193 Single pivot:**
This subclass is indented under subclass 192. Berths suspended from a universal joint or single pivot, providing for berth equilibrium during the motions of the vessel.
- 194 Chairs:**
This subclass is indented under subclass 191. Chairs automatically maintaining a level seat or rest during motions of the vessel in the water.
- 195 Tables:**
This subclass is indented under subclass 191. Tables having automatic leveling tops or equivalent devices securing the same end.
- 197 Boat plugs:**
This subclass is indented under the class definition. Plugs having valves therein adapted to fit in the bottom of a boat and permit the emergence of water.
- 198 Sea cocks:**
This subclass is indented under the class definition. Devices permitting the entrance of seawater from outside to the hold, magazine, etc., or for submerging the ship and usually placed in the bottom or between double bottoms and structurally united therewith.
- 199 CABLE STOPPERS:**
This subclass is indented under the class definition. Devices of the nature of compressors or controllers which have means to check or stop the cable from running out and to hold it securely at any point.
- (1) Note. Cable is used generically and includes hawsers, e.g., towlines, ropes, etc., which are controllable at will.
- SEE OR SEARCH CLASS:
188, Brakes, appropriate subclasses.
254, Implements or Apparatus for Applying Pushing or Pulling Force, subclasses 199 through 417 for analogous devices, or rope-clamps combined with hoisting apparatus.
- 200 Chain:**
This subclass is indented under subclass 199. Cable-stoppers structurally adapted for use on chain cables and not upon rope or wire.
- 201 HATCHES AND COVERS:**
This subclass is indented under the class definition. Inventions in deck hatches involving structure of hatches or deck openings and cov-

ers thereto and devices for fastening or locking said covers down.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, appropriate subclasses for closures of the type provided for.

160, Flexible or Portable Closure, Partition, or Panel, appropriate subclasses for hatches in the form of flexible and portable panels, including hatches of flexible material and of plural strips, slats and panels which are interconnected for relative movement. These patents may include so much of the mounting means as is necessary to support the hatch and may include the operating means for such hatch.

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclasses 336 through 342 for means for closing an opening for an elevator shaft through a building's floor.

202 Sliding:

This subclass is indented under subclass 201. Sliding covers and gratings involving more than sliding doors.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, subclasses 404 through 459 for sliding doors of the type provided for.

203 With fasteners:

This subclass is indented under subclass 201. Hatches combined with means for battening, securing or locking them in place.

SEE OR SEARCH CLASS:

292, Closure Fasteners, subclass 256.5 for hatch-fastening clamps, per se.

204 TRAVELERS:

This subclass is indented under the class definition. Devices having means to permit the reciprocation of a slide or ring to which the sheet of fore-and-aft sails is secured, such devices being fastened to the deck or rail.

SEE OR SEARCH THIS CLASS, SUBCLASS:

112, for travelers permitting vertical motion on masts and longitudinal motion on yards, etc.

205 Tension relievers:

This subclass is indented under subclass 204. Travelers having one or more tension or surge relievers as an element of construction.

SEE OR SEARCH THIS CLASS, SUBCLASS:

213, for tension relieving devices specific to ships.

210 ANCHOR TRIPPERS:

This subclass is indented under the class definition. Devices for instantaneously releasing anchors, shank-painters, ring or cat stoppers, anchor-supporters, shoes, and fluke-holders, and devices for catting and fishing anchors.

SEE OR SEARCH THIS CLASS, SUBCLASS:

378 through 380, for devices for releasing a life craft from its supporting connections.

SEE OR SEARCH CLASS:

54, Harness for Working Animal, subclass 69, for attaching and detaching devices.

119, Animal Husbandry, subclasses 772 through 778 for releasing apparatus for hitched animals.

278, Land Vehicles: Animal Draft Appliances, subclass 21-32, for horse detachers.

294, Handling: Hand and Hoist-Line Implements, subclasses 82.24 through 82.36, particularly subclass 82.27 for load engaging hooks.

211 VENTILATION:

This subclass is indented under the class definition. Ventilating devices specific to ships and involving the structure of the ship.

SEE OR SEARCH CLASS:

454, Ventilation, appropriate subclasses for ventilation in general.

- 212 Valves:**
 This subclass is indented under subclass 211. Ventilating devices in which cowls or hoods are provided with valves, dampers, or baffle-plates to prevent the ingress of water.
- 213 TENSION RELIEVERS:**
 This subclass is indented under the class definition. Devices specific to ships having yielding parts to prevent tension or strains from rupturing some element of the combination and applied to cables, cable-stoppers, sheets, secured ends or "standing" parts, ropes, etc.
- (1) Note. The yielding means is usually rubber, spring, or fluid, which is compressed or stretched, as the case may be.
- SEE OR SEARCH CLASS:
 254, Implements or Apparatus for Applying Pushing or Pulling Force, subclass 277 for fluid or resilient shock-absorbing or tension-maintaining means attached to, supported by, or supporting guiding structure for a load hauling or hoisting cable.
 267, Spring Devices, subclasses 69 through 74 for tension relievers not specific to ships.
- 214 Fluid:**
 This subclass is indented under subclass 213. Tension or surge relievers in which the yielding means is hydraulic or pneumatic.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 171, for hydraulic brakes.
- 215 Cable:**
 This subclass is indented under subclass 213. Tension-relievers to take up the strain on the cable and prevent parting of the cable. The yielding means generally forms an element of the cable stopper or compressor. This subclass includes tension-relievers for chain-stoppers as well as cable-stoppers.
- 216 Couplers:**
 This subclass is indented under subclass 213. Elastic couplings specific to use on ships and in rigging.
- SEE OR SEARCH CLASS:
 267, Spring Devices, subclasses 69 through
 END