

**CLASS 439, ELECTRICAL CONNECTORS****SECTION I - CLASS DEFINITION**

This is the generic class for a pair of mated conductors comprising at least two electrically conducting elements which are interconnected to permit relative motion of such conducting elements during use without a break in electrical conductivity therebetween (see Subclass References to the Current Class, below).

Also, this is the generic class for a device constituting an electricity conducting contact between conductors of electricity; wherein the joint is of a type which may be readily made and broken, repeatedly by attachment and detachment of contact supporting structure on each conductor.

- (1) Note. A soldered joint or joint formed by twisting together a pair of conductors and any of various other splices that is more or less permanent in nature is not generally provided for in this class. See the reference to Class 174 below for location of a device relating to such a splice joint. Also, see below for the scope of this class with regard to general utility and the lines with respect to other classes providing for a joint, per se.
- (2) Note. Included under this class definition is a device known in the art as a contact plug, an outlet receptacle, a lamp socket, a vacuum tube socket, a connection block, a cable terminal, a cable joint, a binding post, a cube tap, a grounding strap, etc.
- (3) Note. This class also includes a device specialized for use with an electrical connector and not elsewhere classifiable. Such a device may be, for example, any of certain types of mounting or supporting means, a locking device, a shield or cover, a strain relieving device, etc.

**SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS****COMBINATION OF AN ELECTRICAL CONNECTOR WITH ANOTHER DEVICE**

With respect to a combination of an electrical connector with an art device, no absolutely uniform rule of classification can be set forth. Disposition of such combina-

tion depends on factors such as the nature of the combined art device, the manner in and extent to which such art device, per se, and in other combinations have been classified, the relationship of other classes to this class as regards superiority, and the manner in which the combination is claimed. Generally, the combination of an electrical connector with an art device is classifiable in the appropriate art class. Also, an electrical connector limited to arrangement or use with an art device is generally classified in the appropriate art class. Two or more different electrical devices combined with an electrical connector will be found in the class providing for the combined electrical devices, even though they are broadly recited.

**CONNECTOR, PER SE, ELSEWHERE CLASSIFIED**

Since any mechanical joint, coupling or connector, when made of metal or other material capable of conducting an electrical current may be said to "electrically" connect, only such structure as are specially designed for and/or disclosed for electrical use have been placed in this class (Class 439).

A patent disclosing a connector having utility both as an electrical connector and as a mechanical coupling wherein the claims do not limit the connector function as an electrical connector is classified in the appropriate class providing for the mechanical joint.

A patent claiming a limitation of structure, composition, or arrangement utility in an electrical installation and not generally applicable to a class providing for the mechanical joint is classified in this class (Class 439). Reference to electrical insulation features is considered to establish electrical utility in an electrical installation.

As stated in the Class Definition, (2) Note, above, the connector of this class (Class 439) is generally of the type wherein an electrical joint can be readily made or broken and reused. Generally an electrical joint of a more permanent nature (e.g., molded, soldered, twisted or crimped connection) is not provided for in this class.

See the notes at the beginning of this section for the general rule of classification. However, certain specific types of electrical connectors are excepted from the general rule, as follows:

Electrode Joints - See Class 313 class definition, Lines With Other Classes, "Electrodes and Shields with Joints Therebetween" for the line between Class 403 and this class (439) with respect to electrode joints.

Rail Bonds - See Class 238, subclass 14.05, (6) Note for the line between the various classes with respect to rail bonds.

#### METHOD OR APPARATUS FOR MANUFACTURING OR APPLYING AN ELECTRICAL CONNECTOR

A patent including a claim to an electrical connector structure of this class (439) and another claim to a process or an apparatus for manufacture of such an electrical connector is originally classified in this class (439) with a mandatory cross-reference in the appropriate manufacturing class. See References to Other Classes, below.

### SECTION III - SUBCLASS REFERENCES TO THE CURRENT CLASS

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

- 1+, for interrelated connectors relatively movable during use.
- 43+, for an electrical connector with a selectable circuit wherein no details of the circuit structure are set forth.
- 152+, for an electrical connector with a coupling separator.
- 180, for an electrical connector detachable from a mating connector by snap or quick-break action.
- 188, for, an electrical connector that includes integrally therewith a "switching" component actuated by coupling engagement with a mating connector.
- 259+, for a connector with a contact moved laterally into engagement with a mating contact in a "zero insertion force device".
- 296+, for an electrical connector with coupling movement-actuating means or retaining means in addition to the contact.
- 310+, for a retaining means with distinct movement-actuating means to move a coupling part axially.
- 374+, for an electrical connector with guiding means for mating of a coupling part.

### SECTION IV - REFERENCES TO OTHER CLASSES

#### SEE OR SEARCH CLASS:

- 24, Buckles, Buttons, Clasps, etc., for a fastener, generally, especially subclasses 115+ for a cord or rope holder, subclass 122.3 for a device for gripping and holding a sheathed strand and subclass 122.6 for a device for gripping or holding a stranded cord or rope. (See "Connector, Per Se, Elsewhere Classified, above)
- 29, Metal Working, subclasses 400.1+ for the residual home for a process of manufacturing; subclasses 592.1+ for a process of making an electrical device, generally; and subclasses 729+ for apparatus for assembling, disassembling or securing parts thereof in the manufacture of an electrical device; especially subclasses 747+ for apparatus for assembling an electrical connector. For example, many patents in subclasses 747+ comprise apparatus for pulling or inserting a contact prong into an aperture of a resilient plug. (See "Method Or Apparatus For Manufacturing Or Applying An Electrical Connector," above.)
- 40, Card, Picture, or Sign Exhibiting, subclasses 541+ for a sign in which a character or legend is made more apparent by means of a special illuminating device. Class 40 provides for the combination of an electrical connector with the significantly recited body of a sign. (See "Combination Of An Electrical Connector With Another Device" above)
- 65, Glass Manufacturing, subclasses 36+ for a process of bonding glass to a formed part by a glassworking operation, and subclasses 152+ for fusion bonding by glassworking means; see the "Search Notes" under each of these subclasses. (See "Method Or Apparatus For Manufacturing Or Applying An Electrical Connector," above.)
- 81, Tools, subclasses 53.1+ for a wrench for applying an overhead line tap-type electrical connector. (See "Method Or Apparatus For Manufacturing Or Applying An Electrical Connector," above.)
- 99, Foods and Beverages: Apparatus, subclass 378 for cooking apparatus in which there is included some electrical structure over and above an electrical heat element as, for example, an arrangement of conductors or connectors supplying electric current to various heating elements. (See "Combination Of An Electrical Connector With Another Device" above)

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, for a method or apparatus employed in laminating, per se. See particularly subclass 49 for splicing; and subclasses 51+ for covering, respectively in making an electrical connector with a conductor of indefinite length. See also subclass 94 for reclaiming or repairing an article. (See “Method Or Apparatus For Manufacturing Or Applying An Electrical Connector,” above.)
- 164, Metal Founding, subclasses 91+ for a process of manufacturing a battery post clamp in which metal is cast about an element of the clamp or conductor. (See “Method Or Apparatus For Manufacturing Or Applying An Electrical Connector,” above.)
- 174, Electricity: Conductors and Insulators, for a permanent electrical connection between two conductors. Also search Class 174 for an electrical conductor or insulator, and for an insulator or apparatus specialized to mounting, supporting, encasing in a conduit, or housing the same. Class 174 also provides for a device in which conductors are joined or spliced for transmission of electrical current therebetween if by a permanent joint (as distinguished from the detachable joint of this class (439)). For example, search subclasses 84+ for conductors joined by having been fused, twisted, soldered or crimped together. An electrical connector of this class which may incidentally also be soldered to the mating connector, e.g., to a printed circuit board, is included in this class (439). Search subclasses 50+ for a box or housing limited by claimed structure to electrical use and for combination of a housing and a connector. A hermetically sealed envelope such as is used for an electric lamp having connector structure is provided for in subclasses 50.5+ of Class 174 where significant structure of the envelope is recited in addition to that necessary to support or mount the connector. (See “Connector, Per Se, Elsewhere Classified, above)
- 178, Telegraphy, subclass 78 for a telegraph instrument combined with a connection for tapping into a telegraph line to receive or transmit a message. (See “Combination Of An Electrical Connector With Another Device“ above)
- 191, Electricity: Transmission to Vehicles, for the combination of an electrical connector with vehicle structure; particularly subclasses 12+ for vehicle structure combined with an electrical connector including means for storing a line cord; subclass 23 for a continuous outlet for a nonremovable sliding coupling associated therewith for transmission of electricity to transverse device; subclass 44 for a trolley conductor having a gear adapted to join a trolley conductor gear; and subclass 44.1 for a splice or coupling for a line and electric trolley wire. (See “Combination Of An Electrical Connector With Another Device“ above)
- 191, Electricity: Transmission to Vehicles, subclass 44.1 for a splicer for the aligned ends of electric trolley wires. (See “Connector, Per Se, Elsewhere Classified, above)
- 200, Electricity: Circuit Makers and Breakers, for a device including a housing first brought into coupled relationship with a mating housing combined with subsequently actuated sliding contacts if the contacts are intended to function in making and breaking electrical circuitry without separation of housings. Note however, that such a device may be found in this class (Class 439) if the coupling of the housings is ancillary to making electrical connection. An electrical connector of class (Class 439) can be distinguished from a circuit maker or breaker of Class 200 in that an electrical connector is physically separated from a distinct mating connector each time the circuit is broken; whereas, a circuit maker or breaker comprises a “permanent” assemblage of parts including both a movable contact and its mating contact wherein there is a positive physical connection between the contacts such that a contact is restricted to move with respect to the mating contact along a prescribed path each time the circuit maker or breaker operates.
- (1) Note. An electrical connector, per se, may include movable contacts and be in this class (438), the class of electrical connectors. For example, search Class 439, for an electrical connector with a selectable circuit wherein no details of the circuit structure are set forth; for an electrical connector with a coupling separator; for an electrical connector detachable from a mating connector by snap or quick-break action; for a connector with a contact moved laterally into engagement with a mating contact in a “zero insertion force device”; for an electrical connector with coupling movement-actuating means or retaining means in addition to the contact, especially for a retaining means with distinct movement-actuating means to move a coupling part axially; and

- for an electrical connector with guiding means for mating of a coupling part. Class 200 has not been screened to verify placement according to this line. (See Subclass References to the Current Class, above. Also see the Class 200 search note in this section to “Combination Of An Electrical Connector With Another Device”)
- 200, Electricity: Circuit Makers and Breakers, for the combination of an electrical circuit maker or breaker for example, an electrical connector with a distinct switch actuated by coupling engagement is to be found in Class 200, especially in subclasses 61.58+. However, an electrical connector that includes integrally therewith a “switching” component actuated by coupling engagement with a mating connector is to be found in this class. See Subclass References to the Current Class, above. (See “Combination Of An Electrical Connector With Another Device” above)
- (1) Note. See the class definition of Class 200, for further distinction between a circuit breaker of Class 200 and an electrical connector of this class (Class 439). See especially Class 200, subclasses 51+ for an electrical connector combined with a switch in a unitary structure or capable of functioning as a switch; and see (4) Note of subclass 51 for a line note directed to the combination of a connector-coupling device with a specified type of circuit maker and breaker excluded from these subclasses. Also see the Class 200 search note relating to the “Connectors” Per Se Elsewhere Classified”
- 204, Chemistry: Electrical and Wave Energy, subclasses 193+ for an electrical connector combined with apparatus for carrying out a process involving electrolysis, a process in which a chemical change is brought about by application of electric current or wave energy to material being treated, a process involving electrophoresis or electro-osmosis, or a process involving coating or forming an object by cathode sputtering. See subclasses 280+ for an electrode for carrying out a process of that class (Class 204). (See “Combination Of An Electrical Connector With Another Device” above)
- 213, Railway Draft Appliances, subclasses 1.3+ for the combination of a railway draft coupler with an electricity conducting means and see (2)
- Note of that class (Class 213) definition for the line between various classes with respect to a car coupler combined with another device. (See “Combination Of An Electrical Connector With Another Device” above)
- 219, Electric Heating, for an electrical connector combined with an electrical heating device such as a space heater, an electrically heated metal working apparatus, or an electrically heated tool. (See “Combination Of An Electrical Connector With Another Device” above)
- 228, Metal Fusion Bonding, for uniting work parts by forming a metallurgical bond. (See “Method Or Apparatus For Manufacturing Or Applying An Electrical Connector,” above.)
- 238, Railways: Surface Track, subclasses 14.05+ for a joint, coupling, rail bond, other electrical connector device, or other means for electrically connecting a railway rail or other surface track element to another rail or some other stationary device or object. (See “Combination Of An Electrical Connector With Another Device” above)
- 242, Winding, Tensioning, or Guiding, subclasses 430+ for a process or apparatus for winding a composite electrical article that may include terminal winding. (See “Method Or Apparatus For Manufacturing Or Applying An Electrical Connector,” above.)
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, for a method of molding an insulative body about a contact in the manufacture of an electrical connector. (See “Method Or Apparatus For Manufacturing Or Applying An Electrical Connector,” above.)
- 294, Handling: Hand and Hoist-Line Implements, subclass 174 for a device for placing or removing a coupling part connector from a distance. (See this class (Class 439), “Combination of an Electrical Connector With Another Device” above.)
- 310, Electrical Generator or Motor Structure, subclass 71 for a dynamo electric machine having combined therewith an electrical connector, terminal, or lead-in, and subclasses 219+ for a current collector including a slip ring, brush holder, brush, etc. (See “Combination Of An Electrical Connector With Another Device” above)
- 313, Electric Lamp and Discharge Devices, for an electric lamp and electric space discharge device structure and see especially section XI of the class definition of Class 313 for the line between Class 313 and this class (Class 439)

- with respect to the combination of an electric lamp and space discharge device and electrical connector structure. In section XI of the class definition of Class 313 may also be found the line between this class (Class 439) and various other classes with respect to the classification of the various features of electric lamp and space discharge devices. (See "Combination Of An Electrical Connector With Another Device" above)
- 324, Electricity: Measuring and Testing, subclass 149 for a connector combined with meter structure or a connector associated with a support for a meter. Where the support merely holds the connector elements in an operative position, classification is in this class (Class 439). However, if the support in any way contacts or supports the meter, classification is in Class 324. (See "Combination Of An Electrical Connector With Another Device" above)
- 337, Electricity: Electrothermally or Thermally Actuated Switches, for an electrothermal or thermally operated switch, combined with an electrical connector. (See "Combination Of An Electrical Connector With Another Device" above)
- 338, Electrical Resistors, subclass 220 for an electrical resistor in a detachable plug-type resistor unit, and subclasses 322+ for a resistor with a terminal. See the Class 338 definition for lines between Class 338 and this class (Class 439). (See "Combination Of An Electrical Connector With Another Device" above)
- 343, Communications: Radio Wave Antennas, subclass 870 for a loop-type antenna with a connector (or terminal) and subclass 906 for an antenna combined with an electrical connector. (See "Combination Of An Electrical Connector With Another Device" above)
- 361, Electricity: Electrical Systems and Devices, subclasses 600+, especially subclass 823 for a switchboard or analogous structure (e.g., plural components with spacing means, distribution boards, etc.) having a connector. (See "Combination Of An Electrical Connector With Another Device" above)
- 362, Illumination, for an electrical connector combined with means adapting it to illumination; such as means to protect, support or distribute a light source, or an artificial light distributor or modifier (e.g., a reflector, a refractor, or a shade). subclasses 437+ provide for a socket cover combined with means for securing a bowl or shade thereto and subclass 457 provides for a miscellaneous attachment or fitting adapted to be secured to or about a socket to form an ornamental lighting unit, in combination with a lamp socket. (See "Combination Of An Electrical Connector With Another Device" above)
- 373, Industrial Electric Heating Furnaces, subclasses 117+ for a holder for an electrode in an electric arc furnace provided with mechanism for feeding the electrode as it is consumed to regulate the length of the arc. (See "Combination Of An Electrical Connector With Another Device" above)
- 379, Telephonic Communications, subclass 185 for a portable telephone or station set adapted to be connected to a circuit at fixed points or at any point. The instrument is connected by means of a line tap, or by means of a socket, plug or equivalent. (See "Combination Of An Electrical Connector With Another Device" above)
- 403, Joints and Connections, for a joint uniting the ends of two rodlike bodies, or a rodlike body and a base, head, or other nonrodlike body; particularly subclasses 206+ wherein an axially curved or bent portion of a rod (or wire) is a joint component. See the notes at the beginning of this section (section IV) for the general rule of classification. However, certain specific types of electrical connectors are excepted from the general rule, as stated in "Connector, Per Se, Elsewhere Classified," above
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, for molding an insulating body. See especially subclasses 110+ for apparatus molding a housing about preformed electrical contacts. (See "Method Or Apparatus For Manufacturing Or Applying An Electrical Connector," above.)
- 427, Coating Processes, subclasses 58+ for a process of coating, per se, wherein the product has utility as an electrical product. (See "Method Or Apparatus For Manufacturing Or Applying An Electrical Connector," above.)
- 429, Chemistry: Electrical Current Producing Apparatus, Product, and Process, for an electrical cell combined with an electrical connector, and see especially subclasses 209+ for the connection of an electrode within an electrical cell or a terminal claimed in combination with significant battery structure or when of such nature and construction as to be inseparable from an electrical cell. (See "Combination Of An Electrical Connector With Another Device" above)

- 445, Electric Lamp or Space Discharge Component or Device Manufacturing, for a process of or apparatus for manufacture of an electrical device of that class, including assembly therewith of an electrical connector. (See "Method Or Apparatus For Manufacturing Or Applying An Electrical Connector," above.)
- 607, Surgery: Light, Thermal, and Electrical Application, subclasses 115+ for apparatus for applying electrical energy directly to the human body, including particular electrode structure; especially subclasses 149+ for an electrode having a flexible metallic contact surface designed to adapt itself to the contours of the human body, and subclass 153 for an electrode having means for wetting the contact surface between the electrode and the body. (See "Connector, Per Se, Elsewhere Classified, above)

- (1) Note. A conductor may include such diverse members as an electrical cable, a wire (either stranded or solid), a grounding plate, an inductive shield, a bus bar, or an electricity-transmitting path formed of a conductive film deposited on an insulating plate or panel, etc.

## SECTION V - GLOSSARY

Terms or phrases used in definitions either repeatedly or in a special or limited sense are set forth below with the meaning each is to have in this class. For economy of space, an asterisk (\*) following a word or phrase indicates that reference should be made to this glossary for the specific meaning thereof.

### CABLE

An elongated, flexible assembly of two or more elongated conductors intended to transmit electricity from one end to the other, the conductors being electrically insulated from one another but physically held together in association with one another.

- (1) Note. The two or more physically associated but mutually insulated conductors are usually further enclosed within an outer protective or insulating covering or sheath.
- (2) Note. A stranded, wire-type conductor is considered to be a single conductor.

### CONDUCTOR

A member intended to transmit electricity from one portion or end thereof to another portion or end thereof, and to which electricity-transmitting member the electricity-conducting part of an electrical connector is intended to be electrically joined or attached.

### CONNECTOR

A device for forming an electricity-conducting joint between conductors of electricity, wherein the device either (1) consists solely of an electricity-conducting element having a contact surface for forming the joint or (2) comprises an assembly which includes an electricity-conducting element having a contact surface for forming the joint and further includes any structure necessary to support, carry, or encase the conductive element; and wherein the joint is of a type which may be readily made and broken, repeatedly, either (a) by engaging or disengaging the conductive element or (b) by engaging or disengaging the conductive element with a conductor.

### CONTACT

An electricity-conducting component of an electrical connector, including a contact surface intended to form a readily made and broken electricity-conducting joint by directly engaging either a conductor or a corresponding surface of a cooperating joint-forming conductive component, so as to permit the passage of electricity through the joint from one component to the other.

### COUPLING PART

An electrical connector comprising a contact and additional supporting structure specially adapted to mate with a specific complementary electrical connector.

- (1) Note. A "specific complementary electrical connector" is also a "coupling part" in this class, but may be referred to as a "mating part" in order to distinguish it from the first mentioned coupling part. Also, such a "counterpart" and the complementary contact thereof may be referred to as the "counter-contact".
- (2) Note. A relatively short, generally stationary rodlike connector is not considered to be a "coupling part" even though it otherwise meets the limitations of this definition,

because such structure has not been so considered in the past. Similarly, a connector for interfitting with such a short rodlike connector is not considered to be a "coupling part". Such a connector may commonly be used on an automobile electrical energy battery. Note further that this restriction does not apply to a generally fixed socket and a cooperating short rodlike connector.

- (3) Note. A bare wire (or cable) making electrical contact is not a coupling part; nor is a connector for making direct engagement with such a wire. Also, neither a threaded stud nor a ring for fitting over such a stud is considered to be a coupling part.

#### MATING PART

A coupling part for electrically connecting with a specific coupling part. Actually a coupling part and a mating part are structurally the same, the distinct terminology is used in this class as an aid to expression.

#### PRINTED CIRCUIT BOARD

A relatively thin, flat insulating sheet, panel, or plate having two or more circuit elements or conductors deposited, adhered, or otherwise formed on a planar surface thereof, the circuit elements or conductors being electrically insulated from one another or being, during use, at electrical potentials different from one another.

#### SUBCLASSES

##### 1 INTERRELATED CONNECTORS RELATIVELY MOVABLE DURING USE:

This subclass is indented under the class definition. Device including a conductor\* having a contact\* and including another conductor having a contact for engagement with the contact of the first conductor so that electricity is transmitted from one of the conductors to the other at the engagement joint; wherein, the two conductors are constructed to allow relative movement therebetween during use without breaking the electricity transmitting joint.

- (1) Note. The art of this subclass (and those subclasses intended hereunder) is somewhat different from that of the remainder of the class in that the indented function of the art of this area is to permit relative

movement of two electrically connected members; whereas, the other areas of the class are to provide for disconnection of two parts which do not move with respect to each other during electricity transmitting use.

- (2) Note. The design and intent of the connector of this subclass is to allow movement of the two members during use as distinguished from adjustment made incidental to a coupling or uncoupling as in screwing a plug into a socket is not included herein. Also, separable couplings which due to the physical disposition of the contacts (e.g., concentric contacts) theoretically might allow relative movement of the members but are excluded from this subclass unless there is a specific disclosure that such relative movement during use is intended.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

- 131, for a connector including a contact carrier that is movable between accessible and inaccessible positions.  
 307, for unauthorized coupling separation preventing means for a screw coupling which includes a freely rotatable shell.  
 578+, for a connector including or for use with coaxial cable, having contacts symmetric about the axis of engagement.  
 586, for a connector in which a contact is carried by flexible or resilient insulation.  
 675, for a connector of the axially engageable type having contacts symmetric about the axis of engagement.

#### SEE OR SEARCH CLASS:

- 191, Electricity: Transmission to Vehicles, for conducting electric energy between relatively movable objects.  
 310, Electrical Generator or Motor Structure, for a brush, commutator, slip ring, or other collector for a dynamo electric machine.  
 314, Electric Lamp and Discharge Devices: Consumable Electrodes, subclass 129 for a consumable electrode device (e.g., an arc lamp) pro-

vided with means to transfer electric current from a lead wire to a moving electrode.

**2 And antivibration mounting:**

This subclass is indented under subclass 1. Device including means to prevent transmission of high frequency reciprocating movement from one member to another or to the electricity transmitting joint.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 86+, for an electric connector having an elastomeric or nonmetallic conductive portion which may dampen vibration.
- 382+, for an electrical connector with vibration damping or cushioning, generally.
- 586+, for an electrical connector including flexing insulation, generally.

**3 With means to apply lubricant or coolant:**

This subclass is indented under subclass 1. Device combined with means to supply friction reducing material or thermal energy absorbing or reducing material to a surface of a member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 190+, for an electrical connector with means to apply or retain fluent material, generally.

**4 With storage means for flaccid conductor:**

This subclass is indented under subclass 1. Device intended to be used with a pliable strandlike member for transmitting electricity to the transmitting member is generally elongated and is readily yieldable transversely of its length to the force of gravity, combined with means to receive and accommodate temporarily a surplus portion of the electricity transmitting means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 7, for interrelated electrical connectors relatively movable during use having "nonsolid" contact.
- 501, for an electrical connector, generally, with storage means for flaccid conductor.

**5 Having liquid contact:**

This subclass is indented under subclass 1. Device (a) wherein the electricity transmitting joint is filled with a material in the liquid state during electricity transmission to make a more positive electricity transmitting path; or, (b) including provision to utilize a liquid as a contact\*, i.e., to make the electricity transmitting joint with another member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 178+, for an electrical connector, generally including fluent conducting material.

**6 Universal movement:**

This subclass is indented under subclass 1. Device wherein: (a) the two conductors are connector together such that neither can rotate more than 360° but one can pivot with respect to the other about any nonrotary axis, or; (b) the two conductors are connected together such that rotation of one about a first axis is accompanied by corresponding rotation of the other about a second axis which intersects the first axis at a point, wherein the conductors are able to pivot about any other axis passing through that point.

- (1) Note. A second or intermediate conductor may be pivotally connected to the first conductor for movement about a first axis with respect thereto and may be pivotally connected to a third conductor for movement with respect thereto about a second axis transverse to the first axis to allow resultant "universal" movement.
- (2) Note. The pivotal movement of this subclass is controlled; e.g., a pliable connecting rod allowing similar movement is not included herein.
- (3) Note. Under Clause (a) of this definition, the end of the moving conductor opposite from the pivot can move in the manner of a pencil when writing a letter "O".

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 534, for an electrical connector combined with a universally adjustable support.



- 7 Having “nonsolid” contact, e.g., fibrous or pelletized bed:**  
This subclass is indented under subclass 6. Device wherein one of the conductors movably engaging the other comprises a mass of generally small size strands or grains that make engagement for the electricity transmitting joint without presenting a single uninterrupted surface.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
5, for interrelated electrical connectors relatively movable during use having a liquid contact.  
390, for an insulation piercing contact adapted to engage a liquid granular or metallic wool contactor.
- 8 Parts comprising ball and socket:**  
This subclass is indented under subclass 6. Device wherein one of the conductors includes a generally spherical surface for encompassing engagement by the other conductor.
- 9 One part having flexible contact fingers:**  
This subclass is indented under subclass 6. Device wherein the contact of one of the conductors includes a plurality of resilient extensions adapted to encompassingly engage the other conductor so that the resilience of the extensions allows relative movement between the conductors while continuing to make an electricity transmitting joint.
- 10 Compound movement, e.g., rotary + linear:**  
This subclass is indented under subclass 1. Device wherein relative movement of one of the conductors with respect to the other is (a) in a first direction and then in a second direction; or, (b) in a manner that is best defined as including two components of movement.
- (1) Note. Helical motion is best defined as rotary + linear.
- 11 Movement about axis:**  
This subclass is indented under subclass 1. Device wherein the first and second conductors move about a pivot line with respect to each other without breaking the electricity transmitting joint therebetween.
- 12 Including stacked plates used as conductor:**  
This subclass is indented under subclass 11. Device including a first conductor\* having a contact\* and including a second relatively movable conductor having a first contact surface for transmitting electricity to the contact of the first conductor and having a second contact surface for transmitting electricity to a contact surface of a third conductor; wherein, the second conductor is generally platelike and wherein its planar surfaces comprise the first and second contact surfaces.
- 13 Rotary movement:**  
This subclass is indented under subclass 11. Device wherein a first conductor moves more than 360° about the pivot line with respect to other.
- 14 Between cable and screw-type contact shell:**  
This subclass is indented under subclass 13. Device including a first member having a helically-ribbed contact and having a second member for receiving an electrical supply cable\* wherein the member having a ribbed contact turns about an axis to effect engagement with a cooperating contact of a third member without breaking the electricity transmitting joint between the first and second members.
- 15 Part comprising hand wheel, e.g., steering wheel:**  
This subclass is indented under subclass 13. Device wherein the conductor which turns more than 360° includes a circular periphery and is intended to be engaged and caused to turn about its axis by a hand of an operative.
- 16 Part comprising vehicle wheel:**  
This subclass is indented under subclass 13. Device wherein the conductor which turns more than 360° includes a circular periphery and is intended to roll therealong to support and transport a mobile structure.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
19, for interrelated electrical connectors relatively movable during use involving rolling contact, generally.

- 17 Including ball or roller bearing used as conductor:**  
This subclass is indented under subclass 13. Device including a first conductor\* having a contact-surface and including a second relatively movable conductor having a contact-surface for transmitting electricity to the contact of the first conductor; wherein the second conductor is circular in cross-section (the second conductor may be either spherical or rodlike) and is intended to roll over the contact surface of the first conductor and is intended to carry a physical load.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
19, for interrelated electrical connector relatively movable during use involving rolling contact, generally.
- 18 Including annular contact:**  
This subclass is indented under subclass 13. Device wherein one of the members includes a contact that extends more than 180° about the axis about which one of the conductors turns with respect to the other.
- 19 Rolling contact:**  
This subclass is indented under subclass 18. Device wherein one of the contacts is adapted to engage and transmit electrical current to another contact with substantially no slippage in the manner of a vehicle wheel in engagement with a support surface.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
16, for interrelated electrical connectors relatively movable during use where one comprises a vehicle wheel.  
17, for interrelated electrical connectors relatively movable during use comprising a ball or roller bearing.
- 20 Coaxial annular contacts:**  
This subclass is indented under subclass 18. Device wherein one of the members includes a first contact that extends more than 180° about the axis about which one of the conductors turns with respect to the other and includes a second contact that also extends more than 180° about the same axis.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
578+, for an electrical connector for use with a coaxial cable.  
675, for an insulated connector having plural contacts including an annular push-pull contact.
- 21 Concentric:**  
This subclass is indented under subclass 20. Device wherein a portion of the first and a portion of the second contact are positioned in a common plane about their common axis radially spaced from one another.
- 22 Having axially facing contact surface:**  
This subclass is indented under subclass 20. Device including a contact having a surface for making an electricity transmitting joint, which surface is in a plane normal to the axis about which one of the conductors turns with respect to the other.
- 23 Having radially outwardly facing contact surface:**  
This subclass is indented under subclass 20. Device including a contact having a surface for making an electricity transmitting joint, which surface is cylindrical about the axis about which one of the conductors turns with respect to the other and can be approached by a cooperating contact as that contact moves toward the axis.
- 24 Three or more such contacts:**  
This subclass is indented under subclass 23. Device including more than two contacts\* each of which having a surface for making an electricity transmitting joint, which surface is cylindrical about the axis about which one of the conductors turns with respect to the other and can be approached by a cooperating contact as that contact moves toward the axis.
- 25 Engaged by resiliently biased contact:**  
This subclass is indented under subclass 24. Device wherein one of the cylindrical contacts makes an electricity transmitting joint with a contact that is yieldably urged thereagainst by a member stressed within its elastic limit.

- 26 Laterally biased finger contact:**  
This subclass is indented under subclass 25. Device wherein the yieldably urged contact comprises an elongated member urged to move to one side and make the electricity transmitting joint with a side face thereof.
- 27 Having axially facing contact surface:**  
This subclass is indented under subclass 18. Device including a contact having a surface for making an electricity transmitting joint, which surface is in a plane normal to the axis about which one of the conductors turns with respect to the other.
- 28 Having radially outwardly facing contact surface:**  
This subclass is indented under subclass 18. Device including a contact having a surface for making an electricity transmitting joint, which surface is cylindrical about the axis about which one of the conductors turns with respect to the other and can be approached by a cooperating contact as that contact moves toward the axis.
- 29 Including resiliently biased contact:**  
This subclass is indented under subclass 13. Device including a member adapted to be flexed within its elastic limit, which member serves by the flexing action to urge the contact of one of the conductors joint into forming engagement with another contact to assure transmission of electricity through the joint.
- (1) Note. The member adapted to be flexed within its elastic limit may be a contact.
- 30 Contact having resilient shank:**  
This subclass is indented under subclass 29. Device wherein the member to be flexed within its elastic limit is a contact.
- 31 Hinge:**  
This subclass is indented under subclass 11. Device wherein the first and second conductors comprise or are mounted on structural components for pivotal support.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
165, for a plurality of electrical connectors not involving interrelated connectors
- relatively movable during use; mounted on different blades of a hinge; wherein the connectors are electrically connected to each other by a pliable conductor.
- 32 Linear movement:**  
This subclass is indented under subclass 1. Device wherein the two conductors are constructed to allow relative movement therebetween along a prescribed line during use without breaking the electricity transmitting joint therebetween.
- 33 Expansion joint:**  
This subclass is indented under subclass 32. Device wherein the purpose of relative movement between the two conductors is to accommodate relatively small movement of supporting structure brought about by ambient (e.g., temperature) changes.
- SEE OR SEARCH CLASS:  
238, Railways: Surface Track, subclass 14.2 for a detailed rail combined with an electrical connector, and for a pair of aligned rails combined with an electrical connector (e.g., a rail bond).  
403, Joints and Connections, for a structural member which may be a railway rail having no claimed limitation to the railway aspect, combined with an electrical connector (e.g., a rail bond).
- 34 WITH VEHICLE STRUCTURE:**  
This subclass is indented under the class definition. Electrical connector in combination with or specialized for use with a means of conveyance.
- (1) Note. This class does not include the combination of a vehicle draft coupling with an electrical connector, such combination being classified in the appropriate class providing for the particular draft coupling involved.
- (2) Note. A claim directed to an electrical connector combined with a "named" vehicle structure or with only sufficient vehicle structure to be illustrative only will be found in the appropriate subclass in this class providing for the connector without the vehicle. A claimed reference

to two or more vehicles or to two or more members of a single vehicle is considered to be “significant” vehicle structure for classification in this subclass.

**35 Connection to towed vehicle:**

This subclass is indented under subclass 34. Electrical connector for transmitting electrical current between a leading means of conveyance and a second means of conveyance that is pulled thereby.

**36 Connection to lamp:**

This subclass is indented under subclass 34. Electrical connector adapted to transmit electrical current to an illumination device.

**37 WITH WEARING APPAREL:**

This subclass is indented under the class definition. Electrical connector in combination with or specialized for use with clothing, footwear or another element of personal attire.

SEE OR SEARCH CLASS:

- 2, Apparel, for the structure or details of a garment or other device to be worn by mankind to adorn, cover or protect the body or person.
- 36, Boots, Shoes, and Leggings, for miscellaneous footwear, such as boots, shoes, or leggings.
- 174, Electricity: Conductor and Insulators, subclasses 5+ for a device including wearing apparel for protecting a person or animal against electric shock.
- 219, Electric Heating, subclass 211 for apparel or fabric having electric heating means.
- 361, Electricity: Electrical Systems and Devices, subclasses 220+ and 230+ for means for discharging a static charge including footwear combined with means to conduct electricity from or bypass it around the body of a person.
- 362, Illumination, subclasses 103+ for a device for supporting a lamp upon the body of a person, e.g., cap supported.
- 607, Surgery: Light, Thermal, and Electrical Application, subclass 149 for a device similar to apparel having means for applying electricity to the body as in electrotherapy.

**38 WITH MAGNET:**

This subclass is indented under the class definition. Electrical connector combined with means to cause one portion of the device to be drawn toward a member of iron or ironlike composition by magnetic attraction.

- (1) Note. The “magnet” of this subclass may be either a permanent magnet or an electromagnet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 305, for an electrical connector including a latch adapted to be manipulated by a magnet.

SEE OR SEARCH CLASS:

- 362, Illumination, subclass 397 for a lamp combined with a magnet for support thereof.

**39 To urge mating connectors together:**

This subclass is indented under subclass 38. Electric connector wherein the means to cause magnetic attraction is intended to hold the connector in position with respect to a cooperating connector to transmit electricity thereto.

- (1) Note. The connector of this subclass is not necessarily a “coupling part”.

**40 To urge connector to supporting surface:**

This subclass is indented under subclass 38. Electrical connector wherein the means to cause magnetic attraction is intended to hold the connector to another member and hold the connector against the force of gravity.

**41 WITH VACUUM APPLYING MEANS, E.G., SUCTION CUP:**

This subclass is indented under the class definition. Electrical connector combined with means to cause one portion thereof to be drawn toward a member by removal of atmospheric pressure from a surface so that atmospheric pressure on other surfaces urges the portion to move toward the area of reduced atmospheric pressure.

## SEE OR SEARCH CLASS:

362, Illumination, subclass 398 for a lamp combined with a suction cup for support thereof.

**42 To urge mating connectors or contacts together:**

This subclass is indented under subclass 41. Electrical connector wherein removal of atmospheric pressure is intended to hold the connector in position with respect to a cooperating connector to transmit electricity thereto or is intended to hold the electricity transmitting member thereof in engagement with corresponding member of an electrical connector with which this connector mates.

**43 WITH SELECTABLE CIRCUIT, E.G., PLUG BOARD:**

This subclass is indented under the class definition. Electrical connector (a) comprising a member having a first contact connected to a first electrical circuit and having a second contact connected to a second electrical circuit and a second member connected to other circuitry, wherein the second member is intended to be manipulated by and at the will of an operative to make electrical connection with either the first or the second contact of the first member; or (b) comprising a member having first, second and third electrically isolated contacts and second member intended to electrically bridge the first contact with either the second or the third contacts, by and at the will of an operative.

(1) Note. A board, per se, of the type provided for in clause (a) of this definition, i.e., plug board and of the type provided for in clause (b) i.e., a jumper board is included herein, since such a board is not provided for as a subcombination in other areas of this schedule.

(2) Note. This definition requires that the second member be manipulated to make selection; therefore, a member for selectively receiving either a second member for making connection in a first manner (which may or may not be disclosed) or a different second member for making connection in a second manner (which also may or may not be disclosed) is not

included herein. See the Search Notes hereunder especially to subclass 189. Similarly, a removable device to “selectively” transmit when installed or break circuitry when removed is not considered to meet the requirements of this definition; whereas, a repositionable conductor to transmit from a first contact to either a second or a third contact is included herein.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

44, for an electrical connector provided with a plurality of jumperlike devices which may selectively be used or not used to bridge certain groups of contacts.

189, for a removable circuit assembly to “prewire” an electrical device, which may be selectable in that a different assembly may be used. See (1) Note above.

502+, for a flaccid conductor for bridging between a first and a second contact on a board.

507+, for a rigid conductor for bridging between a first and a second contact on a board.

## SEE OR SEARCH CLASS:

200, Electricity: Circuit Makers and Breakers, subclass 46 for a switching device in which a contact is controlled by means of a perforated or embossed sheet, card or strip.

235, Registers, subclasses 487+ for a circuit selecting record, per se, used with a calculator.

361, Electricity: Electrical Systems and Devices, subclass 93.3 for rating plug which allows setting of current rating and or trip specification for electrical system, and subclass 633 for a plug board combined with an electrical system.

**44 Planar circuit overlying a second planar circuit, both adapted to be electrically connected:**

This subclass is indented under subclass 43. Electrical connector wherein the previously arranged circuits comprise at least first and second electrical circuits, each physically posi-

tioned in a generally planar configuration, the circuits to be imposed one above the other and adapted to be electrically connected to each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

65+, for a preformed panel circuit arrangement with provision to conduct electricity from that panel circuit to another.

74+, for superposed panel circuits, generally.

- 45 Connected by transversely inserted pin:**  
This subclass is indented under subclass 44. Electrical connector wherein the structure is such that a rodlike connector passing normally therethrough can be used by an operative to selectively make connection with the circuits therein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

75, for similar structure lacking selectability of circuits.

- 46 Pin having selection feature:**  
This subclass is indented under subclass 45. Electrical connector wherein selection is made by the operative in choice of a particular rodlike connector that is adapted to make electrical connection with certain of the circuitry according to physical characteristics of the rod.
- 47 Panel member having planar surface for supporting circuit and parallel surface for supporting second circuit:**  
This subclass is indented under subclass 45. Electrical connector wherein a first electrical circuit is supported on a first generally flat surface of a rigid sheetlike member and a second electrical circuit is supported on a second generally flat surface of that rigid sheetlike member; wherein the second flat surface is parallel to the first flat surface.
- 48 Linear conductors of first surface; linear, normally disposed, conductors in second circuit:**  
This subclass is indented under subclass 45. Electrical connector including a first planar circuit including a plurality of conductors extending generally in parallel straight lines and a

second planar circuit including a plurality of conductors also extending in parallel straight lines wherein the direction of the conductors of the first circuit is at approximately 90° orientation with respect to those of the second circuit.

- 49 Including three or more contacts adapted to be selectively interconnected:**

This subclass is indented under subclass 43. Electrical connector having at least three contacts\* and provision to allow electrical connection therebetween at the will of the operative.

- (1) Note. A plugboard to be used with a jumper to bridge selected contacts is included herein.

- 50 Panel having planar contact array with mating panel having mating planar contact array:**

This subclass is indented under subclass 49. Electrical connector including at least three contacts positioned on a sheetlike member and at a substantially equal distance from a planar face thereof for electricity transmitting engagement with another sheetlike member also including at least three contacts positioned thereon at a substantially equal distance from a planar face thereof.

- (1) Note. "Selectability" of circuits in this subclass is not necessarily made by mating of the first and second sheetlike members.

- (2) Note. Included herein is a plugboard to be used with a jumper to selectively bridge the contacts; wherein the board is moved to make engagement with a mating board.

- 51 Mounted for controlled movement with respect thereto:**

This subclass is indented under subclass 50. Electrical connector including support structure for the first sheetlike structure and structure to support the second sheetlike structure for movement with respect thereto such that the respective groupings of contacts are to be brought together by movement along a predetermined, regulated path.

**52 Coupling part including repositionable contact:**

This subclass is indented under subclass 43. Electrical connector comprising a coupling part\* including a contact\* or a portion of a contact adapted to be moved to a different, particularly configured, sized, or positioned cooperating connector; wherein the contact or the portion of a contact is adapted to be returned to the original position.

- (1) Note. The purpose of repositioning the contact of this subclass may be to adapt the device for use with mating parts of different configurations without use of an intermediate “adapter”.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 103, for a male coupling part (plug) having a repositionable safety ground prong.  
 171+, for a connector having a repositionable contact for interfitting with variously configured mating parts of particular, assigned configurations, e.g., assigned for a particular voltage or ampere rating.  
 174+, for a connector, generally, having a repositionable contact.

**53 Coupling part with selectably oriented mating part:**

This subclass is indented under subclass 43. Electrical connector including a coupling part\* having a plurality of contacts for use with mating part\* such that a contact thereon can, at the will of the operative, be brought into engagement with different contacts of the mating part, by selection of relative position of the parts while the mating part covers substantially all of the contacts of the coupling part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 218+, for a coupling part intended to engage a mating part (a) of a first or a second configuration, or (b) from a first or a second direction.

**54 Test panel:**

This subclass is indented under subclass 43. Electrical connector including a plurality of accessible contacts intended to be engaged merely by inspection equipment.

**55 PREFORMED PANEL CIRCUIT ARRANGEMENT, E.G., PCB, ICM, DIP, CHIP, WAFER, ETC.:**

This subclass is indented under the class definition. Electrical connector combined with a prefabricated sheetlike part on which circuit elements are replaced and fixed.

- (1) Note. Included herein as a “preformed panel circuit arrangement” is a printed circuit board (PCB), an integrated circuit module (ICM), a dual-in-line package (DIP), an electronic circuitry “chip”, an electronic circuitry “wafer”, etc.

SEE OR SEARCH CLASS:

- 29, Metal Working, particularly subclasses 829+ for conductor or circuit manufacture on an insulative base (e.g., printed circuit, etc.).  
 216, Etching a Substrate: Processes, for combined methods including a chemical etching step in the manufacture of a so-called “printed circuit.”  
 250, Radiant Energy, for similar matter in which significant radio parts or means which coact to tune a circuit or a sub-combination thereof are included.  
 361, Electricity: Electrical Systems and Devices, subclasses 600+ for similar subject matter including a significantly identified inductor or capacitor.  
 427, Coating Processes, subclasses 96.1 through 99.5 for a process of coating a substrate to produce an integrated or printed circuit or circuit board.

**56 Connection to lamp or electron tube:**

This subclass is indented under subclass 55. Electrical connector comprising a coupling part\* particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment excluding vacuum maintaining envelope.

- (1) Note. A lamp or tube socket is included herein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement actuating means in addition to the contact of the socket.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second connector.
- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact

and insulation other than the conductor sheath.

#### 57

##### **Movable about its axis:**

This subclass is indented under subclass 56. Coupling part intended to be brought into interfitting relationship with a mating part\* by movement along its greatest axial extent and by movement about the central axis of the coupling part with respect to the mating part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 332+, for a bayonet coupling part movable about its axis with coupling movement-actuating means or retaining means in addition to contact of coupling part.
- 338+, for a coupling part, generally, movable about its axis with coupling movement-actuating means or retaining means in addition to contact of coupling part.

#### 58

##### **Electron tube moved perpendicularly to panel circuit:**

This subclass is indented under subclass 56. Coupling part particularly adapted to detachably receive and electrically couple with a member including electrical amplifying or switching means utilizing an environment excluding, vacuum maintaining envelope wherein connection is effected by rectilinear movement of the member normally with respect to the sheetlike part.

#### 59

##### **With mating connector which receives panel circuit edge:**

This subclass is indented under subclass 55. Electrical connector combined with a member having a contact surface encased by the walls of an opening therein, which opening is particularly adapted to receive an entire marginal edge of that, or another, sheetlike member and wherein the contact surface of the electrical connector is intended to be engaged by the contact surface of the member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 79+, for panel structure not claimed in combination with the mating connector.



**60      Contacts at different distances from lead panel circuit edge:**

This subclass is indented under subclass 59. Electrical connector wherein the prefabricated sheetlike part includes a generally straight marginal edge first presented as the part moves into mating engagement with the mating connector in which the straight marginal edge is approximately normal to the direction of movement, wherein the sheetlike part includes a contact at a first distance from the straight edge and a second contact at a different distance from that edge.

**61      Receives plural panel circuit edges:**

This subclass is indented under subclass 59. Electrical connector including the first opening particularly adapted to receive an entire marginal edge of that or another sheetlike member and another opening particularly adapted to receive another entire marginal edge of that or another sheetlike member.

**62      Panel mounted connector which receives edge of panel circuit:**

This subclass is indented under subclass 59. Electrical connector wherein the member having an opening for receiving the marginal edge of a sheetlike part is supported on another sheetlike part.

**63      For receiving coaxial connector:**

This subclass is indented under subclass 55. Electrical connector particularly constructed for receipt of an elongated coupling part having a center contact\* and cylindrical contact concentrically disposed thereabout.

**64      With guide for directing panel circuit movement:**

This subclass is indented under subclass 55. Electrical connector combined with means fixed to a base to slidingly confine movement of the sheetlike part along a prescribed path.

- (1) Note. Included herein is a printed circuit board guided by a track into connection with another connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

297, for an electrical connector with a guiding means for receiving a longitudinally moved communications device, e.g., a removable automobile radio, with coupling movement-actuating means or retaining means in addition to contact.

374+, for an electrical connector with a guiding means, effect mating, generally.

752.5, for an insulated connector body with guiding means for an inserted contact.

752.5, for an insulated connector body with guiding means for an inserted contact.

**65      With provision to conduct electricity from panel circuit to another panel circuit:**

This subclass is indented under subclass 55. Electrical connector wherein the preplaced circuit element lies in a first plane, combined with means to transmit electrical current from that circuit element to another circuit element also on a sheetlike part.

- (1) Note. Both circuit elements of this subclass may be on the same panel board, but at different levels.

- (2) Note. The first and second planes of this subclass may be coextensive; e.g., the first and second circuit elements may be positioned side by side so that their respective "planes" are in a common strata.

SEE OR SEARCH THIS CLASS, SUBCLASS:

44+, for superposed panel circuits interconnected selectively an operative.

**66      Conductor is compressible and to be sandwiched between panel circuits:**

This subclass is indented under subclass 65. Electrical connector wherein the electricity transmitting means comprises an assembly of a first contact surface to engage a contact surface of the sheetlike part, includes an intermediate portion intended to transmit electricity, and includes a second contact surface of another sheetlike part; wherein intended to fit between the two circuit elements and to be compressed within its elastic limit by force therefrom and conduct electrical current from one sheetlike part to the other.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 91, for an electrical connector including an elastomeric or nonmetallic conductive portion adapted to be sandwiched between preformed panel circuit arrangements.
- 591, for a coupling part including flexing insulation for use between duplicate coupling parts, e.g., sandwiched between printed circuit boards.
- 67 Flexible panel:**  
This subclass is indented under subclass 65. Electrical connector wherein the sheetlike part is intended to readily bend either within or beyond its elastic limit.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 77, for an electrical connector that is part of a flexible preformed panel circuit, generally.
- 492+, for a flexible flat conductor cable lacking the circuit elements of this subclass.
- 68 Micro panel circuit arrangement, e.g., ICM, DIP, chip, wafer, etc.:**  
This subclass is indented under subclass 65. Electrical connector wherein one of the panel circuit arrangements is a very small member including more than three electrical contacts and an electrical circuit.
- (1) Note. The device of this subclass includes circuitry that is closed as a package in which the circuitry is not readily accessible.
- (2) Note. "Very Small Member" is intended to imply that the circuitry is so small that if it were exposed, its details could not ordinarily be seen by the naked eye.
- 69 Overlying second, coextensive micro panel circuit arrangement:**  
This subclass is indented under subclass 68. Electrical connector combined with a second very small panel circuit arrangement of substantially the same lateral dimension as the first, and parallel thereto.
- 70 Dual inline package (DIP):**  
This subclass is indented under subclass 68. Electrical connector comprising a very small panel circuit arrangement on which circuit elements are preplaced and fixed, including first and second parallel straight rows of three or more contacts on or near each of two opposite marginal extremities.
- (1) Note. The member with which the electrical connector of this subclass is to be used includes circuitry that is integrated as a package in which the circuitry is not readily accessible.
- (2) Note. "Very small panel circuit arrangement", implies that the member is a pre-fabricated sheetlike part on which circuit elements are preplaced and fixed (i.e., a printed circuit) and that circuitry is so small that, if it were exposed, its details could not be seen by the naked eye.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 264, for a coupling part with actuating means urging contact to move laterally with respect to rest of coupling part and toward mating part comprising a contractile receptacle for receiving a dual inline package (DIP).
- 330+, for an electrical connector with coupling movement-actuating means or retaining means in addition to contact of coupling part for receiving a dual inline package (DIP).
- 525, for an electrical connector for a dual inline package (DIP), generally.
- 526, for an aligning means for a dual inline package (DIP).
- 71 Leadless:**  
This subclass is indented under subclass 70. Electrical connector wherein the contacts of the first and second rows are substantially flush with the surface of the device.
- 72 Contacts extending parallel with DIP at contact surface:**  
This subclass is indented under subclass 70. Electrical connector wherein each of the contacts of the device includes a surface for making electrical engagement with the very small

panel circuit arrangement which surface extends generally parallel with the panel of the circuit arrangement.

**73 With external, contact enhancing clamp:**  
This subclass is indented under subclass 70. Electrical connector combined with means outside the panel for movement to urge the contact of that electrical connector toward the contact of the mating part.

**74 Overlying second preformed panel circuit, both adapted to be electrically connected:**  
This subclass is indented under subclass 65. Electrical connector combined with a second prefabricated sheetlike part on which circuit elements are preplaced and fixed, physically positioned above or below the first and adapted to be electrically connected to each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

44+, for similar structure allowing selection of circuits.

**75 Connected by transversely inserted pin:**  
This subclass is indented under subclass 74. Electrical connector wherein the structure is such that a rodlike connector passing normally therethrough is used to make electrical connection of the circuits therein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

45, for similar structure allowing selection of circuits.

**76.1 Within distinct housing spaced from panel circuit arrangement:**  
This subclass is indented under subclass 55. Electrical connector combined with an encasing structure that is clearly distinct from and spaced from the encased, prefabricated, sheetlike part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

892+, for a distant housing, per se, for an electrical connector.

**76.2 Automotive junction box:**  
This subclass is indented under subclass 76.1. Coupling part comprising a container adapted to be secured to a motor vehicle that includes an electrical connector.

(1) Note. The term "automotive" is intended to include any motor vehicle (e.g., a truck, a farm tractor, a boat, an airplane, etc.).

(2) Note. This electrical connector commonly, but not necessarily, comprises a "busbar."

**77 Flexible panel:**  
This subclass is indented under subclass 55. Electrical connector wherein the sheetlike part is intended to readily bend either within or beyond its elastic limit.

SEE OR SEARCH THIS CLASS, SUBCLASS:

67, for a flexible preformed panel circuit arrangement with provision to conduct electrical current to another, superposed panel circuit arrangement.

492, for a flexible flat conductor cable lacking the circuit elements of this subclass.

**78 Distinct contact secured to panel circuit:**  
This subclass is indented under subclass 55. Electrical connector including a contact\* that is distinguishable from the circuitry of the panel and is united to the panel either permanently or detachably.

(1) Note. The contact of this subclass while distinct is considered to be a part of the panel.

(2) Note. Included herein is a panel circuit arrangement having a contact soldered to the circuitry of the panel as a separate member, but a dab of solder added to such a panel is considered to be a coating and not a distinguishable element.

(3) Note. Included herein is a panel circuit arrangement having a contact that is not distinguishable from the circuitry combined with a detachable member for

interfitting with that contact and presenting another contact surface.

**79 Panel circuit adapted to move along panel plane relative to coupling part for insertion of male contact:**

This subclass is indented under subclass 78. Electrical connector to be received by a cavity in a cooperating connector and is configured to be engaged with the cooperating connector by relative movement of the prefabricated sheetlike part with respect to the cooperating connector in a direction parallel to the surface of the sheetlike part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

59+, for panel structure combined with the connector with which the panel mates.

**80 Resilient contact or to receive resilient contact:**

This subclass is indented under subclass 79. Electric connector having a contact\* adapted to yield within its elastic limit for yieldably urging its surface toward a cooperating connector or adapted to interfit with such yieldable contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

816+, for a metallic electrical connector having a spring actuated or resilient securing part.

**81 Resilient contact or to receive resilient contact:**

This subclass is indented under subclass 78. Electrical connector having a contact\* adapted to yield within its elastic limit for yieldably urging its surface toward a cooperating contact or adapted to interfit with such a yieldable contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

816+, for a metallic electrical connector having a spring actuated or resilient securing part.

**82 In or for use in panel circuit aperture:**

This subclass is indented under subclass 81. Electrical connector wherein the yieldable contact is located inside a female portion of the

sheetlike member or is on another member to be received by and yieldably engage a female portion of the sheetlike member.

**83 Contact soldered to panel circuit:**

This subclass is indented under subclass 78. Electrical connector wherein the distinguishable contact is adapted to be or has been permanently attached to the circuitry of the sheetlike member by metallic fusion bonding.

**84 Contact secured to panel circuit by deformation:**

This subclass is indented under subclass 78. Electrical connector wherein the distinguishable contact is adapted to be or has been permanently attached to the circuitry of the sheetlike member by stressing the contact member or the sheetlike member beyond its elastic limit.

**85 Of layers of insulation:**

This subclass is indented under subclass 55. Electrical connector comprising a multiplicity of levels of distinct, nonconducting material.

(1) Note. The layers of insulation may be bonded together. Also coating is considered to be a layer.

**86 INCLUDING ELASTOMERIC OR NON-METALLIC CONDUCTIVE PORTION:**

This subclass is indented under the class definition. Electric connector wherein a component part thereof is intended to transmit electricity, which part is made of material that is a plastic or is other than a metal.

(1) Note. A mixture of an elastomeric material and metallic particles is included herein if the mixture retains the general characteristics of an elastomeric material.

(2) Note. A carbon impregnated string is considered to be a nonmetallic conductor for this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

2, for interrelated electrical connectors relatively movable during use with antivibration mounting.

- 382+, for an electrical connector with vibration clamping or cushioning, generally.
- 586+, for an electrical connector including flexing insulation, generally.
- 87 Rigid carbon conductive member:**  
This subclass is indented under subclass 86. Electrical connector including a physically nonyielding component for conducting electricity comprised at least in part of elemental carbon in the graphite form.
- 88 Inductive shielding or arc suppressing means:**  
This subclass is indented under subclass 86. Electrical connector adapted to prevent passage of inductive current therethrough or having means to inhibit electrical discharge in the vicinity of the electrical joint forming means.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 181+, for an electrical connector having arc suppressing or extinguishing means, generally.
- 607.01, through 607.59, for an electrical connector having an inductive or capacitive shield, generally.
- 89 Sealing with coupled connector:**  
This subclass is indented under subclass 88. Electrical connector wherein the elastomeric or nonmetallic conductive portion is provided to fit between a face of the device and a corresponding face of a mating part\* to securely close off the faces and interior of the mated assembly from moisture, dust, or other foreign matter.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 190+, for sealing means used with an electrical connector with means for retaining or having a passageway for fluent material.
- 230, for a coupling part to receive a fluorescent or neon lamp having sealing element or material for cooperation with a coupled lamp.
- 271, for an electrical connector with a sealing element or material for cooperation with a coupled connector, generally.
- 283, for the sealed interfitting of coupled connector part housings.
- 527+, for a wall, plate or panel mounting or attaching means with a connector part sealed thereto.
- 586+, for a connector having a contact carried by flexing or resilient insulation and having a sealing joint between coupled parts.
- 604, for a connector with an external cable or conductor embedded in insulative sealing material.
- SEE OR SEARCH CLASS:
- 277, Seal for a Joint or Juncture, for a generic sealing means or process, cross-reference art collection 920 for a seal including an electromagnetic shielding feature.
- 90 Between parallel conductors:**  
This subclass is indented under subclass 88. Electrical connector wherein the electricity conducting plastic or nonmetal is physically located between a pair of spaced electricity conducting members extending in the same direction.
- 91 Adapted to be sandwiched between preformed panel circuit arrangements:**  
This subclass is indented under subclass 86. Electrical connector wherein the conductive member of plastic or other than metallic material is to be used between a first and a second sheetlike part on which circuit arrangements are preplaced and fixed.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 66, for a preformed panel circuit arrangement with provision to sandwich a connector between it and a superposed second preformed panel circuit arrangement.
- 591, for a coupling part including flexing insulation for use between duplicate coupling parts, e.g., sandwich between printed circuit boards.
- 92 WITH CIRCUIT CONDUCTORS AND SAFETY GROUNDING PROVISION:**  
This subclass is indented under the class definition. Electrical connector combined with a electricity transmitting member for supply of

electrical current, a second electricity transmitting member for return of that electrical current (i.e., a return ground) and with additional, distinct, particular provision to electrically connect a portion thereof to the earth, in addition to or other than the provision of an electromagnetic or electrostatic shielding ground.

- (1) Note. This subclass is to provide for any electrical connector including a grounding provision, except (a) one providing for a return path to earth of electricity that has been transmitted to an appliance that has utilized the electricity passing therethrough or (b) one purely for shielding the effect of electromagnetic or electrostatic radiation. Such provision may be called a "return", "common", "neutral", etc. ground. In the event of doubt of whether or not the provision is an "earth" ground or a "return" ground, the device is to be found in this and the indented subclasses.
- (2) Note. In the transmission of low voltage electricity, it is not unusual to utilize the framework of structure to serve as a return for electricity. Such a return path is not considered to be a "common" or "return" ground. Terminology that may be indicative of structure including a ground that is not a safety ground includes: "tube socket", "transistor", "chassis", "electronic", "radio circuitry", "electrical shield", etc.
- (3) Note. A connector for a two-wire, 120v. a.c. residential electrical supply system including an insulated "hot" wire (black) and insulated "ground" wire (white) is not included herein because the white wire is considered to be an electricity return, even though the white line is connected to earth at some point. A connector for a three-wire 120v. a.c. electrical supply system wherein the third wire comprises a "bond" wire is included herein because the third wire is a safety ground not intended to serve as an electricity return.
- (4) Note. A connector for a three-wire 240v. a.c. residential electrical supply system including two "hot" wires and a single

ground wire is excluded from this subclass if the ground is insulated (therefore considered to be a ground that is not an electricity return).

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 126, for an electrical connector having a spark or glow plug cover with inductive shielding with a grounding provision.
- 578+, for an electrical connector combined with a coaxial cable having provision to ground the shielding or return ground sheath thereof.
- 607.08, through 607.28, for an electrical connector having or providing inductive or capacitive shielding, including means for grounding the shield.
- 677+, for a polarized plural contact coupling part wherein one contact may be for "safety" grounding, but is not claimed as the combination of elements required for this subclass.
- 799+, for a circumferentially tensioned flexible strap or band which may be for "safety" grounding, but is not claimed as the combination of elements required for this subclass.

**93 And means to block access to power contact surface:**

This subclass is indented under subclass 92. Electrical connector combined with (a) means to physically block the contact surface\* thereof from electricity transmitting engagement with the contact surface of a cooperating connector; or, (b) a connector enclosing member having a portion intended to remain attached to the remainder of the enclosing member but repositionable to alternatively cover a contact surface or permit access to that contact surface.

- (1) Note. The contact preventer of this subclass (clause a) includes any structure which, by disclosure, is intended to be used for that function and also any structure which is of like configuration but lacks specific disclosure of being a contact preventer; e.g., a plastic shell intended to cover and protect the pins of an electron tube is included herein.

- (2) Note. The retractable cover part of this subclass (clause b) is in addition to the electrical connector. Also the retractable cover part may, but is not required to, prevent making of electrical contact.
- (3) Note. In this subclass, access is usually prevented to provide safety. The blocking means may be moved out to blocking position by insertion of the ground prong.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 133+, for a lock to prevent unauthorized use of a connector combined with contact preventing structure or a retractable cover.
- 135+, for an electrical connector combined with a contact preventer or retractable cover part, generally.
- 892+, for a distinct connector cover, generally.

**94 Uninterrupted support rail or contact, or for interfitting with uninterrupted support rail or contact:**

This subclass is indented under subclass 92. Electrical connector including (a) an elongated member for supporting another connector such that the supported structure may be located at any of an infinite number of locations along the elongated member; or (b) an elongated member housing an elongated contact member such that the contact can accept a mating connector at any of an infinite number of locations along its length; or intended to cooperate with such a member.

- (1) Note. Under clause (a) of this definition, a device is included if the track (elongated supporting member) does not house an electrical connector, rather an electrical connection may be made by use of a flexible conductor extended to a fixed electrical connector.
- (2) Note. Under clause (b) of this definition, the elongated housing may be constructed to limit access to the elongated contact to only a restricted location. This is to allow placement of similar art in this subclass even though limited use

has been placed on the device by application of a restricting cover plate. Also, if not provided for elsewhere, a contact, per se, for engagement with a mating connector at any of an infinite number of locations along its length is included herein.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 110+, for an electrical connector including an uninterrupted support rail or interrupted contact, generally.
- 121+, for an electrical connector for interfitting with an uninterrupted support rail or contact, generally.

**95 Grounding to connector container or housing:**

This subclass is indented under subclass 92. Electrical connector wherein the contact is encased in a vessel, combined with provision to transmit electricity to the vessel.

- (1) Note. For placement herein, it is not necessary that the vessel be positively claimed.
- (2) Note. The vessel may comprise a component part of the connector for encasing the remainder thereof.

**96 Pliable conductor for making grounding connection of connector to container:**

This subclass is indented under subclass 95. Electrical connector including an assembly within the vessel, wherein the provision to transmit electricity to the vessel comprises a flexible strand or web extending from the assembly to the vessel.

- (1) Note. The "assembly" of this subclass may comprise a receptacle\*, a switch (by name only), a lamp, etc.

**97 By means of connector mounting screw:**

This subclass is indented under subclass 95. Electrical connector including an assembly within the vessel wherein the provision to transmit electricity to the vessel comprises means adapted to securely engaged by a helically ribbed member adapted to hold the assembly and vessel together.

**98 Grounding to conductive sheath of cable:**

This subclass is indented under subclass 92. Electrical connector for use with a cable\* including a flexible conductor and a protective wrapper, which wrapper is conductive of electricity; which connector is particularly adapted to be secured to the surface of the protective wrapper and provide earth grounding of the wrapper.

- (1) Note. Grounding the outer conductor of a coaxial cable is included herein even if there is an additional wrapper about the cable.

**99 Portion of connector beneath conductive sheath:**

This subclass is indented under subclass 98. Electrical connector wherein a position of the structure including an electricity transmitting contact surface is positioned to be encased at least partially by the protective wrapper.

**100 Grounding to pipe, rod, or conduit:**

This subclass is indented under subclass 92. Electrical connector particularly adapted to be secured to a concave or convex surface of a cylindrical member of either hollow or solid cross-section wherein the member is not one that would be considered to be a "wire", or to a "second electricity transmitting member" comprising a sheath about a wire or cable as a part of the supply and return of electrical current.

- (1) Note. The "wire" of this definition is a metallic strandlike member intended to be generally flexible and to conduct electrical current.

SEE OR SEARCH THIS CLASS, SUBCLASS:

208, for a conduit or duct with a grounding cable passing therethrough electrically bonded thereto; wherein there is not electrical circuit; e.g., a ground line from a water line passing through a conduit.

799+, for a circumferentially tensioned flexible strap or band which may be for "safety" grounding, but is not claimed as the combination of elements required for this subclass.

**101 Direct grounding of coupling part member passing into aperture:**

This subclass is indented under subclass 92. Electrical connector comprising a coupling part\* having a contact\* that is part of the second electricity transmitting member, and is intended to enter into an opening in the mating part and be electrically connected to earth.

SEE OR SEARCH THIS CLASS, SUBCLASS:

677+, for a polarized plural contact coupling part wherein one contact may be for "safety" grounding but is not claimed as the combination of elements required for this subclass.

**102 Prong having locking provision, e.g., bayonet:**

This subclass is indented under subclass 101. Electrical connector including a male contact member having physical configuration to secure the connector to a mating connector adapted to receive the male member.

**103 Movable or removable ground prong:**

This subclass is indented under subclass 101. Electrical connector including a male contact\* adapted to enter a receptacle and make electrical connection to earth ground, which male contact is constructed to be (a) operationally repositioned with respect to the remainder of the connector or, (b) withdrawn from operational position.

- (1) Note. The purpose of repositioning the contact of this subclass may be to adapt the connector for use with mating parts of different configurations without use of an intermediate "adapter".

SEE OR SEARCH THIS CLASS, SUBCLASS:

52, for a coupling part having a repositionable contact to allow an operative to select different circuitry.

171+, for a connector having a repositionable contact for interfitting with variously configured mating parts of particular, assigned configurations, e.g., assigned for a particular voltage or ampere rating.



174, for a connector, generally, having a repositionable contact.

**104 Pivotal or rotatable about transverse axis:**  
This subclass is indented under subclass 103. Electrical connector wherein the male contact member is constructed to be repositioned or withdrawn by movement about a pivot with respect to the device, wherein the pivot is normal to the extent of the member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

172, for a coupling part including a contact repositionable to a nonuse position so that the coupling part can interfit with a different mating part.

**105 Adapter:**  
This subclass is indented under subclass 101. Electrical connector including (a) a first coupling part for mating with a first mating part and including integrally therewith a second coupling part for mating with a second mating part to thereby connect together the first and second parts, wherein the first and second mating parts could not be interconnected directly; (b) a first coupling part for mating with a first mating part and including integrally therewith a plurality of second coupling parts similar in configuration to the first mating part, for mating with plural other mating parts to provide multiple access to the first mating part; or (c) a first coupling part for mating with a first mating part and including integrally therewith a second coupling part similar in configuration to the first mating part to effectively reposition the second mating part from the location of the first mating part if it were interfitted therewith.

(1) Note. The coupling part of clause (a) allows a coupling part to be electrically connected to a physically noninterfitting mating part; the coupling part of clause (b) allows plural mating parts to be electrically connected to a single coupling part; and the coupling part of clause (c) effectively repositions a mating part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

119, for an uninterrupted support rail or interrupted contact with an adapter.

124, for a candle-simulation-type electrical connector comprising an adapter.

236, for an adapter to receive a fluorescent or neon lamp.

300, for an adapter retained in connection with a mating part by the presence of a distinct coupling part.

323, for an adapter with coupling part retaining means in addition to the contact comprising a movable threaded ring.

365, for an adapter with coupling retaining means in addition to the contact comprising a helically threaded member.

638+, for a member comprising two or more plural contact coupling parts with insulation other than a conductor sheath.

**106 Three-prong coupling part including ground prong, or receptacle:**

This subclass is indented under subclass 101. Electrical connector comprising a coupling part\* including more than two contacts\* each intended to enter an opening in the mating part, or comprising such as mating part; wherein one of the contacts is a safety grounding device.

**107 Duplex receptacle:**

This subclass is indented under subclass 106. Electrical connector comprising a member for receiving a mating part having more than two prong contacts at first location and for receiving a second mating part of like configuration to the first.

(1) Note. The connector of this subclass is known by the name of this subclass title in the home building trade.

**108 Grounding of coupling part:**

This subclass is indented under subclass 92. Electrical connector comprising a coupling part\*.

**109 INTERMEDIATE MEMBER BETWEEN PRONG AND ENCOMPASSING PLATE GROUND:**

This subclass is indented under the class definition. Electrical connector comprising a conductor adapted to serve as return ground transmitting member between a male contact and a plate having an opening therethrough for receipt of the male contact; wherein the device

is adapted to fit physically between the male contact and the opening in the plate through which the contact penetrates and make electrical connection with the male contact and with the plate.

- (1) Note. See the discussion of “safety grounding” under subclass 92.

#### **110 UNINTERRUPTED SUPPORT RAIL OR UNINTERRUPTED CONTACT:**

This subclass is indented under the class definition. Electrical connector including (a) an elongated member for supporting another connector such that the supported structure may be located at any of an infinite number of locations along the elongated member; or (b) an elongated member housing an elongated contact member such that the contact can accept a mating connector at any of an infinite number of locations along its length.

- (1) Note. Under clause (a) of this definition, a device is included if the track (elongated supporting member) does not house an electrical connector, rather an electrical connection may be made by use of a flexible conductor extended to a fixed electrical connector.
- (2) Note. Under clause (b) of this definition, the elongated housing may be constructed to limit access to the elongated contact to only a restricted location. This is to allow placement of similar art in this subclass even though limited use has been placed on the device by application of a restricting cover plate. Also, if not provided for elsewhere, a contact, per se, for engagement with a mating connector at any of an infinite number of locations along its length is included herein. An accessible, pliant, conducting wire within a housing is not considered to be an elongated contact under this definition.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 94, for an uninterrupted support rail or contact or a connector for interfitting with an uninterrupted rail or contact with safety grounding.

121+, for an electrical connector for interfitting with an uninterrupted support rail or contact, generally.

207+, for an electrical connector combined with a distinct structure for encasing a pliant conducting wire including a device wherein the wire is “accessible” at an infinite number of locations along its length.

#### **111 Arcuate, bendable, or pliant rail or contact:**

This subclass is indented under subclass 110. Electrical connector wherein the elongated member is constructed to allow support or acceptance of the supported connector or the mating connector at an infinite number of locations along a curved way, or along a way which may be made permanently or temporarily curved.

#### **112 Circular rail or contact:**

This subclass is indented under subclass 11. Electrical connector wherein the curved way extends equidistant about a center 360°.

#### **113 With access restricting cover:**

This subclass is indented under subclass 110. Electrical connector including or combined with a member overlaying the elongated member such that the supported or mating connector can utilize only a limited extent of the device.

#### **114 Bus duct:**

This subclass is indented under subclass 113. Electrical connector comprising an elongated, rigid metallic housing of reasonably uniform cross-section, and a plurality of rigid metallic contacts (i.e., buses) extending therealong and spaced therefrom.

- (1) Note. “Bus duct” is an art term.

- (2) Note. A second housing of reasonable uniform cross-section connected at its end with the first housing is not considered to be “distinct from the first and such a combination is included herein”.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 207+, for an electrical connector combined with a distinct conductor encasing housing.

- 212+, for a bus duct including an electrical connector, generally.
- the uninterrupted contact is included herein.
- 115 With means to join tandem rails or tandem contacts:**  
This subclass is indented under subclass 110. Electrical connector including provision to unite the elongated member to another such member at the respective ends thereof.
- 116 With coupling movement-actuating means or retaining means in addition to contact of coupling part:**  
This subclass is indented under subclass 110. Electrical connector comprising a coupling part\* having (a) separate means to forcibly bring together into mating relation the interfitting or matching parts of the coupling part and a mating part\* interfitting therewith, or (b) means separate from the current carrying components of the coupling part and a mating part to maintain the interengagement of such parts operable independently of or in addition to the coupling motion.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 144, for an electrical connector having a contact preventer or retractable cover part that is movable about an axis, combined with retaining means.
- 296+, for an electrical connector with coupling movement-actuating or retaining means in addition to contact of coupling part.
- 117 Uninterrupted contact accessible by mating contact moving in a first, then a lateral direction:**  
This subclass is indented under subclass 116. Electric connector particularly adapted to receive a mating connector by movement of the mating connector in a first coupling direction and then by movement of at least the contact portion of the mating connector in a direction at right angles to the first direction.
- (1) Note. Included herein are devices adapted to receive a mating part by a pivotal or "bayonet" engagement.
- (2) Note. A "push-pull" mating part wherein the prong thereof is directed to move along an arcuate path to engage
- 118 Bayonet coupling part movable about axis:**  
This subclass is indented under subclass 117. Electrical connector intended to be brought into interfitting relationship with a mating part\* by a first movement along its greatest axial extent and then by a movement about the central axis of the coupling part with respect to the mating part.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 57, for a preformed panel circuit arrangement included a receptacle for a lamp or electron tube with connection effected by movement of the lamp or tube about its axis.
- 314+, for a coupling part with a retaining bayonet that is a relatively pivotable concentric movement-actuating or retaining ring.
- 332+, for a bayonet coupling part with coupling movement-actuating means or retaining means in addition to the contact of the coupling part.
- 119 With mating part having mating connector portion and another connector portion electrically connected thereto; e.g., adapter:**  
This subclass is indented under subclass 110. Electrical connector combined with structure that mates therewith, wherein the mating structure includes a first part including an electrical contact for engagement with the device, an electrical contact for engagement with another coupling part, and an electricity conductive part for transmitting electrical current via the two contacts from the device to the other coupling part.
- (1) Note. This subclass includes the combination of an uninterrupted support rail or contact with an "adapter".
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 105, for an adapter with safety grounding.
- 124, for a candle-simulation-type electrical connector comprising an adapter.
- 236, for an adapter to receive a fluorescent or neon lamp.

- 300, for an adapter retained in connection with a mating part by the presence of a distinct coupling part.
- 323, for an adapter with coupling part retaining means in addition to the contact comprising a movable threaded ring.
- 365, for an adapter with coupling retaining means in addition to the contact comprising a helically threaded member.
- 638+, for a member comprising two or more plural contact coupling parts with insulation other than a conductor sheath.

**120 Molding type; e.g., baseboard:**

This subclass is indented under subclass 110. Electrical connector including a housing thereabout, wherein the housing is to be mounted on an otherwise finished product, is of decorative value, and accordingly serves as a trim as well as an electrical service means.

- (1) Note. The finished product of this subclass may be a building wall or an exterior panel of a vehicle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 209, for a molding-type conduit or duct.
- 216, for a coupling part of indeterminate lateral length of the molding type.

**121 FOR INTERFITTING WITH UNINTERRUPTED SUPPORT RAIL OR UNINTERRUPTED CONTACT:**

This subclass is indented under the class definition. Electrical connector intended to cooperate with (a) an elongated member supporting the device such that the device may be located at any of an infinite number of locations along the elongated member; or (b) an elongated member housing an elongated contact member such that the contact can accept the device at any of an infinite number of locations along its length.

- (1) Note. See the notes under subclass 110 for descriptions of the member with which the device of this subclass cooperates.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 94, for an uninterrupted support rail or contact or a connector for interfitting with an uninterrupted support rail or contact with safety grounding.
- 110+, for an electrical connector including an uninterrupted support rail or uninterrupted contact, generally.

**122 Coupling part with actuating means urging contact surface to move with respect to rest of connector and toward mating contact:**

This subclass is indented under subclass 121. Electrical connector comprising a coupling part\* including means to exert pressure on a contact thereof tending to move that contact with respect to other portions of the connector to cause it to make engagement with a contact of a mating part\*.

- (1) Note. The “means to urge” of this subclass is part of the device, such as a cam or wedge, rather than a spring, a gravity utilizing device, or a handle with no force modifying linkage. Note further that it is not necessary that the contact actually move.
- (2) Note. Included herein is a “zero insertion withdrawal force” connector in which that connector is brought into position with the mating part and subsequently the contacts are caused to move into engagement with each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 259+, for a coupling part with actuating means urging contact surface to move with respect to rest of connector and toward mating part, generally.

**123 CANDLE SIMULATION TYPE:**

This subclass is indented under the class definition. Electrical connector comprising means to receive and electrically connect to an illumination lamp, which device is shaped or arranged so that when combined with said lamp it has the appearance of a candle.

## SEE OR SEARCH CLASS:

- 200, Electricity: Circuit Makers and Breakers, subclass 51.01 for such a device combined with a switch or capable of functioning as a switch.
- 362, Illumination, for such device in combination with a light modifying or distributing means, especially subclass 810 for a cross-reference art collection to imitation candles.

**124 Adapter:**

This subclass is indented under subclass 123. Electrical connector comprising a coupling part\* (a) for mating with a first mating part and including integrally therewith a second coupling part for mating with a second mating part to thereby connect together the first and second mating parts, wherein the first and second mating parts could both be interconnected directly; (b) for mating with a first mating part, and including integrally therewith a plurality of second in configuration to the first mating parts for mating with plural other mating parts to provide multiple access to the first mating part; or (c) for mating with a first mating part and including integrally therewith a second coupling part similar in configuration to the first mating part to effectively reposition the second mating part from the location of the first mating part if it were interfitted therewith.

- (1) Note. The coupling part of clause (a) allows a coupling part to be electrically connected to a physically noninterfitting mating part; the coupling part of clause (b) allows plural mating parts to be electrically connected to a single coupling part; and the coupling part of clause (c) effectively repositions a mating part.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 105, for an adapter with safety grounding.
- 119, for an uninterrupted support rail or uninterrupted contact with an adapter.
- 236, for an adapter to receive a fluorescent or neon lamp.
- 300, for an adapter retained in connection with a mating part by the presence of a distinct coupling part.
- 323, for an adapter with coupling part retaining means in addition to the con-

tact comprising a movable threaded ring.

- 365, for an adapter with coupling retaining means in addition to the contact comprising a helically threaded member.
- 638+, for a member comprising two or more plural contact coupling parts with insulation other than a conductor sheath.

**125 HAVING SPARK OR GLOW PLUG COVER:**

This subclass is indented under the class definition. Electrical connector comprising a connector at the terminal end of an integral combustion engine igniter including encasing structure to prevent or control passage of radiated electrical energy, to insulate against conduction of electrical current away from the terminal end of the igniter, to prevent corrosion, or to prevent passage of moisture.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 92+, for an electrical connector, generally, having an encasing member that is grounded to provide electrical safety.
- 521+, for a contact cover or case to protect a contact from the environment.
- 607.01, through 607.59, for a shielded electrical connector not peculiar to a spark plug.

## SEE OR SEARCH CLASS:

- 174, Electricity: Conductors and Insulators, subclasses 152+ for a spark plug and bushing (insulator). (Claimed sparking electrodes go beyond Class 174).
- 313, Electric Lamp and Discharge Devices, subclasses 118+ for spark plug, generally; and particularly subclass 134 for a spark plug with radio shielding and subclass 137 for a spark plug with plural part insulation means.

**126 Inductive shielding; e.g., radio disturbance:**

This subclass is indented under subclass 125. Electrical connector intended to restrict radiation of electrical waves away from the connector or igniter.

- (1) Note. Inductive shielding is usually accomplished by concentrically encir-

cling an electrical wave emitter with a conductive sleeve and grounding that sleeve.

**127 With distinct securing means:**  
This subclass is indented under subclass 125. Electrical connector combined with additional structure to hold the encasing structure in a selected position.

**128 Having removable closure:**  
This subclass is indented under subclass 125. Electrical connector wherein the encasing structure is provided with an openable cover providing access to the interior thereof.

**129 MAGNETO POST TYPE:**  
This subclass is indented under the class definition. Electrical connector generally including a spring urged or other resiliently mounted contact for leading off the charge induced in a permanent magnet alternator.

**SEE OR SEARCH CLASS:**

310, Electrical Generator or Motor Structure, subclass 249 for an electrical connector intended to slidingly engage and transmit electrical current to the moving parts of an electromotive device and for the combination of such a connector with an electrical connector of this class.

**130 MULTICONTACT INTERNAL COMBUSTION ENGINE DISTRIBUTOR CAP OR MULTICONTACT MATING PART:**

This subclass is indented under the class definition. Electrical connector having a plurality of contacts\* each to be detachably connected to a high tension spark plug conductor in a multicylinder ignition engine wherein the device is to be used with a selector means to sequentially direct electrical current to each of the spark plugs; or comprising a connector including a plurality of distinct contacts for use with such a device.

(1) Note. A distributor cap may be referred to as a "timer".

**131 CONNECTOR MOVABLE BETWEEN ACCESSIBLE AND INACCESSIBLE POSITIONS:**

This subclass is indented under the class definition. Electrical connector relocatable between a first location in which electrical connection can be made and a second location in which electrical connection is physically blocked.

(1) Note. In order for the device to be moved to the second position, electrical connection must be broken.

**132 With fluid pressure operating or control means:**

This subclass is indented under subclass 131. Electrical connector combined with means to move or regulate the movement of the device utilizing hydraulic or vacuum effort.

**133 WITH UNAUTHORIZED CONNECTION PREVENTER, E.G., KEY OR COMBINATION LOCK:**

This subclass is indented under the class definition. Electrical connector having provision to physically block electrical connection of the device except by utilization of a specially designed implement or by special manipulation of a component thereof to permit such connection.

(1) Note. Included herein is a locking device requiring use of a key, a combination lock, or other device requiring use of an uncommon tool to permit coupling. Also included herein is a device requiring presence of a particular sound (e.g., voice command) or a particular anatomical feature (e.g., a particular fingerprint).

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

93, for an electrical connector including provision for safety grounding combined with a contact preventer or retractable cover part.

135+, for an electrical connector combined with a contact preventer or retractable cover part, generally.

304+, for locking structure to prevent uncoupling of coupled connectors.

892+, for a distinct connector cover, generally.

**134 Prong cover:**

This subclass is indented under subclass 133. Electrical connector including an outwardly extending male contact having a contact-surface\* and including means to fit over the contact to prevent normal electrical conduction from the contact-surface\* to the contact surface of a cooperating connector.

**135 WITH CONTACT PREVENTER OR RETRACTABLE COVER PART:**

This subclass is indented under the class definition. Electrical connector combined with (a) means to physically block the contact-surface\* of the device from electricity transmitting engagement with the contact-surface of a cooperating connector; or (b) a connector enclosing member having a portion intended to remain attached to the remainder of the connector but repositionable to alternatively cover a contact-surface or permit access to that contact-surface.

- (1) The contact preventer of this subclass (clause a) includes any structure which, by disclosure, is intended to be used for that function. Also any structure which is of like configuration but lacks specific disclosure of intent to cover and protect the plane of electron tube is included herein (specifically, in subclass 150) intended hereunder.
- (2) Note. The retractable cover part of this subclass (clause b) is in addition to the electrical connector. Also the retractable cover part may, but is not required to, prevent making of electrical contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 93, for an electrical connector including provision for safety grounding combined with a contact preventer or retractable cover part.
- 133+, for a lock to prevent unauthorized use of a connector combined with contact preventing structure or a retractable cover.
- 892+, for a distinct connector cover, generally.

**136 Movably mounted:**

This subclass is indented under subclass 135. Electrical connector including (a) means to physically block the contact-surface comprising a member repositionable with respect to the remainder of the device from a position blocking the contact-surface to a position not blocking the contact-surface; or (b) a connector enclosing member having a portion intended to remain attached to the remainder of the enclosing member but repositionable to that contact-surface.

- (1) Note. A compressible sleeve about a contact is considered to be movably mounted for this and the indented subclasses.

**137 Moved by mating connector:**

This subclass is indented under subclass 136. Electrical connector wherein the repositionable member is displaced by a surface of a connector interfitting therewith.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 93+, for an electrical connector including movable means to cover an electrical contact, which means is adapted to be moved by receipt of the ground prong of a cooperating connector.

**138 Moved about an axis:**

This subclass is indented under subclass 137. Electrical connector wherein the repositionable member is restricted to move about a fixed line with respect to the remainder of the device.

**139 Connector moved rectilinearly for engagement, preventer or cover moved about axis parallel to direction of connector movement:**

This subclass is indented under subclass 138. Electrical connector intended to move in a straight path to make electrical connection with a cooperating connector, wherein the repositionable member is restricted to move with respect to the remainder of the device about a fixed line extending in the direction of with straight path.

- (1) Note. The helical movement of a screw threaded connector is not considered to be "rectilinear" for this subclass.

**140 Connector moved rectilinearly for engagement, preventer or cover moved rectilinearly and parallel thereto:**

This subclass is indented under subclass 137. Electrical connector intended to move in a straight path to make electrical connection with a cooperating connector, wherein the repositionable member is restricted to move with respect to the remainder of the electrical connector in a straight path parallel to the electrical connection path.

**141 Retractable sheath:**

This subclass is indented under subclass 140. Electrical connector wherein the repositionable member is generally cylindrical and encircles the contact-surface and wherein it is moved with respect to the remainder of the electrical connector along its cylindrical axis.

**142 Movable about axis:**

This subclass is indented under subclass 136. Electrical connector wherein the repositionable member is restricted to move about a fixed line with respect to the remainder of the device.

**143 To misalign aperture with contact:**

This subclass is indented under subclass 142. Electrical connector comprising means to cover the contact\* while leaving an opening providing direct access to that contact wherein that means is movable so as to reposition that opening out of a position that allows such access.

**144 With connector retaining means in addition to contact of connector:**

This subclass is indented under subclass 142. Electrical connector having means separate from the current carrying components of the connector and a mating part to maintain interengagement of such parts operable independently of or in addition to the connecting motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

147, for an electrical connector with a contact preventer or retractable cover part with connector retaining means in addition to the contact thereof.

292+, for an electrical connector adapted to cooperate with a duplicate electrical

connector with connector retaining means in addition to the contact thereof.

310+, for a coupling part with coupling movement retaining means in addition to the contact thereof, with distinct movement-actuating means to move the coupling part axially.

345+, for an electrical connector with coupling retaining means in addition to the contact thereof, generally.

**145 Movable to misalign aperture with contact:**

This subclass is indented under subclass 136. Electrical connector comprising means to cover the contact\* while leaving an opening providing direct access to that contact wherein that means is movable so as to reposition that opening out of a position that allows such access.

**146 Adapted to fit between contacts of first and second coupled connectors (e.g., power measuring meter):**

This subclass is indented under subclass 135. Electric connector comprising means to prevent engagement of a contact\* with a mating contact by being physically positioned to hold the contacts apart with the connectors in position such that the contacts would normally function.

(1) Note. Device of the type normally found in this subclass may be used with a power measuring meter to prevent use of power and still allow the meter to physically remain in position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

167, for an electrical connector convertible by internal change to selectively cooperate with a different contact, comprising a connector for a power measuring meter.

508, for jumper adapted to be used with a power measuring meter.

517, for power measuring meter coupling part, generally.



**147 With connector retaining means in addition to contact of connector:**

This subclass is indented under subclass 135. Electrical connector having means separate from the current carrying components of the connector and mating part to maintain interengagement of such parts operable independently of or in addition to the connection.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 144, for an electrical connector with a contact preventer or retractable cover part movable about an axis with connector retaining means in addition to the contact thereof.
- 292+, for an electrical connector adapter to cooperate with a duplicate electrical connector with connector retaining means in addition to the contact thereof.
- 310+, for a coupling part with coupling movement retaining means in addition to the contact thereof, with distinct movement-actuating means to move the coupling part axially.
- 345+, for an electrical connector with coupling retaining means in addition to the contact thereof, generally.

**148 Dummy connector:**

This subclass is indented under subclass 135. Device comprising a member adapted to couple with an electrical connector, but failing to conduct electrical current with respect thereto.

- (1) Note. A device to be inserted into a wall outlet to prevent tampering, e.g., by a child, is to be found in this subclass.
- (2) Note. A dummy connector, per se, even though not meeting the requirements of this class (e.g., not having a contact\*) is included among the patents of this subclass.

**149 Prong cover:**

This subclass is indented under subclass 135. Electrical connector adapted to be used with a male-type connector and adapted to enclose only the protruding contact.

**150 Protector for electron tube pin:**

This subclass is indented under subclass 149. Electrical connector adapted to physically shield the male contact of a member including electrical amplifying or switching means utilizing an environment excluding vacuum maintaining envelope.

**151 COUPLING PART COMBINED WITH MEANS TO ALLOW REPOSITIONING OF MATING PART FOR ENGAGEMENT WITH DIFFERENT CONTACTS ON MATING PART, E.G., FLASH CUBE:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* intended to mate with a mating part\* in a first relative position mating with a first contact of the mating part and in a second relative position mating with a second contact of the mating part.

- (1) Note. The device of this subclass allows selection of more than one circuitry of the mating part, such as is used in a photo flash device which, when in a first position actuates a first illumination portion and when in a second position actuates a second illumination portion.

**152 WITH COUPLING SEPARATOR:**

This subclass is indented under the class definition. Electrical connector combined with means in addition to any coupling means and any conductors electrically connected thereby, acting either in conjunction with or independently with those components of the device to forcibly uncouple the connector both physically and electrically from a mating connector.

- (1) Note. Structure utilizing the force of an explosive device to separate one electrical connector from another is included herein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 180, for an electrical connector having means for causing the contacts to separate from a mating member by a snap action, wherein such means does not cause separation of the connector assembly from a mating connector assembly.

- 266+, for a coupling part with plug prong deflecting or socket spreading, means to permit uncoupling where such means does not cause separation of the coupled parts.
- 296+, for an electrical connector with coupling movement actuating means, generally.
- 153 Including retainer or joiner:**  
This subclass is indented under subclass 152. Electrical connector also (a) including means to positively (i.e., more than frictional drag) hold the device in coupled relationship with respect to the mating connector or (b) combined with means to bring the connector into coupled relationship with a mating connector.
- 154 Destructible retainer:**  
This subclass is indented under subclass 153. Electrical connector including means to secure it to a cooperating connector wherein the means is intended to be altered when permitting separation of the connector from a mating connector such that the means is no longer functional as a securing member.
- 155 Distinct from separator:**  
This subclass is indented under subclass 153. Electrical connector wherein the means to secure the connector or to bring into mating cooperation is physically separate from the means to forcibly uncouple the device.
- 156 Coaxial contacts, center one comprising separator, e.g., photo flash:**  
This subclass is indented under subclass 155. Electrical connector including a first contact at the center of the connection and a second contact concentric thereabout wherein the first contact is movable with respect to the remainder of the connector and is to force the connector out of engagement with the mating connector.
- 157 Integral retainer and cam separator:**  
This subclass is indented under subclass 153. Electrical connector wherein the means to forcibly uncouple the connector turns about an axis and also serves as the means to positively hold the device in coupled relationship.
- 158 Means to utilize direct fluid action:**  
This subclass is indented under subclass 152. Electric connector wherein a liquid or gaseous medium is directed against the device or against the cooperating connector to forcibly uncouple the device.
- 159 Nonconducting pusher:**  
This subclass is indented under subclass 152. Electrical connector wherein the means to forcibly uncouple the connector is made of material that is highly resistant to the flow of the electrical current and wherein the member acts in compression when performing the uncoupling function.
- 160 Including handle for direct manual urge to separate:**  
This subclass is indented under subclass 159. Electrical connector wherein the means to forcibly uncouple the connector is engageable by an operative without other intermediate structure.
- 161 HEAT RESPONSIVE CONTACT PRESSURE CONTROL:**  
This subclass is indented under the class definition. Electrical connector including structure particularly adapted to urge the contact toward a cooperating contact at a predetermined force according to the temperature of the device.
- (1) Note. In this subclass, the expansion of component parts under temperature changes is recognized and compensation is accordingly made. Usually the provision is to increase contact pressure upon increase in ambient temperature, but also may be to reduce contact pressure as temperature is elevated or to maintain substantially unchanging pressure.
- 162 WITH RELATIVELY GUIDED MEMBERS AND INTERMEDIATE PLIABLE CONDUCTOR:**  
This subclass is indented under the class definition. Electrical connector combined with two component parts intended to move with respect to each other in a prescribed, controlled manner and combined with a flexible electrical conductor extending from one of the component parts to the other.

- (1) Note. A storage spool, even though having a relatively guided member and an electrical connector is not included in this and the indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 1+, for structure having two component parts movable relative to each other wherein a connector on one is also movable relative to a cooperating connector on the component part.

**163 Frangible pliable conductor; e.g., umbilical break-away:**

This subclass is indented under subclass 162. Electrical connector wherein the flexible electrical conductor is specially designed to rupture and subdivide upon extreme movement of one component part with respect to the other.

**164 Relatively movable about axis:**

This subclass is indented under subclass 162. Electrical connector wherein the component parts move relatively about a line that is fixed with respect to each of the parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 446, for an electrical connector having means pivotally attached thereto to protect the cable extending from the connector from excessive bending.  
534, for an electrical connector pivotally attached to supporting structure.

**165 Hinge:**

This subclass is indented under subclass 164. Electrical connector wherein the first component part is secured to and supported by a member and the second component part is secured to and supported by the first member such that the first member pivotally supports the second member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 31, for a plurality of electrical connectors mounted on different blades of a hinge, wherein the connector is electrically connected to each other.

**166 CONVERTIBLE BY INTERNAL CHANGE TO SELECTIVELY COOPERATE WITH A DIFFERENT CONTACT:**

This subclass is indented under the class definition. Electrical connector including a contact\* adapted to interfit with a particularly configured contact, a particularly sized contact, or a contact particularly positioned within supporting structure including integral component structure intended to be repositioned to allow the electrical connector to interfit with a different particularly configured, sized, or positioned contact; wherein the integral component structure is intended to be returnable to the original position.

- (1) Note. A device including a storage compartment for a component to be transformed manually to operating position is included herein; whereas a similar device having no such storage compartment is not included herein.

- (2) Note. A single device may have several "connectors". In such a structure, it is only necessary that one of these connectors be changed under this subclass definition.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 176, for a female coupling part convertible to a male coupling part by addition of a prong.  
177, for a coupling part convertible to a distinct shape by addition of a nonremovable element or by removal of a nonreusable element.  
217+, for a device having several types of connector available without modification of the device, but structurally limited so that if one type is in use, use of another will be prevented.  
516, for an electrical connector with provision to isolate circuitry by severance of a bridging element.  
518, for a coupling part convertible to a different format by substitution of a different contact.

**167 Connector for power measuring meter:**

Electrical connector under 166 comprising the base of a watt-hour measuring device or

adapted to engage and be electrically connected with the base of a watt-hour measuring device.

- (1) Note. Watt-hour meters are somewhat standardized in overall configuration; i.e., are adapted to be mounted on the wall of a permanent structure, presenting a generally circular base, and having four, five or more vertically disposed blade-type contacts extending from the base thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 146, for a contact preventer or retractable cover part adapted to fit between coupled connectors (e.g., power measuring meter).  
 508, for a jumper adapted to be used with a power measuring meter.  
 517, for a power measuring meter coupling part, generally.

#### 168 **Lamp or electron tube socket or base:**

This subclass is indented under subclass 166. Electrical connector particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment excluding, vacuum maintaining envelope; or comprising the electrical connector of such a light radiating member or amplifying or switch member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.  
 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.  
 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.  
 226+, for a coupling part to receive a fluorescent or neon lamp.  
 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.  
 336, for lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a

movement-actuating means or retaining means in addition to the contact of the socket.

- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.  
 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.  
 414, for a lamp or electron tube socket or base including a conductor against the cutting contact.  
 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.  
 541, for a plural lamp or electron tube sockets including supporting means therefore.  
 558, for a lamp or electron tube socket extending into a supporting panel.  
 602, for a lamp or electron tube socket or base including flexing insulation.  
 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).  
 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.

#### 169 **Test probe:**

This subclass is indented under subclass 166. Electrical connector comprising a generally rodlike member having an elongated portion adapted to be grasped by the hand of an operative for random manipulation thereof and having a contact\* extending from the axial extremity thereof.

- (1) Note. The contact may comprise a coupling part\* for interfitting with a particular mating part\*.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 219, for an alternatively connected test probe.

482, for a randomly manipulated test probe including a handle or distinct manipulating means.

**170 Coupling part:**

This subclass is indented under subclass 166. Coupling part specially adapted to mate with a specific complementary electrical connector.

(1) Note. See coupling part\* in the glossary of this class.

**171 Including repositionable contact:**

This subclass is indented under subclass 170. Coupling part including a contact\* or a portion of a contact adapted to be moved to a different location with respect to the coupling part to allow it to interfit with a different, particularly configured, sized, or positioned cooperating connector; wherein the contact or the portion of a contact is adapted to be returned to the original position.

(1) Note. The purpose of repositioning the contact of this subclass may be to adapt the device for use with mating parts of different configurations without use of an intermediate “adapter”.

(2) Note. Included herein is a connector having a repositionable contact for interfitting with variously configured mating parts of particular, assigned configurations, e.g., assigned for particular voltage or ampere rating.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52, for a coupling part having a repositionable contact to allow an operative to select different circuitry.

103+, for a male coupling part (plug) having a repositionable safety ground plug.

174+, for a connector, generally, having a repositionable contact.

**172 To nonuse or distinct use (e.g., male/female position):**

This subclass is indented under subclass 171. Coupling part wherein the contact or the portion of a contact is adapted to be moved (a) out of operating position, or (b) to a position such that the device functions differently.

(1) Note. Under (b) of this subclass definition, a contact prong may be withdrawn into the device to then function as the contact of a female connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

104, for an electrical connector including a safety ground including a pivotable prong.

**173 To fit differently oriented contact:**

This subclass is indented under subclass 171. Coupling part wherein the contact or the portion of a contact is adapted to be moved so that it will fit with a mating contact of different alignment than before such modification.

**174 Including repositionable contact:**

This subclass is indented under subclass 166. Electrical connector including a contact\* or a portion of a contact adapted to be moved to a different location with respect to the device to allow the device to interfit with a different, particularly configured, sized or positioned cooperating connector; wherein the contact or the portion of a contact is adapted to be returned to the original position.

(1) Note. The purpose of repositioning the contact of this subclass may be to adapt the device for use with mating parts of different configurations without use of an intermediate “adapter”.

(2) Note. Included herein is a connector having a repositionable contact for interfitting with variously configured mating parts of particular, assigned configurations, e.g., assigned for particular voltage or ampere rating.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52, for a coupling part having a repositionable contact to allow an operative to select different circuitry.

103+, for a male coupling part (plug) having a repositionable safety ground prong.

171+, for a coupling part having a repositionable contact for interfitting with variously configured mating parts of particular, assigned configurations,

e.g., assigned for a particular voltage or ampere rating.

**175 To fit different size contact:**

This subclass is indented under subclass 74. Electrical connector wherein the contact or the portion of a contact is adapted to be moved so that it will fit with a cooperating contact of different cross-sectional area.

**176 FEMALE COUPLING PART CONVERTIBLE TO MALE COUPLING PART BY ADDITION OF PRONG:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* of the type including an opening with a contact\* therein for receiving a projecting contact of a mating part\*; wherein the device is particularly adapted to receive, as a part thereof, a prong to enable the device to function as a coupling part having a contact project therefrom to be received by an opening of a mating part.

- (1) Note. Without the added prong, the device of this subclass functions as a female coupling part, with the prong it functions as a male. The device does not function alternatively without addition or removal of the prong.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 166+, for an electrical connector convertible by internal change to selectively cooperate with a different contact.
- 177, for a coupling part convertible to a distinct shape by addition of a nonremovable element or by removal of a nonreusable element.
- 217+, for a device having several types of connector available without modification of the device, but structurally limited so that if one type is in use, use of another will be prevented.
- 516, for an electrical connector with provision to isolate circuitry by severance of a bridging element.
- 518, for a coupling part convertible to a different format by substitution of a different contact.

**177 COUPLING PART CONVERTIBLE TO DISTINCT SHAPE BY ADDITION OF**

**NONREMOVABLE ELEMENT OR BY REMOVAL OF NONREUSABLE ELEMENT:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* having a particular configuration adapted to have a member permanently added thereto to change the device to a different configuration or adapted to have a member permanently removed therefrom to change the device to a different configuration.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 166+, for an electrical connector convertible by internal change to selectively cooperate with a different contact.
- 176, for a female coupling part convertible to a male coupling part by addition of prong.
- 217+, for a device having several types of connector available without modification of the device, but structurally limited so that if one type is in use, use of another will be prevented.
- 516, for an electrical connector with provision to isolate circuitry by severance of a bridging element.
- 518, for a coupling part convertible to a different format by substitution of a different contact.

**178 FLUENT CONDUCTING MATERIAL:**

This subclass is indented under the class definition. Electrical connector in which at least part of the electricity transmitting medium is a gas liquid or flowable solid during transmission of electrical current.

- (1) Note. Provision of an environment in which an arc passes through atmospheric gases (or vacuum) is included in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 5, for interrelated electrical connectors relatively movable during use having a liquid contact.
- 190+, for an electrical connector having a retainer or passageway for fluent material.

485+, for a connector in which fluent material dissipates heat, but does not serve to conduct electricity.

519+, for a connector in which fluent material restricts environmental effects, e.g., corrosion, but does not serve to conduct electricity.

**SEE OR SEARCH CLASS:**

174, Electricity: Conductors and Insulators, subclasses 9+ for a conductor utilizing a conductive fluid, generally.

**179 Liquid:**

This subclass is indented under subclass 178. Electrical connector wherein the electricity transmitting medium is liquid during transmission of electrical current.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

5, for a connector with relatively moving parts having liquid contacts.

199+, for a connector including a retainer for liquid.

**180 CONTACT SEPARATION BY SNAP OR QUICK-BREAK ACTION:**

This subclass is indented under the class definition. Electrical connector having means which, during uncoupling from a cooperating connector, causes a contact\* of the device to move suddenly with respect to the remainder of the device and out of engagement with and away from the contact of the cooperating connector.

(1) Note. In general, the contact movement is effected suddenly by release of stored energy.

(2) Note. The movable contact herein is actuated when the connector as a whole is disengaged from the cooperating connector rather than in the manner of a switch or circuit breaker, i.e., make or break circuitry without uncoupling the connectors.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

152, for an electrical connector with means to separate it from another electrical connector.

266+, for a coupling part having handle or means to move the contact thereof laterally to permit uncoupling.

296+, for an electrical connector with coupling movement-actuating means, generally.

**SEE OR SEARCH CLASS:**

74, Machine Element or Mechanism, particularly subclasses 97.1+ and 100.1+ for a mechanical movement involving a snap action.

200, Electricity: Circuit Makers and Breakers, subclasses 402+ for a circuit maker or breaker having snap action.

**181 INCLUDING ARC SUPPRESSING OR EXTINGUISHING MEANS:**

This subclass is indented under the class definition. Electrical connector combined with or having means to inhibit electrical discharge or the effects of electrical discharge in the vicinity of the electrical joint forming means resulting from the making or breaking of the electrical connection.

(1) Note. Provision to cause arcing at one location, e.g., at a spark gap, thereby inhibiting arcing at another location is included herein.

(2) Note. Provision to prevent arcing from a contact to an adjacent contact on a connector, e.g., from one to another of the prongs of an electron tube, is considered to be an insulator rather than an arc suppressing or extinguishing means.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

38+, for a connector using magnetic means to suppress or extinguish an arc.

88, for an electrical connector including an elastomeric or nonmetallic conductive portion having inductive shielding or arc suppressing means.

135+, for a connector having cover means automatically moving upon separation of the connector from a mating part.

180, for a connector having means to move its contact away from the contact of a cooperating connector by a snap or

quick-break action, which might incidentally thereby suppress the arc.

SEE OR SEARCH CLASS:

218, High-Voltage Switches With Arc Preventing and Extinguishing Devices, subclasses 1+ for an arc suppressing or extinguishing means for a circuit maker or breaker.

**182 Lamp or electron tube socket:**

This subclass is indented under subclass 181. Electrical connector comprising a coupling part\* particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical switching means utilizing an environment excluding, vacuum maintaining envelope.

SEE OR SEARCH THIS CLASS, SUBCLASS:

56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.

168, for a lamp or electron tube socket or base convertibly by internal change to selectively cooperate with a different contact.

220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.

226+, for a coupling part to receive a fluorescent or neon lamp.

280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.

336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.

356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.

375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.

414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means

to move the conductor against the cutting contact.

419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.

**183 By arc suppressing or extinguishing environment:**

This subclass is indented under subclass 181. Electrical connector including provision of an atmosphere in the vicinity of the electrical joint forming means to inhibit electrical discharge or the effects of electrical discharge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

186+, for means for holding normal atmosphere or normal combustion by-products within a chamber or confined escape passage so that oxygen is consumed, thereby extinguishing any resulting fire.

**184 Gas:**

This subclass is indented under subclass 183. Electrical connector wherein the atmosphere that inhibits electrical discharge or the effects of electrical discharge is in the gaseous state when so functioning.

(1) Note. Accommodation of normal atmosphere or of normal combustion gaseous by products is not included herein.

**185 Gas accommodation by relatively moving parts:**

This subclass is indented under subclass 184. Electrical connector including means to contain or provide controlled escape of gases from the vicinity of the joint forming means, wherein the containing or controlling means includes portions that move with respect to one another during such function.

**186 Contact encasing chamber:**

This subclass is indented under subclass 181. Electrical connector with an enclosure wherein any arc formed when making or breaking electrical connection is enclosed to thereby limit the effect of the arc.



- (1) Note. Mere encasement of a contact does not justify placement herein. There must be specific, claimed disclosure that the encasement is to suppress or extinguish the arc formed when mating contacts are brought together.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 183+, for an electrical connector, with specific environment for arc suppressing or extinguishing which may include a contact encasing chamber.

**187 Movable relative to contact:**

This subclass is indented under subclass 186. Electrical connector wherein the contact\* is repositioned during making or breaking of electrical continuity with respect to the arc enclosing means thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 186, for an electrical connector wherein a contact encasing chamber includes wall portions that are part of that connector and wall portions that are part of a mating connector and move during making or breaking of electrical connection with respect to the wall portions of the mating connector.

**188 HAVING CIRCUIT INTERRUPTING PROVISION EFFECTED BY MATING OR HAVING "DEAD" CONTACT ACTIVATED AFTER MATING:**

This subclass is indented under the class definition. Electrical connector (a) including a characteristic intended to modify the flow of electrical current upon making of the connection, other than that effected by the connection; or (b) including an electricity transmitting member intended to be not connected to a source of electrical current before mating with corresponding electricity transmitting member of a cooperating connector but be so connected after mating.

- (1) Note. Under clause (b) of this definition the "dead" contact may be actuated by sliding within the contactor to make engagement with another contact that is

"live", i.e., charged with electrical current.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 944+, for a cross-reference art collection similar to this subclass, but limited to use with coaxial cable.

SEE OR SEARCH CLASS:

- 200, Electricity: Circuit Makers and Breakers, for an electrical connector assembly combined with a switch, generally, and especially subclasses 51+ for an electrical connector combined with a switch actuated upon application of the connector with a mating connector wherein the switch is remote from the connector assembly or is functional to actuate a distinct electrical circuit. See the line expressed under section III of the definition of this class (Class 439).

**189 WITH OR COMPRISING REMOVABLE CIRCUIT MODIFYING ARRANGEMENT:**

This subclass is indented under the class definition. Electrical connector including two contacts\* wherein a removable unitary member is intended to electrically connect those two contacts to each other; wherein the member is intended to electrically alter the current to the connector structure.

- (1) Note. The circuitry of the removable member may not be clearly set forth. The structure of this subclass commonly is to be fitted with a bridging member to convert the circuitry of the device.
- (2) Note. A device to be used "selectively" with either of a plurality of jumpers or circuit arrangements is included herein. Also, a device to receive a "key", coded for restrictive utilization is included herein, as is a device used to alter a motor for use with a 120 volt rather than a 240 volt supply.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 500, for an energy cell substitution device including plural contacts or for an

- electrical connector including support means for an energy cell.
- 502+, for a flaccid bridging conductor combined with a plurality of electrical connectors.
- 507+, for a rigid bridging conductor with a contact surface at each end.

**190 HAVING RETAINER OR PASSAGEWAY FOR FLUENT MATERIAL:**

This subclass is indented under the class definition. Electrical connector with a provision to (a) confine a flowable medium or (b) confine the flow of such a medium.

- (1) Note. A hydraulic drive is not considered to meet the limitations of this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 3, for interrelated electrical connectors relatively movable during use with means to apply lubricant or coolant.
- 41, for means to subject a portion of an electrical connection to negative pressure; i.e., to a vacuum.
- 89, for an electrical connector including an elastomeric or nonmetallic conductive, inductive shield or arc suppressing means.
- 178+, for similar structure in which the fluent material conducts electricity.
- 207+, for similar structure including a tubular component for confining an electrical cable.
- 230, for a coupling part to receive a fluorescent or neon lamp having sealing element or material for cooperation with a coupled lamp.
- 271, for an electrical connector with a sealing element or material for cooperation with a coupled connector, generally.
- 283, for a seal interfitting a coupled connector part housings.
- 386+, for a connector having a contact carried by flexible or resilient insulation and having a sealing joint between coupled parts.
- 527+, for a wall, plate or panel mounting or attaching means with a connector part sealed thereto.

- 586+, for a connector having a contact carried by flexible or resilient insulation and having a sealing joint between coupled parts.
- 604+, for a connector with an external cable or conductor embedded in insulative sealing material.

SEE OR SEARCH CLASS:

- 174, Electricity: Conductors and Insulators, for an electrical conductor combined with provision for a fluid, not including a detachable electrical connector.

**191 Fluent material transmission line:**

This subclass is indented under subclass 190. Electrical connector including a passageway along which the flowable medium is transported.

**192 Connector electrically joined to line:**

This subclass is indented under subclass 191. Electrical connector wherein that electrical connector is in electrical communication with the means providing a passageway for a flowable medium.

- (1) Note. Attachment to the conduit is normally to maintain transmission of only so much current as required to maintain equal electrical potential between interconnected line components to thereby prevent formation of an arc between the components and to reduce corrosion of the components.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 210, for an electrical connector with a conduit or duct and means to join conduit, duct or conductor sections.

**193 For use with line heater:**

This subclass is indented under subclass 191. Electrical connector to be used with a heating means (e.g., an electrical resistance heater) to raise the thermal level of the means providing the passageway.

SEE OR SEARCH CLASS:

- 138, Pipes and Tubular Conduits, subclass 38 for the combination of a transmission line and an electrical heating

- means provided specifically to thaw material inside the line with or without an electrical connector.
- 174, Electricity: Conductors and Insulators, subclass 47 for a fluid transmission line combined with a conductor but lacking a claimed reference to an electrical connector.
- 219, Electric Heating, subclasses 200+ for a fluid transmission line combined with an electrical heating device, with or without an electrical connector.
- 194 Electrical connection within line:**  
This subclass is indented under subclass 191. Electrical connector wherein the means to make an electrical connection is physically positioned within the confines of the passageway for transmission of a flowable medium.
- 195 Connector/line assembly coupled to mating connector/line assembly by movement about an axis less than 360°:**  
This subclass is indented under subclass 191. Electrical connector adapted to make both electrical contact and fluent material passageway connection with mating connector whereby such connection is effected by movement of the device relative to the mating connector about a pivot line less than a full revolution.
- 196 Liquid material to dissipate, remove, or block the flow of heat:**  
This subclass is indented under subclass 190. Electrical connector wherein the flowable medium is in the liquid state and is for spreading, lowering the level of, or preventing transmission of thermal energy.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
485+, for an electrical connector with provision to dissipate, remove, or block the flow of heat, generally.  
519+, for an electrical connector with provision to restrict environmental effects, generally.
- 197 For urging contact toward or away from mating contact:**  
This subclass is indented under subclass 190. Electrical connector with provision to bring pressure from the flowable medium onto the contact\* thereof tending to move that contact
- with respect to other portions of the electrical connector cause that contact to make (or break) engagement with the contact of a mating part.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
259+, for a coupling part with actuating means urging the contact to move laterally with respect to the rest of the coupling part and toward a mating part.
- 198 Gas retainer:**  
This subclass is indented under subclass 190. Electrical connector wherein the flowable medium is in the gaseous state while confined.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
41+, for provision to retain an electrical connector under negative pressure, i.e., under vacuum.
- 199 Liquid retainer:**  
This subclass is indented under subclass 190. Electrical connector wherein the flowable medium is in the liquid state while confined.
- (1) Note. A gelatinous material is considered to be in the liquid state only if it is retained in the manner of a liquid.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
179, for a conductor in which liquid conducts electricity.  
190, for provision to flush out unwanted material from a connection region by liquid material, without retention of the liquid.  
196, for a connector in which liquid dissipates, removes or blocks the flow of heat.
- 200 Impregnated material:**  
This subclass is indented under subclass 199. Electrical connector wherein the liquid medium is absorbed or held in place by a porous member.

**201 Coupling part having contact encompassed by liquid storage chamber:**

This subclass is indented under subclass 199. Electrical connector comprising a coupling part\* wherein the liquid medium is retained in an enclosed pocket surrounding the means for making an electricity transmitting joint.

- (1) Note. Included herein is a coupling part wherein the liquid medium surrounds the contact but does not necessarily engage the surface from which electrical current is transmitted to a mating part.

**202 Contact comprising tapered post or mating part (e.g., battery post):**

This subclass is indented under subclass 201. Coupling part wherein the contact\* is an elongated rodlike member having a conical end, or is a socket for receiving such a rodlike member, at which conical end is the surface for transmitting electrical current to a mating part\* and at which the liquid is retained.

**203 Crimped end terminal:**

This subclass is indented under subclass 199. Electrical connector wherein the liquid medium is located between a solid means for making an electricity transmitting joint and an electricity transmitting strandlike member or assembly, wherein both the solid means and the strandlike member or assembly having been subsequently secured together by distortion of the solid means.

- (1) Note. To be included herein an electrical connector must meet the definition of the class, i.e., must be detachable from a cooperating connector, generally at a point remote from the crimp.

**SEE OR SEARCH CLASS:**

- 29, Metal Working, subclasses 825+ and 753 for a process of or apparatus for attaching a conductor to a connector element wherein the joint is formed by a crimping or deforming operation.  
174, Electricity: Conductors and Insulators, subclasses 84+ for a conductor crimped to a mating part, generally.

**204 Encompassing wire:**

This subclass is indented under subclass 199. Electrical connector including provision to enclose an electrical conductor in the liquid.

**SEE OR SEARCH CLASS:**

- 174, Electricity: Conductors and insulators, subclasses 8+ for a conductor encased in a liquid, without a detachable electrical connector.

**205 Passageway allowing escape of fluent material during mating:**

This subclass is indented under subclass 190. Electrical connector with provision to permit movement of the flowable medium out of the vicinity of the mating face of the connector as the connector is brought into position with respect to a cooperating connector.

**206 Vent:**

This subclass is indented under subclass 190. Electrical connector including provision to allow aeration of the device.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 485+, for an electrical connector with cooling, generally.

**207 WITH CONDUIT OR DUCT:**

This subclass is indented under the class definition. Electrical connector combined with an elongate tubular casing of either circular or polygonal cross-section wherein the casing is distinct from the housing of the electrical connector, is of indeterminate length and is for encasing an electricity transmitting member.

- (1) Note. The elongated tubular casing of this subclass may be of any cross-section; for example, it may be oval. Also the casing may be made of straight or curved section. "Conduit" and "duct" are terms in the building trade.  
(2) Note. A cable sheath is not considered to be a "conduit or duct" for this subclass.  
(3) Note. The electricity transmitting member of this subclass may comprise a wire, a line cord, a cable, or a bus bar.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 110+, for structure that includes an elongated member for supporting an electrical connector at any point along its length and for a contact intended to be engagable at any point along its length, wherein an electricity transmitting member may be housed.
- 209, Indented hereunder for an elongated tubular shell of decorative shape and indeterminate length for housing a row of connectors.
- 892+, for a connector encasing means that is distinct from the connector, generally.
- 208 Enclosed conductor electrically connected thereto:**  
This subclass is indented under subclass 207. Electrical connector wherein the encased electricity transmitting member is attached to the housing to transmit electrical current thereto.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 100, for safety grounding to a pipe, rod or conduit.
- 192, for an electrical connector attached to a fluent material transmission line.
- 209 Molding type (e.g., baseboard):**  
This subclass is indented under subclass 207. Electrical connector wherein the distinct housing is to be mounted on an otherwise finished product is of decorative value, and accordingly serves as a trim as well as an electric service means.
- (1) Note. The finished product of this subclass may be a building wall or an exterior panel or a vehicle.
- (2) Note. Concealment of electric wires is considered to be “decorative”.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 120, for an electric connector of the molding type including an uninterrupted contact.
- 216, for an electrical connector of the molding type not combined with a distinct conduit or duct.
- 210 Means to join conduit, duct or conductor selections:**  
This subclass is indented under subclass 207. Electrical connector combined with or comprising a structural member intended to fit between a first and a second conductor to couple the housings together or to couple the conductor encased by one housing to the conductor encased by the other housing.
- 211 Including receptacle:**  
This subclass is indented under subclass 207. Electrical connector comprising a female coupling part\* including a contact located within a recession.
- 212 BUS DUCT:**  
This subclass is indented under the class definition. Electrical connector comprising an elongated, reasonably uniform cross section, rigid metallic housing and a plurality of rigid metallic contacts (i.e., buses) extending therealong and spaced therefrom.
- (1) Note. “Bus duct” is an art term.
- (2) Note. A second housing of reasonably uniform cross-section connected at its end with the first housing is not considered to be “distinct” from the first and such a combination is included herein.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 114, for a bus duct including buses accessible at any point along their length.
- 207+, for an electrical connector combined with a distinct conductor encasing housing.
- 213 Means to join bus ducts:**  
This subclass is indented under subclass 212. Electrical connector particularly adapted to connect a housing or conductor at its longitudinal extent to another such housing or conductor.
- 214 COMPRISING COUPLING PART OF INDETERMINATE LENGTH LATERALLY OF CONNECTION:**  
This subclass is indented under the class definition. Electrical connector comprising a coupling part\* intended to mate with a specially

shaped mating part\* at a face thereof, which connector is of undefined dimension in at least one direction parallel to that face.

- (1) Note. Included herein is a lamp fixture consisting of a multiplicity of sockets set in a face thereof, with no lateral limit to the structure. Also included herein is a multioutlet “baseboard” intended to be limited in length only by the dimension of the room wall on which it is to be custom fitted.
- (2) Note. An electrical connector of infinite length is included herein if it is intended to be coupled directly with another such connector which in turn is to be coupled directly to a third such connector, such that the resultant structure is of indefinite length.

**215 Included in prefabricated building panel (e.g., floor, ceiling, wall):**

This subclass is indented under subclass 214. Coupling part combined with means forming a substantial portion of a generally planar space dividing member of an architectural structure wherein the device is a portion thereof.

**216 Molding type, (e.g., baseboard):**

This subclass is indented under subclass 214. Coupling part wherein the housing is to be mounted on an otherwise finished product, is of decorative value, and accordingly serves as trim as well as an electric service means.

- (1) Note. The finished product of this subclass may be a building wall or an exterior panel of a vehicle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 120, for an electrical connector of the molding type including an uninterrupted contact.
- 209, for an electrical connector of the molding type combined with a distinct conduit or duct.

**217 ALTERNATIVELY CONNECTED:**

This subclass is indented under the class definition. Electrical connector including a connection face which is selectively usable at one time without rearrangement or alteration thereof (a)

with a first cooperating connector of a first configuration or with a second cooperating connector that is of a different configuration, or (b) with a cooperating connector making electrical connection from a first direction or from a second, distinct direction.

- (1) Note. The “connection face” of this subclass refers to a particular component of an electrical connector usually comprising a contact where connection may be made and is intended to restrict from this subclass a connector simply having a first face for making electrical connection with a first mating connector and a second face for making electrical connection wherein the first and second connections are independent one of the other. However, included in this subclass is a similar device wherein if the first mating connection is connected thereto, use of the second connection would be blocked from making connection by the presence of the first.

- (2) Note. Included in this and the indented subclasses, particularly subclass 218, is a coupling part\* that accepts a mating part\* from a first direction along a first axis or accepts a mating part from the opposite direction along the same axis. Also included in this and the indented subclasses, particularly subclass 224, is a connector that is not a coupling part that accepts a cooperating connector from a first or a second direction, with one exception, i.e., NOT INCLUDED HEREIN is a noncoupling part connector that is accessible only from opposite directions along the same axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 166+, for an electrical connector convertible by internal change to selectively cooperate with a different contact.
- 176, for a female coupling part convertible to a male coupling part by addition of a prong.
- 177, for a coupling part convertible to a distinct shape by addition of a nonremovable element or by removal of a nonreusable element.

- 516, for an electrical connector with provision to isolate circuitry by severance of a bridging element.
- 518, for a coupling part convertible to a different format by substitution of a different contact.
- 218 Coupling part:**  
This subclass is indented under subclass 217. Electrical connector specially adapted to mate with a specific complementary electrical connector.
- (1) Note. See coupling part\* in the glossary of this class.
- (2) Note. See (2) Note under the definition of subclass 217.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 53, for an alternatively connected coupling part intending to bring a contact selectively into engagement with a first or a second mating contact.
- 219 Test probe:**  
This subclass is indented under subclass 218. Coupling part comprising a generally rodlike member having an elongated portion adapted to be grasped by the hand of an operative for random manipulation thereof and having a contact\* extending from the axial extremity thereof.
- (1) Note. The contact alone of this subclass may comprise a coupling part\* for interfitting with a particular mating part\*.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 169, for a test probe convertible by internal change to selectively cooperate with a different contact.
- 482, for a randomly manipulated test probe including a handle or distinct manipulating means.
- 220 Lamp or electron tube socket or base:**  
This subclass is indented under subclass 218. Coupling part particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical, amplifying or switching means utilizing an environment excluding vacuum maintaining envelope; or comprising the electrical connector of such a light radiating or switching member.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.
- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.

- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.
- 221 Contact comprising prong:**  
This subclass is indented under subclass 218. Coupling part including a male contact\* adapted to enter a receptacle\* and make electrical connection therein.
- 222 Receptacle having distinct openings for distinct prongs:**  
This subclass is indented under subclass 218. Coupling part comprising a receptacle\* including a contact located within a first recess therein for receipt of a male contact and including a contact within a second recess are constructed such that only a contact of a required characteristic with respect to the coupling part of which it is a part can interfit therewith.
- 223 Receptacle for prong of first lateral dimension or for prong of second lateral dimension:**  
This subclass is indented under subclass 218. Coupling part comprising a receptacle\* designed to receive a male contact of first cross-sectional shape or size; or to receive a male contact of a second cross-sectional shape or size.
- 224 To receive contact from first direction or from second axially distinct direction:**  
This subclass is indented under subclass 217. Electrical connector adapted to engage an elongated cooperating connector positioned along a first predetermined axis and adapted to engage an elongated cooperating connector lying along a second predetermined axis that is not coextensive with the first axis.
- (1) Note. Not included herein is a terminal device to which a cooperating connector may be secured from an infinite number of directions (rather than from a finite number of distinct directions). Also not included herein is a device for receiving a cooperating connector from directions exactly 180° opposite.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
218, for a coupling part for receiving a mating part from a first direction or for receiving a coupling part from a second direction exactly 180° opposite.
- 225 CONTACT TAP BETWEEN NORMALLY ENGAGED COUPLING PARTS:**  
This subclass is indented under the class definition. Electrical connector for use with a coupling part\* and its mating part\* by fitting between the parts when they are mated to each other and make electrical connection therewith to modify electric current flow between the mated parts.
- (1) Note. “Modify electric current flow” includes utilization of electric power to drive another device and includes addition of power to the contacts of the mated parts.
- (2) Note. Grounding or shielding is not included in this definition.
- 226 COUPLING PART TO RECEIVE FLUORESCENT OR NEON LAMP:**  
This subclass is indented under the class definition. Electrical connector comprising a coupling part\* particularly intended to be used to physically interfit with and supply electric current to an illumination device, which illuminating device includes means to ionize that gas (a) to cause the gas to activate a coating on the envelope and causes that coating to emit visible light, or (b) wherein the gas is neon to cause the gas to emit visible light.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electric tube.  
168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.  
182, for a lamp or electron tube socket or including arc suppressing or extinguishing means.



- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket or adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of coupling part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.
- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.
- 227 Having curved tubular envelope:**  
This subclass is indented under subclass 226. Coupling part particularly adapted to supply electricity to an illuminating device wherein its tubular gas containing transparent container extends along a nonrectilinear way.
- 228 Plural lamps:**  
This subclass is indented under subclass 227. Coupling part intended to supply electrical current to a first and to a second illumination device without removal of either illumination device therefrom.
- 229 Circular lamp:**  
This subclass is indented under subclass 227. Coupling part wherein the tubular gas containing envelope extends along a circular way.
- 230 With sealing element or material for cooperation with coupled lamp:**  
This subclass is indented under subclass 226. Coupling part combined with a member intended to be positioned during use between the connector and the illuminating device to which it transmits electrical current, which member is intended to isolate the contacts from foreign material in the environment (e.g., water or dust).
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 86+, for an electrical connector including an elastomeric or nonmetallic conductive, inductive shield or arc suppressing means.
- 190+, for similar sealing means used with an electrical connector with means for retaining or having a passageway for fluent material.
- 271+, for an electrical connector with a sealing element or material for cooperation with a coupled connector, generally.
- 283, for the sealed interfitting of coupled connector part housings.
- 527+, for a wall, plate or panel mounting or attaching means with a connector part sealed thereto.
- 586+, for a connector having a contact carried by flexible or resilient insulation and having sealing joint between coupled parts.
- 604+, for a connector with an external cable or conductor embedded in insulative sealing material.

**231 With contact for starting switch:**

This subclass is indented under subclass 226. Coupling part combined with provision to transmit electrical energy to a switching device having a function to start ionization of the gas within the tubular envelope of the illuminating device.

**232 With additional retaining or locking means for coupled connector and lamp:**

This subclass is indented under subclass 226. Coupling part combined with means to hold the coupling part in electrical current carrying relationship with the illuminating device or to secure another member which in turn holds the coupling part in electric current carrying relationship with the illuminating device.

**233 Removable:**

This subclass is indented under subclass 232. Coupling part wherein the means to hold the coupling part in current carrying relationship is detachable from the remainder thereof.

**234 Adjustably mounted:**

This subclass is indented under subclass 226. Coupling part supported on other structure such that it can be repositioned thereupon.

**235 Plural lamps:**

This subclass is indented under subclass 226. Coupling part intended to supply electrical current to a first and to a second illumination device without removal of either illumination device therefrom.

**236 Adapter:**

This subclass is indented under subclass 226. Coupling part, (a) for mating with a first mating part and including integrally therewith a second coupling part for mating with a second mating part to thereby connect together the first and second mating parts, wherein the first and second mating parts could not be interconnected directly; (b) for mating with a first mating part and including integrally therewith a plurality of second coupling part similar in configuration to the first mating part to effectively reposition the second mating part from the location of the first mating part if it were interfitted therewith.

- (1) Note. The coupling part of clause (a) allows a coupling part to be electrically connected to a physically noninterfitting mating part; the coupling part of clause (b) allows plural mating parts to be electrically connected to a single coupling part; and the coupling part of clause (c) effectively repositions a mating part.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 105, for an adapter with safety grounding.  
 119, for an uninterrupted support rail or uninterrupted contact with an adapter.  
 124, for a candle-simulation type electrical connector comprising an adapter.  
 300, for an adapter retained in connection with a mating part by the presence of a distinct coupling part.  
 323, for an adapter with coupling part retaining means in addition to the contact comprising a movable threaded ring.  
 365, for an adapter with coupling retaining means in addition to the contact comprising a helically threaded member.  
 638+, for a member comprising two or more plural contact coupling parts with insulation other than a conductor sheath.

**237 Separately biased connector:**

This subclass is indented under subclass 226. Coupling part mounted on another member and movable with respect thereto wherein the coupling part is yieldably urged in a direction with respect to the member on which it is movably mounted.

**238 Pivotal connector:**

This subclass is indented under subclass 237. Coupling part movably with respect to the member on which it is mounted about an axis less than 360°.

- (1) Note. For placement in this subclass, a connector is considered to be moved about an axis, even if that axis is constantly changing, as a rocking movement or the movement of a member supported by a flexible, resilient blade.

- 239 With provision for transverse receipt of lamp contact:**  
This subclass is indented under subclass 226. Coupling part intended to receive an illuminating device contact that extends in the direction parallel to the tubular illuminating device envelope by movement of the illuminating device perpendicular to that direction with respect to the coupling part.
- 240 By rotation of lamp about axis:**  
This subclass is indented under subclass 239. Coupling part wherein the illuminating device is to be turned about its axis to effect the electrical connection.
- 241 Contact comprising laterally resilient spring finger:**  
This subclass is indented under subclass 240. Coupling part wherein the contact is an elongated protuberance that is yieldable within its elastic limit normally with respect to the elongation.
- 242 With provision for axial receipt of lamp contact:**  
This subclass is indented under subclass 226. Coupling part intended to receive an illuminating device contact that extends in the direction parallel to the tubular illuminating device envelope by movement of the illuminating device in the direction of the axis.
- 243 Axially biased contact:**  
This subclass is indented under subclass 242. Coupling part wherein a contact is movable relative to the remainder of the coupling part in the direction parallel to the illuminating device envelope and is yieldably urged by a member stressed within its elastic limit in that direction.
- 244 Coil spring with provision to utilize conductivity thereof:**  
This subclass is indented under subclass 243. Coupling part wherein the contact is yieldably urged by a helically wound resilient conductive member intended to transmit electrical current.
- 245 COUPLING PART HAVING HELICALLY DISPOSED STRANDLIKE CONTACT:**  
This subclass is indented under the class definition. Electrical connector, comprising a coupling part\* having an elongated contact\* formed about and along an axis for screwthread engagement with a screwlike contact of a mating part\*
- 246 SELF ALIGNING CONTACT:**  
This subclass is indented under the class definition. Electrical connector having a contact\* which is nonrigidly mounted upon the remainder of the electrical connector such that the said contact is permitted a certain freedom of movement (other than inherent resiliency) and is accordingly movable during the coupling motion with respect to the remainder of the connector.
- 247 Contact mounted in floating nonconductive holder:**  
This subclass is indented under subclass 246. Electrical connector including support structure for the contact, which support structure is not intended to transmit electricity and which structure is mounted for movement with the contact and with respect to the remainder of the electrical connector.
- 248 Connector including housing or panel to support holder:**  
This subclass is indented under subclass 247. Electrical connector having structure to support the contact and associated structure against gravity while permitting the certain freedom of movement of the contact with respect thereto, which structure is constructed (a) to encase the contact; or, (b) as a planar member extending in the plane of the freedom of movement.
- 249 Receptacle having two directly opposed contact arms and open sides between arms:**  
This subclass is indented under subclass 246. Electrical connector including a U-shaped member having legs comprising a contact\* or a pair of electrically insulated contacts adapted to grip and make electrical contact with a connector held therebetween.
- 250 To receive fuse:**  
This subclass is indented under subclass 249. Electrical connector intended to be used to grip and make electrical contact with a conductive member having portion intended to melt under excess current flow to thereby terminate that current flow.

**251 To receive rigid bar type connector, e.g., busbar:**

This subclass is indented under subclass 249. Electrical connector intended to be used to grip and make electrical contact with an elongated rigid member having no function other than making electrical contact.

**252 Tubular socket:**

This subclass is indented under subclass 246. Electrical connector wherein the contact is cylindrical in shape and is intended to axially receive a mating contact internally along the axis thereof.

**253 SCREW COUPLING PART ENGAGED OR DISENGAGED WITHOUT ROTARY MOTION:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* having a rib helical about an axis parallel to the direction of connector coupling action, for coupling with a mating part by a helical motion and with helical interfitting with respect thereto, and also having provision to permit coupling or uncoupling with the mating part other than by helical motion.

(1) Note. A member for interfitting with the helical rib of a mating connector is considered to be a helical rib because such a member functions as a helical rib.

(2) Note. Included herein is a device adapted to be coupled to a mating connector by a screwlike operation having means to disable the helical rib to allow disconnection by a longitudinal pulling motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

352, for an electrical coupling part including a resiliently urged retaining finger or stretchable sleeve with additional means to prevent unlatching.

**254 Having radially movable threaded means:**

This subclass is indented under subclass 253. Coupling part wherein the helical rib is moved radially into or out of screwlike engagement with the mating part to permit coupling with the mating part other than by helical motion.

(1) Note. A member for interfitting with the helical rib of a mating connector is considered to be a helical rib because such a member functions as a helical rib.

**255 By axially moving wedge or cam:**

This subclass is indented under subclass 254. Coupling part, (a) including a tapering member adapted to move in the direction of connector coupling action, (i.e., parallel to the helical axis) to engage and force the helical rib to move radially into or out of screwlike engagement with the mating adapted to turn about an axis normal to the direction of connector coupling action and having a surface extending progressively away from its axis to engage and force the helical ribs to move radially into or with the mating part.

**256 Biased toward mating thread:**

This subclass is indented under subclass 254. Coupling part wherein the rib is resiliently urged toward the interfitting rib of the mating part.

**257 Socket:**

This subclass is indented under subclass 256. Coupling part comprising a female part having a movable helical rib.

**258 COUPLING PART WITH LATCHING MEANS AND TETHER OR EXPLOSIVE TO UNLATCH FROM MATING PART:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* having means to exert more than frictional resistance to effect separation of the device from connection with an electrically coupled part and having (a) a pliant member capable of exerting only force in tension for being pulled by an operative to make the separation resisting means ineffective or (b) explosive means to make the separation resisting means ineffective.

SEE OR SEARCH THIS CLASS, SUBCLASS:

352, for an electrical coupling part including a resiliently urged retaining finger or stretchable sleeve with additional means to prevent unlatching.

**259 COUPLING PART WITH ACTUATING MEANS URGING CONTACT TO MOVE Laterally with respect to rest of coupling part and toward mating part:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* including means to exert pressure on a contact\* thereof tending to move that contact generally normally of the coupling axis with respect to other portions of the electrical connector to cause that contact to make engagement with the contact of a mating part\*.

- (1) Note. The “means to urge” of this subclass is part of the device, such as a cam or wedge, rather than a spring, a gravity utilizing device, or a handle with no force modifying linkage. Note further that it is not necessary that the contact actually move.
- (2) Note. Included herein is a “zero insertion withdrawal force” connector in which that connector is brought into position with the mating part and subsequently the contacts are caused to move into engagement position with the mating part and subsequently the contacts are caused to move into engagement with each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 122, for a coupling part including actuating means to urge a contact toward a mating contact for interfitting with uninterrupted support rail or contact.
- 197, for an electrical connector with provision to utilize fluid pressure to urge a contact toward or away from a mating contact.
- 252, for a tubular socket having a self aligning contact and having a contractile contact biasing band.

**260 Having open slot for receiving preformed panel circuit arrangement or tape cable:**

This subclass is indented under subclass 259. Coupling part including an elongated opening intended (a) to receive a sheetlike member and make electrical connection with a portion thereof or (b) to receive an electricity transmit-

ting cable including more than three conductors wherein all the conductors are arranged in the same plane extending therealong and make electrical contact with a portion thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 55+, for a preformed panel circuit arrangement including an electrical connector.
- 267, for a coupling part having a handle or means to move a contact laterally to permit uncoupling, having an open slot for receiving a panel circuit arrangement.
- 492+, for an electrical connector for use with a tape cable, generally.

**261 Pivotal means, one portion actuating contact surface, another portion retaining coupling part:**

This subclass is indented under subclass 259. Coupling part wherein the means to urge the contact to move is mounted for movement about an axis with respect to the remainder of the coupling part and includes a first surface portion adapted to urge the contact to move and a second surface adapted to secure the coupling part to a mating part.

**262 Urging stacked contacts to move with respect to rest of coupling part:**

This subclass is indented under subclass 259. Coupling part including a plurality of contacts mounted in alignment such that when one is urged to move with respect to the remainder of the coupling part it will serve to move the next one, so that when one is first urged by the means, then the next is urged by the means via the first.

**263 Contractile receptacle:**

This subclass is indented under subclass 259. Coupling part comprising a female coupling part having an opening to receive a male coupling part including means to vary the size or position of the opening while urging the contact to move.

- (1) Note. Included herein is a device wherein a single contact is actuated to grip a mating contact as well as a device wherein a plurality of contacts are actuated to grip an assemblage of contacts

against the reactive force of a similar opposing assemblage of contacts.

**264 For dual inline coupling part, e.g., DIP:**

This subclass is indented under subclass 263. Coupling part intended to be used with a mating part having three or more contacts in rectilinear alignment on one lateral margin and three or more contacts in rectilinear alignment on the opposite lateral margin.

- (1) Note. The device of this subclass is to be used with a very small panel circuit arrangement on which circuit elements are preplaced and fixed including a first and a second straight row of three or more contacts on each of two opposite marginal extremities.
- (2) Note. The member with which the coupling part of this subclass is to be used includes circuitry that is integrated as a package in which the circuitry is not readily accessible.
- (3) Note. "Very small panel circuit arrangement", implies that the member is a prefabricated sheetlike part on which circuit elements are preplaced and fixed (i.e., a printed circuit) and that circuitry is so small that, if it were exposed, its details could not ordinarily be seen by the naked eye.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 70, for preformed panel circuit arrangement with provision to conduct electricity from panel circuit to another panel circuit including a dual inline package (DIP).
- 330+, for an electrical connector with coupling movement-actuating means or retaining means in addition to contact of coupling part for receiving a dual inline package (DIP).
- 525, for an electrical connector for a dual inline package generally (DIP).
- 526, for an aligning means for a dual inline package (DIP).

**265 Expandable contact or spreadable contacts:**  
This subclass is indented under subclass 259. Coupling part including (a) a generally rodlike contact adapted to engage a mating contact by axial movement with respect thereto and having a variable cross-section to prevent removal thereof from the mating contact part, or (b) first and second laterally spaced contacts adapted to be moved away from each other and toward the contact mating part.

**266 COUPLING PART HAVING HANDLE OR MEANS TO MOVE CONTACT LATERALLY TO PERMIT UNCOUPLING:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* adapted to be brought out of cooperative engagement with a mating part\* by movement with respect thereto in a first direction, wherein a contact\* or a portion of a contact of the device must be moved in a second direction with respect to the remainder of the device normal to the first direction; wherein the device includes (a) a portion adapted to be engaged by the hand of an operative, or (b) a force multiplying device, whereby moving force is exerted on the contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 180, for an electrical connector with provision to effect movement if its contact from a mating contact by snap or quickbreak action.

**267 Having open slot for receiving panel circuit arrangement:**

This subclass is indented under subclass 266. Coupling part including an elongated opening intended to receive a sheetlike member and make electrical connection with a portion thereof; wherein the second direction of contact movement is normal to the plane of the sheetlike member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 55+, for a preformed panel circuit arrangement including an electrical connector.
- 260, for a coupling part with actuating means urging its contact to move laterally with respect to rest of coupling

part and toward mating part having an open slot for receiving preformed panel circuit arrangement or tape cable.

**268 Expandable, prong receiving socket:**

This subclass is indented under subclass 266. Coupling part wherein the contact\* comprises a female member for matingly receiving and making electrical connection with a rodlike contact wherein the female member is intended to be expanded to allow removal of the mating rod like contact.

**269.1 To move contact with respect to similar contact:**

This subclass is indented under subclass 266. Coupling part including a first and a second contact\* that are (a) electrically insulated from each other, (b) of substantially identical configuration, and (c) adapted to be moved with respect to each other.

**269.2 Comprising laterally movable prong or socket attached to flaccid conductor:**

This subclass is indented under subclass 269.1. Coupling part wherein the first or second contact is particularly adapted to be received by a confining, receptaclelike contact or comprises such a receptaclelike contact; in either case, it is intended to be used with a generally elongated, strandlike member, that is readily yieldable transversely of its length to the force of gravity, for transmitting electricity to the transmitting joint.

**270 Movable latching prong or latch on prong:**

This subclass is indented under subclass 226. Coupling part including a rodlike contact\* (a) adapted to be moved with respect to the remainder of the coupling part to project and interfit with a mating contact and thereby selectively permit separation therefrom, or (b) including a portion movable with respect to other portions of that contact to project and interfit with a mating contact and thereby selectively permit separation therefrom.

**271 WITH SEALING ELEMENT OR MATERIAL FOR COOPERATION WITH COUPLED CONNECTOR (E.G., GASKET):**

This subclass is indented under the class definition. Electrical connector combined with an additional discrete part or mass of filler sub-

stance provided to fit between a face of that electrical connector and a corresponding face of a cooperating connector to securely close off the faces and the interior of the mated assembly from moisture, dust, or other foreign matter.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 89, for an electrical connector including an elastomeric or nonmetallic conductive, inductive shield or arc supporting means.
- 205, for similar sealing means used with an electrical connector with means for retaining or having a passageway for fluent material.
- 230, for a coupling part to receive a fluorescent or neon lamp having sealing element or material for cooperation with a coupled lamp.
- 283, for the sealed interfitting of coupled connector part housings.
- 527+, for a wall, plate or panel mounting or attaching means with a connector part sealed thereto.
- 586+, for a connector having a contact carried by flexible or resilient insulation and having a sealing joint between coupled parts.
- 604, for a connector with an external cable or conductor embedded in insulative sealing material.

**SEE OR SEARCH CLASS:**

- 277, Seal for a Joint or Juncture, for a generic sealing means or process, subclasses 602+ for a static, contact seal intended for use on a pipe, conduit, or cable.

**272 Sealing element having cross section that is neither circular nor rectangular:**

This subclass is indented under subclass 271. Electrical connector including an additional discrete part which, when viewed in a plane along its longitudinal centerline with respect to the direction of coupling engagement of that electrical connector with another connector, is of a shape other than one defined by a curved everywhere equidistant from a fixed point or by a parallelogram which includes a right angle.

- (1) Note. A square cross-section is considered to be rectangular.
- 273 Tapered cross-section:**  
This subclass is indented under subclass 272. Electrical connector wherein the additional discrete part which, when viewed in a plane along its longitudinal centerline, is wedge shaped.
- 274 Combined with distinct cable sheath sealing element or material:**  
This subclass is indented under subclass 272. Electrical connector wherein the end thereof remote from the end having a face mating with another connector has another discrete member or mass of filler substance which tightly engages the insulative covering surrounding an electricity transmitting strandlike member or assembly to prevent exposure of the interior of the electrical connector to moisture, dust, or other foreign matter.
- 275 Combined with distinct cable sheath sealing element or material:**  
This subclass is indented under subclass 271. Electrical connector wherein the end thereof remote from the end having a face mating with another connector has another discrete member or mass of filler substance which tightly engages the insulative covering surrounding an electricity transmitting strandlike member or assembly to prevent exposure of the interior of the device to moisture, dust, or other foreign matter.
- 276 Including chamber for contact potting:**  
This subclass is indented under subclass 271. Electrical connector including housing for enclosing a contact and for retaining a solid substance which is to have been pressed or flowed thereinto prior to or during electrical connection.
- (1) Note. The packing material usually serves to prevent exposure of the coupled connector parts to moisture, dust, or other foreign matter.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
604+, for an external conductor or cable molded in insulative sealing material.
- 277 With helically threaded coupling movement-actuating means or retaining means in addition to contact of coupling part:**  
This subclass is indented under subclass 271. Electrical connector comprising a coupling part\* having (a) separate means to forcibly bring together into mating relation the interfitting or matching parts of the coupling part and a mating part\* interfitting therewith, or (b) means separate from the current carrying components of the coupling part and a mating part to maintain the interengagement of such parts operable independently of or in addition to the coupling motion; including a helically ribbed portion adapted to interfit with a portion of the mating part by relative rotation and corresponding axial advance.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
309, for an electrical connector with coupling movement-actuating means or retaining means in addition to contact of a coupling part including a female threaded coupling part and an unauthorized separation preventer.
- 278 HAVING RESILIENT HOUSING FOR SEALING WITH COUPLED CONNECTOR:**  
This subclass is indented under the class definition. Electrical connector provided with an external shell member made of pliable material adapted to yield within its elastic limit to abuttingly mate with another such device and securely close the abutting faces and the interior of the mated assembly from moisture, dust, or other foreign matter.
- 279 Combined with distinct cable sheath sealing element or material:**  
This subclass is indented under subclass 278. Element connector wherein the end having a face mating with another connector has another discrete member or mass of filler substance which tightly engages the insulative covering surrounding an electricity transmitting strandlike member or assembly to prevent exposure of the interior of the device to moisture, dust, or other foreign matter.



**280 Connector comprising lamp or electron tube socket or base:**

This subclass is indented under subclass 278. Electrical connector particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment comprising the electrical connector of such a light radiating means or amplifying or switching member.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of coupling part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.

- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket or base including flexing insulation.
- 602, for a lamp or electron tube socket or base including insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.

**281 Having interengageable sealing extension:**

This subclass is indented under subclass 278. Electrical connector wherein the external shell member includes a portion extending in the direction to which the electrical connector is intended to be mated with another such electrical connector, which portion is intended to fit into a receiving pocket of the mating connector and perform the closing function by tightly fitting a generally cylindrical wall of the mating connector.

**282 Housing comprising resilient latching means:**

This subclass is indented under subclass 278. Electrical connector wherein the external shell member adapted to yield within its elastic limit also is intended to interfit with the mating device and require flexing thereof for separation from the mating member.

- (1) Note. The resilient housing of this subclass may snap over a protuberance of the mating member; or may be forced out of its normal position to lock to the mating member.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 350+, for resilient latching structure wherein there is no disclosure of sealing.

**283 COUPLED CONNECTOR TO SEALINGLY FIT WITH FIRST CONNECTOR:**

This subclass is indented under the class definition. Electrical connector including a contact carrying body which when mated with another contact carrying body of a mating connector

acts to securely close off the juncture of or the abutting or interfitting cojoined faces of the mated contact carrying bodies and the interior of the mated assembly thus formed from moisture, dust, or other foreign matter.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 89, for an electrical connector including an elastomeric or nonmetallic conductive, inductive shield or arc suppressing means.
- 190, for similar sealing means with an electrical connector with means for retaining or having a passageway for fluent material.
- 230, for a coupling part to receive a fluorescent or neon lamp having sealing element or material for cooperation with a coupled lamp.
- 271, for coupled connector parts with a distinct sealing element therebetween.
- 527+, for a wall, plate or panel mounting or attaching means with a connector part sealed thereto.
- 586+, for a connector having a contact carried by flexible or resilient insulation and having a sealing joint between coupled parts.
- 606, for a connector part with a external cable or conductor embedded in a molded insulative sealing material.

**284 ADAPTED TO COOPERATE WITH DUPLICATE CONNECTOR:**

This subclass is indented under the class definition. Electrical connector adapted to be electrical connected to another electrical connector under the class definition wherein the first and second electrical connectors are identical in configuration in the interfitting portions thereof.

- (1) Note. The overall structure of the first and second devices of this subclass is such that they appear to be exactly alike, but this subclass is intended to include those connectors that are somewhat different from each other; for example, a first connector with a latch hinges to it and a cooperating connector with a cam to receive the latch.

**285 Sequentially connected contacts, e.g., zipper type:**

This subclass is indented under subclass 284. Coupling part including a row of contacts connected to a pliable member to allow the contacts to be brought into interlocking engagement with a similar row of contacts on another pliable member by the action of camming device slideable along the respect rows of contacts.

- (1) Note. The device of this subclass has the appearance of a slide fastener used on a garment.

**286 Engaged by axial and pivotal movements (e.g., bayonet):**

This subclass is indented under subclass 284. Electrical connector having a projecting contact member extending along an axis wherein coupling is effected by movement relative to the other connector along that axis and by movement about an axis parallel to that axis.

**287 Engaged by lateral movement:**

This subclass is indented under subclass 284. Electrical connector having a projecting contact\* extending along an axis adapted to be coupled to another such electrical connector by movement of the contact member with respect thereto transversely of that axis.

**288 Pivotal:**

This subclass is indented under subclass 287. Electrical connector wherein the contact is moved about an axis parallel to its lateral extension during coupling of the connector to another electrical connector.

**289 Butt coupling:**

This subclass is indented under subclass 284. Electrical connector including a housing presenting a generally planar face to a corresponding housing of the other electrical connector and including a contact member\* having a contact surface generally coplanar therewith.

- (1) Note. Included herein is a connector having a contact intended to engage the cooperating connector with a directly, squarely abutting face.

**290 Contact intermeshable with duplicate mating contact:**

This subclass is indented under subclass 284. Electrical connector including a contact\* of a configuration to interfit with the contact of a cooperating connector such that a portion of the mating contact is gripped between opposed surfaces thereof; wherein the mating contact is identical in configuration thereto.

**291 Plural, electrically distinct contacts:**

This subclass is indented under subclass 290. Electrical connector including a first contact\* and a second contact that are electrically insulated from each other.

**292 With coupling movement retaining means in addition to contact of coupling part:**

This subclass is indented under subclass 284. Electrical connector comprising a coupling part\* having means separate from the current carrying elements thereof to maintain interengagement with a mating part.

- (1) Note. The overall structure of the device of this subclass and its mating part is such that they appear to be exactly alike, but, for example, this subclass is intended to include a connector having a latch hinged thereto, while the mating part includes a cam to be engaged by the latch.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 144, for an electrical connector with a contact preventer or retractable cover part movable about an axis with connector retaining means in addition to the contact thereof.
- 147, for an electrical connector with a contact preventer or retractable cover part with connector retaining means in addition to the contact thereof.
- 310+, for a coupling part with coupling movement retaining means in addition to the contact thereof, with distinct movement-actuating means to move the coupling part axially.
- 345+, for an electrical connector with coupling retaining means in addition to the contact thereof, generally.

**293 Resilient:**

This subclass is indented under subclass 292. Coupling part wherein the maintaining means is intended to be stressed within its elastic limit to hold the connectors together.

**294 With relatively rotatable movement-actuating or retaining ring:**

This subclass is indented under subclass 292. Coupling part wherein the maintaining means comprises an encompassing member thereabout which turns about an axis with respect to the remainder thereof wherein the encompassing member is intended to engage a portion of a mating part to either bring or hold the coupling part and the mating part together.

**295 Resiliently biased contact:**

This subclass is indented under subclass 284. Electrical connector including a contact\* intended to be stressed within its elastic limit to effect a tight fit with a contact of the other device.

**296 WITH COUPLING MOVEMENT-ACTUATING MEANS OR RETAINING MEANS IN ADDITION TO CONTACT OF COUPLING PART:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* having (a) separate means to forcibly bring interfitting or matching parts of the coupling part and a mating part\* interfitting therewith, i.e., to effect electrical connection; or (b) means separate from the current carrying components of the coupling part and a mating part to maintain the interengagement of such parts, the parts being operable independently of or in addition to the coupling motion, i.e., to maintain electrical connection.

- (1) Note. This and the indented subclasses provide only for a device of the "coupling part\* type, i.e., a device having a base or body, usually of insulation, carrying an electrical contact and constituting and connector which requires some complementary connector with a matching or interfitting conductive element. This does not include a mere binding post, clip, cord or cable terminal or the like involving only the immediate con-

nection between a wire, cable or bus bar and some other conductive part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 116+, for an uninterrupted support rail or uninterrupted contact with coupling movement-actuating means in addition to contact of coupling part.
- 144, for an electrical connector having a contact preventer or retractable cover part that is movable about an axis, combined with retaining means.
- 152+, for an electrical connector with a coupling separator.
- 449+, for means to prevent force on a conductor from being transmitted to an electrical connector.

**297 With guiding means for removable automobile radio or record player:**

This subclass is indented under subclass 296. Coupling part for use with a removable information receiving or transmitting device or with a sound reproducing device, wherein the coupling part has a surface for directing the device to move in a prescribed path with respect to the coupling part as electrical connection between the coupling part and the device is effected, and wherein the coupling part is to be used in a motor vehicle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 64, for an electrical connector that is part of a preformed panel circuit arrangement with a guide for directing panel circuit movement.
- 374, for an electric connector with a guiding means to effect mating, generally.
- 752.5, for an insulated connector body with guiding means for an inserted contact.

**298 Including resilient latching retaining means:**

This subclass is indented under subclass 297. Coupling part including a member that is yieldable within its elastic limit intended to engage the mating part and positively maintain electrical connection therewith.

**299 With coupling part retained in connection with mating part by presence of distinct coupling part:**

This subclass is indented under subclass 296. Coupling part adapted to interfit with a mating part\* and to be used in conjunction with a second coupling part which, when connected to a corresponding second mating part, physically blocks the first coupling part against removal from its mating part.

**300 Adapter:**

This subclass is indented under subclass 299. Coupling part (a) for mating with a first mating part and including integrally therewith a second coupling part for mating with a second mating part to thereby connect together the first and second mating parts, wherein the first and second mating parts could not be interconnected directly; (b) for mating with a first mating part and including integrally therewith a plurality of second coupling parts similar in configuration to the first mating part, for mating with plural other mating parts to provide multiple access to the first mating part; or (c) for mating with a first mating part and including integrally therewith a second coupling part similar in configuration to the first mating part to effectively reposition the second mating part from the location of the first mating part if it were interfitted therewith.

- (1) Note. The coupling part of clause (a) allows a coupling a part to be electrically connected to a physically noninterfitting mating part; the coupling part of clause (b) allows plural mating parts to be electrically connected to a single coupling part; and the coupling part of clause (c) effectively repositions a mating part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 105, for an adapter with safety grounding.
- 119, for an uninterrupted support rail or uninterrupted contact with an adapter.
- 124, for a candle simulation type electrical connector comprising an adapter.
- 236, for an adapter to receive a fluorescent or neon lamp.
- 323, for an adapter with coupling part retaining means in addition to the con-

- tact comprising a movable thread ring.
- 365, for an adapter with coupling retaining means in addition to the contact comprising a helically threaded member.
- 638+, for a member comprising two or more plural contact coupling parts with insulation other than a conductor sheath.
- 301 Retaining means requiring destruction of element before separation:**  
This subclass is indented under subclass 296. Coupling part adapted to couple with a mating part and including provision such that the parts cannot be uncoupled without breaking or otherwise destroying an element associated therewith.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
133+, for an electrical connector with a device, e.g., a key or combination lock, to prevent connection.
- 302 Threaded coupling part:**  
This subclass is indented under subclass 301. Coupling part including a helically ribbed portion adapted to interfit with a portion of the mating part by relative rotation and corresponding axial advance thereof.
- 303 Required destruction of lamp envelope:**  
This subclass is indented under subclass 302. Coupling part for use with or comprising the electrical connector of an illumination device including provision to require breakage of the glass bulb associated with the illumination device before the electrical connection can be broken.
- (1) Note. Included herein is a theft preventing device that eliminates theft by making any lamp removed unusable.
- 304 Including lock for retaining means (e.g., key or combination lock or requiring "special" tool):**  
This subclass is indented under subclass 296. Coupling part wherein the means to maintain interengagement with a mating part requires utilization of a special manipulation of a component thereof to permit such removal of the coupling part from a mating part.
- (1) Note. Included herein is a locking device requiring use of a key, a combination lock or other device requiring use of an uncommon tool to permit uncoupling. Also included herein is a device requiring presence of a particular sound (e.g., a voice command) or a particular anatomical feature (e.g., particular fingerprint).
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
133+, for locking structure for preventing coupling of coupled connectors.
- 305 Magnetically operated latch:**  
This subclass is indented under subclass 304. Coupling part wherein the means to maintain interengagement includes a member of iron or ironlike composition adapted to be moved to release the retaining means by magnetic attraction.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
38, for an electrical connector including magnet structure.
- 306 Threaded coupling part:**  
This subclass is indented under subclass 304. Coupling part including a helically ribbed portion adapted to interfit with a portion of the mating part by relative rotation and corresponding axial advance.
- (1) Note. In this and the indented subclasses, the means to forcibly bring the parts together or the means to maintain interengagement may comprise structure actually stamped from a contact and still integral therewith wherein the intended use of that structure is to hold the parts together such that a specially designed implement or a special manipulation is required for separation of the parts.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
277, for a threaded coupling part with a sealing element or material for cooperation with a coupled connector.  
665, for an insulated, plural contact electrical connector having an irregular,

- interrupted or discontinuous screw thread contact; wherein such irregularities are to increase friction with the groove of a mating connector.
- 735, for an insulated electrical connector having an irregular, interrupted or discontinuous screw thread contact; wherein such irregularities are to increase friction with groove of a mating connector.
- 307 Having freely rotatable component to prevent unthreading:**  
This subclass is indented under subclass 306. Coupling part in which electrical connection is maintained by allowing a component on the helically-ribbed portion to turn with respect to the helically-ribbed portion when in blocking condition, such that rotation thereof does not effect separation from the mating part.
- (1) Note. Herein the coupling part and its mating part are prevented from being separated by the presence of the freely rotatable component since there is no way to hold the helically ribbed portion to turn with respect to the mating part.
- (2) Note. The device of this subclass is intended to be a provision to prevent coupling separation and not be a coupling with parts relatively movable during use while preserving circuit continuity.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
47, for similar structure including relatively rotatable components intended to transmit electrical current while being rotated with respect to each other.
- 308 Retaining means entirely exterior of coupling part:**  
This subclass is indented under subclass 306. Coupling part wherein the means to maintain interengagement is distinct from and positioned outside the coupling part.
- 309 Retaining means comprising part of female coupling part:**  
This subclass is indented under subclass 306. Coupling part having a recessed contact intended to be received by a projecting contact of the mating part and wherein the means to maintain interengagement is a part of the coupling part having a recessed contact.
- 310 Retaining means with distinct movement-actuating means to move coupling part axially:**  
This subclass is indented under subclass 296. Coupling part having both (a) means to effect electrical connection, and (b) means to maintain electrical connection which is separate from and independently operable from the means to effect electrical connection and separate from the current carrying parts thereof; wherein the coupling action is generally in a straight line parallel to the longitudinal extent of the coupling part.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
144, for an electrical connector with a contact preventer or retractable cover part movable about an axis with connector retaining means in addition to the contact thereof.  
147, for an electrical connector with a contact preventer or retractable cover part with connector retaining means in addition to the contact thereof.  
292+, for an electrical connector adapted to cooperate with a duplicate electrical connector with connector retaining means in addition to the contact thereof.  
345+, for an electrical connector with coupling retaining means in addition to the contact thereof, generally.
- SEE OR SEARCH CLASS:  
200, Electricity: Circuit Makers and Breakers, for an electrical switch generally having a contact controlled for movement along a fixed path. However, a device that is basically an electrical connector will not be excluded from this class (Class 439) by the presence of a contact that is movable with respect thereto. Specifically, a

connector may include a first contact fixed mounted therein and a second contact movably mounted therein, such that upon engagement by the contact of a mating connector with the movable contact, it will move into engagement with the fixed contact, electrically coupling the three contacts together. To distinguish the connector with the movable contact of this subclass, note that for inclusion herein the electrical connection is normally made as a function of the physical uniting of two connectors; whereas in the device of Class 200 connection and disconnection is normally made without physical separation of the encasing structure.

- 311 For bayonet (breech) type locking ring:**  
This subclass is indented under subclass 310. Coupling part wherein the means to maintain electrical connection is rotatable relative to the coupling part or mating part and engages a lug on the other part to secure the parts together upon partial rotation of the means about a pivot parallel to the longitudinal extent of the coupling part.
- 312 Coupling part with relatively pivotable concentric movement-actuating or retaining ring:**  
This subclass is indented under subclass 296. Coupling part having an encompassing member thereabout which turns about an axis parallel to the longitudinal extent thereof and with respect thereto, wherein the encompassing member is intended to engage a portion of a mating part to either effect or maintain electrical connection.
- 313 Coupling part having appurtenant means for supporting other structure:**  
This subclass is indented under subclass 312. Coupling part combined with structure to hold against gravity structure in addition to the coupling part.
- (1) Note. Included herein is an electrical coupling part and additional housing structure fixedly attached thereto intended to support another structure such as a lamp.

- (2) Note. Included herein is an electrical coupling part and a hook for supporting a flexible suspension means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

529+, for an electrical coupling part with support means therefor, including appurtenant means for supporting other structure; and see the search notes thereunder for other electrical connectors having such support structure.

**314 Retaining bayonet:**

This subclass is indented under subclass 312. Coupling part wherein the encompassing member is intended to interfit with the mating part by moving first axially and then rotatably with respect to the mating part to engage a cooperating lug on the mating part.

- (1) Note. Under the definition, one coupling part may move into engagement with a mating part, the mating part having an annular latching component which is then rotated to engage a lug on the coupling part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

57, for a preformed panel circuit arrangement including a receptacle for a lamp or electron tube with connection effected by movement of the lamp or tube about its axis.

118, for a bayonet coupling part movable about its axis with coupling movement-actuating means or retaining means in addition to the contact thereof with an uninterrupted support rail or uninterrupted contact.

332+, for a bayonet coupling part with coupling movement-actuating means or retaining means in addition to the contact of the coupling part.

- 315 Having coupling indicating indicia or signal:**  
This subclass is indented under subclass 314. Coupling part including as a part thereof, indicating markings or an audible or visual indicator intended to designate completion of coupling or retaining operation.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
488+, for an electrical connector with indicating or identifying provision, generally.
- 316 Bayonet lug on axially extending finger:**  
This subclass is indented under subclass 314. Coupling part wherein the encompassing member includes a protuberance for interfitting with the mating part, extending laterally from an elongated extension aligned generally parallel to the axial extent of the coupling part.
- 317 With means to move ring:**  
This subclass is indented under subclass 314. Coupling part combined with means to engage and effect repositioning of the encompassing member about its axis.
- (1) Note. A biasing provision, e.g., a spring, is not considered to be a means to "effect repositioning" herein.
- 318 With means to prevent bayonet release:**  
This subclass is indented under subclass 314. Coupling part combined with means to physically block removal of the coupling part from the mating part by preventing either rotary or axial movement of the parts with respect to each other.
- (1) Note. A spring biasing a component to prevent accidental uncoupling is not included herein.
- 319 With spring to longitudinally bias movement-actuating or retaining ring:**  
This subclass is indented under subclass 314. Coupling part combined with means to be stressed within its elastic limit and yieldably urge the encompassing member in the direction parallel to its axis.
- 320 Threaded ring or ring adapted to engage threaded mating part:**  
This subclass is indented under subclass 312. Coupling part wherein the encompassing member includes a helically ribbed surface intended to mate with a corresponding surface of the mating part; or wherein the encompassing member includes a portion intended to mate with a helically ribbed surface of the mating part; so that the parts are drawn or held together by rotation of the encompassing member.
- 321 With means to prevent unthreading:**  
This subclass is indented under subclass 320. Coupling part combined with provision to block the encompassing member against rotating with respect to the mating part after connection has been established.
- 322 Coupling part having concentric contacts:**  
This subclass is indented under subclass 320. Coupling part including a first contact surface and a second contact surface, each of which is circular about a common axis at a cross-section therethrough.
- 323 Adapter:**  
This subclass is indented under subclass 320. Coupling part (a) for mating with a first mating part and including integrally therewith a second mating part to thereby connect together the first and second mating parts, wherein the first and second mating parts could not be interconnected directly; (b) for mating with a first mating part including integrally therewith a plurality of second coupling parts similar in configuration to the first mating part, for mating with plural other mating parts to provide multiple access to the first mating part; or (c) a first coupling part for mating with a first mating part and including integrally therewith a second coupling part similar in configuration to the first mating part to effectively reposition the second mating part from the location of the first mating part if it were interfit therewith.
- (1) Note. The coupling part of clause (a) allows a coupling part to be electrically connected to a physically noninterfitting mating part; the coupling part of clause (b) allows plural mating parts to be electrically connected to a single coupling part; and the coupling part of clause (c) effectively repositions a mating part.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
105, for an adapter with safety grounding  
119, for an uninterrupted support rail or uninterrupted contact with an adapter.  
124, for a candle-simulation type electrical connector comprising an adapter.



- 236, for an adapter to receive a fluorescent or neon lamp.
- 300, for an adapter retained in connection with a mating part by the presence of a distinct coupling part.
- 365, for an adapter with coupling retaining means in addition to the contact comprising a helically threaded member.
- 638+, for a member comprising two or more plural contact coupling parts with insulation other than a conductor sheath.
- 324 Male contact pin with blockable retaining means at tip, e.g., Modrey:**  
This subclass is indented under subclass 296. Coupling part comprising a rodlike male member including a base extending from a conductor and an exposed extremity having means to maintain interengagement with a mating part located at that extremity, further having means to physically prevent movement of the retaining means to an inactive position.
- (1) Note. Included herein is a device commonly referred to as a "Modrey" type pin.
- 325 Coupling part for receiving edge of planar board moving parallel to plane:**  
This subclass is indented under subclass 296. Coupling part particularly adapted to receive a lateral extremity of a rigid sheetlike mating part adapted to move when making electrical connection therewith in a direction along the flat extent thereof.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 55+, for a connector comprising a part of or combined with a rigid sheetlike member.
- 326 With angular mating:**  
This subclass is indented under subclass 325. Coupling part wherein the mating is to be by a dual movement, first along the flat extent of the sheetlike mating part and then about an axis parallel to the flat extent.
- 327 Retaining means exterior of slot:**  
This subclass is indented under subclass 325. Coupling part including means to maintain electrical connection that is adapted to engage the sheetlike mating part away from the received lateral extremity thereof.
- 328 Fingerlike grasping means comprising portion of coupling part:**  
This subclass is indented under subclass 327. Coupling part wherein the means to maintain electrical connection is generally elongated and is considered to be a part of the coupling part.
- (1) Note. A fingerlike retaining means that is first applied to the coupling part to become a part thereof and then, after coupling, applied to the mating part is included herein; a fingerlike retaining part that is snapped over the assembly of the coupling and mating parts is not included herein.
- 329 For direct connection to a flexible tape or printed circuit board:**  
This subclass is indented under subclass 296. Coupling part intended to be used with and make contact with a sheetlike member that is either (a) elongated and pliable or (b) is generally rigid, and includes an electrical conductor extending in a direction of the sheetlike extent.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 55+, for an electrical connector comprising or combined with a preformed panel circuit arrangement, e.g., a printed circuit board.
- 492+, for an electrical connector including or for use with a tape cable.
- 330 For dual inline package (DIP):**  
This subclass is indented under subclass 296. Coupling part intended to be used with very small panel circuit arrangement on which circuit elements are preplaced and fixed including a first and a second straight row of three or more contacts on each of two opposite marginal extremities.
- (1) Note. The member with which the coupling part of this subclass is to be used includes circuitry that is integrated as a package in which the circuitry is not readily accessible.
- (2) Note. "Very small panel circuit arrangement", implies that the member is a pre-

fabricated sheetlike part on which circuit elements are preplaced and fixed (i.e., a printed circuit) and that circuitry is so small that, if it were exposed, its details could not ordinarily be seen by the naked eye.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 55, for a connector comprising part of or combined with a rigid sheetlike member, generally.
- 70, for a preformed panel circuit arrangement with provision to conduct electricity from panel circuit to another panel circuit.
- 264, for a coupling part with actuating means urging contact to move laterally with respect to rest of coupling part and toward mating part comprising a contractile receptacle
- 525, for an electrical connector for a dual inline package (DIP), generally.
- 526, for an aligning means for a dual inline package (DIP).

**331 Movement-actuating or retaining means comprises cover press:**

This subclass is indented under subclass 330. Coupling part including means to effect electrical connector which means is adapted to be superposed over the planar member and exert force simultaneously on the contacts of the member along each row of the contacts.

**332 Bayonet coupling part movable about its axis:**

This subclass is indented under subclass 296. Coupling part designed to be brought into interfitting relationship with the mating part\* by a first movement along its greatest axial extent and then by a movement about the central axis of the coupling part with respect to the mating part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 57, for a preformed panel circuit arrangement including a receptacle for a lamp or electron tube with connection effected by movement of the lamp or tube about its axis.
- 118, for a bayonet coupling part movable about its axis with coupling move-

ment-actuating means or retaining means in addition to the contact thereof with an uninterrupted support rail or uninterrupted contact.

- 314+, for a coupling part with a retaining bayonet that is a relatively pivotable concentric movement-actuating or retaining ring.

**333 With distinct means to secure movement-actuating or retaining means against movement:**

This subclass is indented under subclass 332. Coupling part combined with structure to block the means to effect or maintain electrical connection.

**334 Coupling part including appurtenant means for supporting other structure:**

This subclass is indented under subclass 332. Coupling part combined with structure to hold against gravity structure in addition to the coupling part.

- (1) Note. Included herein is an electrical coupling part and additional housing structure fixedly attached thereto intended to support another structure such as a lamp.
- (2) Note. Included herein is an electrical connector and a hook for supporting flexible suspension means.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 529, for an electrical coupling part with supporting means therefor, including appurtenant means for supporting other structure; and see the search notes thereunder for other electrical connectors having such support structure.

**335 Comprising cylindrical shell having lug receiving slot:**

This subclass is indented under subclass 332. Coupling part including a tubular portion having a portion cut out or recessed along its axis to receive and guide protuberances of the mating part.

- (1) Note. The cylindrical shell herein may comprise either a male or female portion of a coupling part.

**336 Lamp or electron tube socket:**

This subclass is indented under subclass 335. Coupling part particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment excluding, vacuum maintaining envelope.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.

- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.
- 699.2, for a plural-contact electrical connector with insulation other than the conductor sheath particularly adapted to receive a lamp.

**337 Having axially extending bayonet contact:**

This subclass is indented under subclass 332. Coupling part wherein an electricity conductor member for making electrical contact elongated along the coupling direction and is shaped for interfitting with cooperating structure of the mating part to prevent separation thereof.

- (1) Note. Included herein is an electrical connector having a contact for interlocking with noncontact structure of the mating part; and an electrical contact with a nonconducting portion for holding it in engagement with a mating part and with a contact for interfitting with the contact of the mating part.

**338 Including movement of coupling part about axis:**

This subclass is indented under subclass 296. Coupling part intended to be brought into interfitting relationship with the mating part by a movement about the central axis of the coupling part with respect to the mating part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 57, for a preformed panel circuit arrangement including a receptacle for a lamp or electron tube with connection effected by movement of the lamp or tube about its axis.

- 312+, for a coupling part with relatively piv-  
otable concentric movement actuating  
or retaining ring in addition to the  
contact thereof.
- 339 Threaded coupling part:**  
This subclass is indented under subclass 338.  
Coupling part to be brought into interfitting  
relationship with the mating part by a simulta-  
neous movement about and along the central  
axis of the coupling part with respect to the  
mating part.
- 340 With socket contact transversely engaging  
male threaded part:**  
This subclass is indented under subclass 339.  
Coupling part wherein either that part or the  
mating part is a male member having a helical  
ridge shaped contact extending along a tubular  
wall thereof and wherein the cooperating part  
includes a contact member adapted to engage  
that helical ridge shaped contact at only a por-  
tion thereof while other portions are engaged  
by conductive structure for bringing or holding  
the coupling part and the mating part together.
- 341 Pivotal movement:**  
This subclass is indented under subclass 338.  
Coupling part wherein relative movement  
thereof with respect to the mating part is  
restricted to less than 360°.
- 342 Including compound movement of coupling  
part:**  
This subclass is indented under subclass 296.  
Coupling part intended to be brought into inter-  
fitting relationship with the mating part by a  
first movement and then by a second move-  
ment that is distinct from the first.
- 343 Including appurtenant means for support-  
ing other structure:**  
This subclass is indented under subclass 342.  
Coupling part combined with structure to hold  
against gravity structure in addition to the cou-  
pling part.
- (1) Note. Included herein is an electrical  
coupling part and additional housing  
structure fixedly attached thereto  
intended to support another structure  
such as a lamp.
- (2) Note. Included herein is an electrical  
coupling part and a hook for supporting  
flexible suspension means.
- SEE OR SEARCH THIS CLASS, SUB-  
CLASS:  
529, for an electrical coupling part with  
supporting means therefor, including  
appurtenant means for supporting  
other structure; and see the search  
notes thereunder for other electrical  
connectors having such support struc-  
ture.
- 344 Having push-pull contacts spaced along only  
one planar side wall transverse to longitudi-  
nal engagement axis (e.g., telephone jack or  
plug):**  
This subclass is indented under subclass 296.  
Coupling part adapted to engage or disengage a  
mating part by pure rectilinear movement rela-  
tive thereto; including a contact carrying planar  
surface extending in the direction of coupling  
movement; wherein not more than one plural-  
ity of contacts are spaced along a straight line  
on the planar surface perpendicular to the  
direction of coupling movement.
- SEE OR SEARCH THIS CLASS, SUB-  
CLASS:  
676, for similar structure lacking a latching  
means other than the contact.
- 345 Retaining means:**  
This subclass is indented under subclass 296.  
Coupling part having means separate from the  
current carrying elements thereof to maintain  
interengagement with a mating part\*, i.e., to  
maintain electrical connection.
- SEE OR SEARCH THIS CLASS, SUB-  
CLASS:  
144, for an electrical connector with a con-  
tact preventer or retractable cover part  
movable about an axis with connector  
retaining means in addition to the con-  
tact thereof.  
147, for an electrical connector with a con-  
tact preventer or retractable cover part  
with connector retaining means in  
addition to the contact thereof.  
292+, for an electrical connector adapted to  
cooperate with a duplicate electrical

- connector with connector retaining means in addition to the contact thereof.
- 310+, for a coupling part with coupling movement retaining means in addition to the contact thereof, with distinct movement-actuating means to move the coupling part axially.
- 346 Adapted to engage contact of mating part:**  
This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection is a nonconducting member adapted to hold to the conductive contact\* of the other part.
- (1) Note. The retaining engagement is non-conductive.
- 347 Laterally moving slide:**  
This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection moves transversely with respect to the longitudinal movement of coupling action and the means is rigid in the portion engaging the mating part.
- (1) Note. Included herein is a laterally sliding plate as well as a laterally sliding pin.
- 348 Laterally moving roller or ball:**  
This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection moves transversely with respect to the longitudinal movement of coupling action and the means includes a portion engaging the mating part that is circular in cross-section or spherical and is allowed to turn about its axis when mating is effected.
- 349 Toroidal band urged radially of connection or adapted to be compressed for retention, e.g., O-ring:**  
This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection has the shape of a tube curved upon itself into a ring and is adapted to function for maintaining interengagement by being resiliently urged toward or away from the center of the ring or by being resiliently urged toward the center of the tubular configuration.
- (1) Note. The "tube" of this subclass may be circular or rectangular, but must be of such configuration that force on one part is transmitted to other parts of the tubular cross-section, as compared to a sleeve wherein one portion can be forced to move without affecting other portions.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
252, for a self-aligning contact formed in a tubular configuration biased towards its axis by a contractile band.
- 350 Finger or stretchable sleeve resiliently urged laterally of connection:**  
This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection has the shape of (a) an elongated protuberance adapted to flex within its elastic limit transversely of its longitudinal extent to grippingly engage the mating part; or (b) a tube adapted to stretch within its elastic limit outwardly of its central axis to grippingly engage the mating part.
- (1) Note. Included herein is movement of the finger about the axis of a circular connector as well as radially.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
282, for an electrical connector having a resilient housing for sealing with a coupled connector wherein the housing comprises a resilient latching means.
- 351 Coupling part having appurtenant means for supporting other structure:**  
This subclass is indented under subclass 350. Coupling part combined with structure to hold against gravity structure in addition to the coupling part.
- (1) Note. Included herein is an electrical coupling part and additional housing structure fixedly attached thereto.
- (2) Note. Included herein is an electrical coupling part and a hook for supporting flexible suspension means.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
529, for an electrical coupling part with supporting means therefor, including appurtenant means for supporting other structure; and see the search notes thereunder for other electrical connectors having such support structure.
- 352 With additional means to cause or prevent unlatching:**  
This subclass is indented under subclass 350. Coupling part combined with structure to engage the resilient member to effect release thereof from engagement with the mating part, or to effect positive securement of the coupling part to a mating part.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
253, for similar structure having a screw coupling part adapted to be engaged or disengaged without rotary motion.  
258, for similar structure including a tether to unlatch from a mating part.
- 353 Finger inwardly biased during coupling or uncoupling:**  
This subclass is indented under subclass 350. Coupling part wherein the elongated member is moved radially toward the center of the coupling part against its elastic bias when going into or out of coupling engagement with a mating part.
- 354 Rearwardly extending finger:**  
This subclass is indented under subclass 353. Coupling part wherein the elongated protuberance is attached to the coupling part such that, as the mating occurs, the portion of the protuberance that flexes is advanced of the portion in engagement with the mating part.
- 355 Plural independent coupling parts:**  
This subclass is indented under subclass 350. Coupling part including a first coupling part\* for interfitting with a mating part\* and a second coupling part for interfitting at the same time with a second mating part wherein the interfitting of one is not dependent on the interfitting of the other.
- 356 Coupling part comprising lamp or electron tube socket:**  
This subclass is indented under subclass 350. Coupling part intended to receive a male portion of an illumination device or of a device having electrical amplifying or switching mechanism in an evacuated environment.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.  
168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.  
182, for a lamp or electron tube socket including arc suppressing or extinguishing means.  
220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.  
226+, for a coupling part to receive a fluorescent or neon lamp.  
280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.  
336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.  
375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.  
414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.  
419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.  
541, for plural lamp or electron tube sockets including supporting means therefor.  
558, for a lamp or electron tube socket extending into a supporting panel.

- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.
- 357 Resilient finger:**  
This subclass is indented under subclass 350. Coupling part wherein the means to maintain electrical connection has the shape of an elongated protuberance adapted to flex within its elastic limit transversely of its longitudinal extent to grippingly engage the mating part.
- 358 With graspable portion:**  
This subclass is indented under subclass 357. Coupling part wherein the elongated protuberance is provided with a portion intended to be engaged by the hand of an operator.
- 359 Retaining means comprising helically threaded member:**  
This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection is generally tube or rod-like and has a rib extending continually about and along its axis for interengagement with another member so that relative rotation effects longitudinal movement between the tube or rodlike means and the other member.
- 360 For lamp or electron tube:**  
This subclass is indented under subclass 359. Coupling part particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical switching means utilizing an environment excluding, vacuum maintaining envelope.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.
- 541, for a plural lamp or electron tube sockets including supporting means thereof.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.
- 361 Including appurtenant means for supporting other structure:**  
This subclass is indented under subclass 359. Coupling part combined with structure to hold against gravity structure in addition to the coupling part.

- (1) Note. Included herein is an electrical coupling part and additional housing structure fixedly attached thereto.
- (2) Note. Included herein is an electrical coupling part and a hook for supporting a flexible suspension means.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

529, for an electrical coupling part with supporting means therefor, including appurtenant means for supporting other structure; and see the search notes thereunder for other electrical connectors having such support structure.

**362 Parallel to connection:**

This subclass is indented under subclass 359. Coupling part wherein electrical engagement with a mating part is effected along a straight path and wherein the axis of the tube or rodlike maintaining means extends in the same direction as that path.

**363 For retaining tubular conductor in electrical contact:**

This subclass is indented under subclass 362. Coupling part including a conductor for carrying electricity away from the coupling part comprising an elongated shell-like member to be held directly in contact with the contact surface of the mating part.

**364 Passing centrally through coupling part:**

This subclass is indented under subclass 362. Coupling part wherein the axis of the tube or rodlike retaining means passes through the center of the coupling part.

- (1) Note. A point intermediate a pair of coupling parts (e.g., a duplex outlet) is not considered to be central of the coupling part.

**365 Adapter:**

This subclass is indented under subclass 362. Coupling part (a) for mating with a first mating part and including integrally therewith a second coupling part for mating with a second mating part to thereby connect together the first and second mating parts, wherein the first and

second mating parts could not be interconnected directly; (b) for mating with a first mating part and including integrally therewith a plurality of second coupling parts similar in configuration to the first mating part; for mating with plural other mating parts to provide multiple access to the first mating part; or (c) for mating with a first mating part and including integrally therewith a second coupling part similar in configuration to the first mating part to effectively reposition the second mating part from the location of the first mating part if it were interfitting therewith.

- (1) Note. The coupling part of clause (a) allows a coupling part to be electrically connected to a physically noninterfitting mating part; the coupling part of clause (b) allows plural mating parts to be electrically connected to a single coupling part; and the coupling part of clause (c) effectively repositions a mating part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

105, for an adapter with safety grounding.  
 119, for an uninterrupted support rail or uninterrupted contact with an adapter.  
 124, for a candle simulation type electrical connector comprising an adapter.  
 236, for an adapter to receive a fluorescent or neon lamp.  
 300, for an adapter retained in connection with a mating part by the presence of a distinct coupling part.  
 323, for an adapter with coupling part retaining means in addition to the contact comprising a movable threaded ring.  
 638+, for a member comprising two or more plural contact coupling parts with insulation other than a conductor sheath.

**366 Retaining functioning electrical component (e.g., tube, lamp, fuse, battery, etc.):**

This subclass is indented under subclass 345. Coupling part for use directly with a unitized structure intended to utilize electrical energy to perform a useful operation.



**367 Protective enclosure:**

This subclass is indented under subclass 345. Coupling part including an encasing shell for providing physical protection of the coupling part.

**368 Single means retaining plural distinct coupling parts and mating parts together:**

This subclass is indented under subclass 345. Coupling part comprising a unitary structure to maintain electrical connection of a first coupling part and a first mating part and to maintain electrical connection of a second coupling part and a second mating part, wherein the first parts and second parts are separate from one another.

**369 For unsupported coupling part and unsupported mating part (e.g., connecting extension cords):**

This subclass is indented under subclass 345. Coupling part not intended to be held against gravity by a base member and wherein the mating part to which it is adapted to be connected is also not intended to be held against gravity by a base member.

- (1) Note. Included herein is a coupling part that is the termination of an "extension cord" adapted to be connected to another extension cord.
- (2) Note. The means retaining a pair of coupling parts together of this subclass may inherently relieve a contact from stress.

SEE OR SEARCH THIS CLASS, SUBCLASS:

449+, for means to prevent force and a conductor from being transmitted to an electrical connector.

502+, for an "extension cord" generally, including an electrical connector with a flaccid conductor and another electrical connector spaced therealong.

**370 Resiliently urging coupling part and mating part together:**

This subclass is indented under subclass 345. Coupling part wherein a portion of the means to maintain electrical connection in use is intended to be stressed within its elastic limit

and to accordingly bias the coupling part into tight fit with the mating part.

**371 Pliable band, conductor sheath engaging means, or adhesive:**

This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection of the parts comprises (a) a flexible member capable of exerting force only in tension along its length, (b) means for engaging the encasing structure (usually insulation) of a pliable conductor assembly, or (c) means for application of treatment by a surface bonding material.

**372 Rotatable retaining means, pivotable retaining means, or actuated gripping retaining means:**

This subclass is indented under subclass 345. Coupling part wherein the means to maintain electrical connection either: (a) turns 360° or more about an axis with respect to the coupling part, (b) turns less than 360° about an axis with respect to the coupling part, or (c) includes means to engage and urge the means radially inwardly.

**373 Wall or outlet mounted:**

This subclass is indented under subclass 345. Coupling part to be used as a power supply in household type use of electricity wherein the means to maintain electrical connection of is secured either to the wall on which the coupling part is mounted or to a portion of the coupling part itself.

**374 WITH GUIDING MEANS FOR MATING OF COUPLING PART:**

This subclass is indented under the class definition. Electrical connector provided with non-conductive means to cooperate with a mating connector to slidingly direct the device and the mating connector to assume a desired alignment as the device is mated with the mating connector.

- (1) Note. The "nonconductive means" may be made of metal, but is not intended to transmit electricity in use of the device.
- (2) Note. The portion of the mating connector engaged by the alignment causing member may be a contact\* or other conductor, or may be a nonconductor.

- (3) Note. The guiding means herein may serve to polarize the device.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 64, for an electrical connector that is part of a preformed panel arrangement with a guide for directing panel circuit movement.
- 297+, for an electrical connector with a guiding means for receiving longitudinally moved communications device, e.g., an automobile radio, with coupling movement-actuating means or retaining means in addition to contact.
- 752.5, for an insulated connector body with guiding means for an inserted contact.

SEE OR SEARCH CLASS:

- 200, Electricity: Circuit Makers and Breakers, for an electrical contact intended to make and break with mating contact under controlled or guided movement, wherein both contacts are considered to be an integral member.

**375 Lamp or electron tube socket or base:**

This subclass is indented under subclass 374. Electrical connector particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment excluding vacuum maintaining envelope; or comprising the electrical connector of such a light radiating member or amplifying or switching member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.

- 226+, for a coupling part to receive a fluorescent neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket adapted to receive a cooperative lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.
- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto, (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.

**376 For constrained pivotal or plural movement coupling:**

This subclass is indented under subclass 374. Electrical connector having means to guide the device into mating relationship with a mating connector by directing relative movement of the device (a) about an axis or (b) along a first and then a second path.

- 377 For guiding side of movable panel, e.g., circuit board:**  
This subclass is indented under subclass 374. Electrical connector intended to engage a lateral boundary of a planar member and slidingly direct that member into mating relationship with the device.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
55+, for an electrical connector comprising or combined with a preformed panel circuit arrangement.
- 378 Rodlike guide member extending in coupling direction or tubular passage for receiving rodlike guide member:**  
This subclass is indented under subclass 374. Electrical connector wherein the directing means comprises an opening for encircling and receiving an elongated cylindrical shaft of a mating connector or comprises such an elongated cylindrical shaft.
- 379 With plural contacts circularly disposed about guide opening or rodlike member, e.g., electron tube base:**  
This subclass is indented under subclass 378. Electrical connector including a plurality of contact members positioned in a circle, the center of which coincides with the center of the tubular passage or of the elongated cylindrical shaft.
- 380 Tubular passage receives contact:**  
This subclass is indented under subclass 378. Electrical connector wherein the directing means comprises a tubular passage for an elongated cylindrical shaft, which shaft includes a contact member or comprises a nonconductive portion of a rodlike shaft, which shaft also includes a contact member.
- 381 Bare contact:**  
This subclass is indented under subclass 380. Electrical connector wherein the directing means comprises a tubular passage for an elongated cylindrical shaft, which shaft is a contact member and has no insulation in the portion received by the guide opening.
- 382 INCLUDING VIBRATION CUSHIONING OR ABSORBING MEANS:**  
This subclass is indented under the class definition. Electrical connector having or combined with means to lessen, soften, or take up mechanical shocks or impulses imparted thereto.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
2, for interrelated electrical connectors relatively movable during use with antivibration mounting.  
86+, for an electrical connector having an elastomeric or nonmetallic conductive portion which may dampen vibration.  
586+, for an electrical connector including flexing insulation, generally.  
775+, for a connector or contact, per se, having a movable or resilient securing part.
- 383 Adapted to fit between opposing faces of mated connectors:**  
This subclass is indented under subclass 382. Electrical connector adapted to abuttingly engage a cooperating connector wherein the means to lessen, soften, or take up mechanical shocks or impulses is physically located between the abutting faces of the device and a cooperating connector.
- (1) Note. One of the connectors may comprise the base of a lamp or electron tube.
- 384 For supporting connector:**  
This subclass is indented under subclass 382. Electrical connector wherein the means to lessen, soften, or take up mechanical shocks or impulses also serves as a mounting for the device or another connector.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
527+, for a coupling part with supporting means therefor.
- 385 By gripping mating connector:**  
This subclass is indented under subclass 384. Electrical connector wherein the means to lessen, soften, or take up mechanical shocks or impulses is constructed to exert yieldable force

about and radially inwardly toward the connector with which the device cooperates.

- (1) Note. The mating connector may comprise the base of a lamp or electron tube.

**386 WITH COMMONING MEANS FOR RETURN GROUND:**

This subclass is indented under the class definition. Electrical connector including conductor means in electrical engagement with plural other conductors intended to be used to hold all those conductors at neutral potential.

**387 CONTACT COMPRISING CUTTER (SEVERING, PIERCING, ABRADING, SCRAPING, BREAKING, OR TEARING):**

This subclass is indented under the class definition. Electrical connector including a penetrating contact, i.e., a member for engaging and making electrical contact with another device, wherein that member also serves to forcibly separate one portion of the second or a third device from another portion thereof.

- (1) Note. Included herein is:
- (a)Severing - subdividing one portion of the other device from another portion thereof.
  - (b)Piercing - penetrating the other device to form an opening therein or there-through.
  - (c)Abrading - engaging the other device to grind away a portion thereof by the action of a crystalline tool.
  - (d)Scraping - subjecting the other device to a surface action by a sharp blade to remove a portion thereof or a coating thereon.
  - (e)Breaking - subjecting the other device to bending forces exceeding the strength thereof.
  - (f)Tearing - subjecting the other device to tensile forces exceeding the strength thereof.

**388 Adapted to engage tapered post (e.g., storage battery terminal):**

This subclass is indented under subclass 387. Electrical connector intended to engage and make electrical contact with an elongated rod-like member at a conical portion thereof.

- (1) Note. The electrical connection of a lead-acid storage battery such as used in an automobile commonly has been a tapered rod.

**389 Insulation cutter:**

This subclass is indented under subclass 387. Electrical connector including a penetrating contact to be used to make electrical contact with a conducting member and intended to penetrate a nonconductor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 201, for a device for piercing through a grease package to make electrical connection with a contact thereby, such as is used in oil well drilling apparatus.

**390 Adapted to engage liquid, granular, or metallic wool conductor:**

This subclass is indented under subclass 389. Electrical connector for making electrical contact with an electricity transmitting member that is (a) in the liquid state when conducting electricity, (b) is composed of multiple, unconnected particles collectively acting as a single member, or (c) is composed of randomly intertwined strands acting collectively as a single member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 7, for interrelated electrical connectors relatively movable during use having a "nonsolid" contact.

**391 Conductor sheath piercing:**

This subclass is indented under subclass 389. Electrical connector wherein the conducting member is strandlike and is enclosed by an elongated generally encircling casing of solid nonconducting material wherein the penetrating contact cuts through the casing.

- 392 With means to cut off excess end of conductor:**  
This subclass is indented under subclass 391. Electrical connector combined with or including means to sever away a surplus portion of the conducting strand being electrically engaged.
- 393 Cutter piercing insulation parallel to conductor axis:**  
This subclass is indented under subclass 391. Electrical connector wherein the penetrating contact engages the strandlike conductor by relative movement along the axis of the strandlike conductor.
- 394 Coaxial cable:**  
This subclass is indented under subclass 391. Electrical connector particularly adapted to be used with an electricity transmitting, generally circular cross-section, elongated cable\* including a first electrical conductor at the axis thereof and an isolated second conductor that is sleeve-like and concentric with respect to the axis of the first conductor.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
578+, for an electrical connector including or for use with a coaxial cable generally.
- 395 Having slot edge for cutting insulation:**  
This subclass is indented under subclass 391. Electrical connector wherein the penetrating contact is a platelike conductive body having a first margin provided with a notch or opening therein such that the stranded conductor when moved to a certain position within the notch or opening is passively urged against the first margin by a second margin with sufficient force to penetrate the casing and make electrical contact with the stranded conductor.
- (1) Note. Penetration may be made by both the first margin and the second margin.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
443, for a contact having a slot edge for piercing, generally.
- 396 With additional diverse sharp cutting edge:**  
This subclass is indented under subclass 395. Electrical connector including a piercing member or surface in addition to and of a type different from the margin of a notch or opening in the platelike conductive body.
- (1) Note. Included herein is a cutting contact wherein a notch or opening is provided with a sharp piercing point (e.g., extending from the intersection of the first and second margins).
- 397 Contact engages conductor in at least two locations spaced along conductor axis:**  
This subclass is indented under subclass 395. Electrical connector wherein the conductive body has a portion intended to make electrical contact with the strandlike conductor at a first point along the length of the conductor and has another portion intended to make the electrical contact with the stranded conductor at a different point along the length thereof.
- (1) Note. The other portion of the contact may be the second margin or may be a distinct contact surface.
- 398 Conductor engaging slot extends through bight of contact:**  
This subclass is indented under subclass 397. Electrical connector wherein the platelike conductive body is generally folded back on itself and the notch or opening therein is such that it extends through the fold to present a first and cooperating second margin and a third and its cooperating fourth margin, wherein the first and third margins engage the strandlike conductor at different points along the length of the strandlike conductor.
- 399 With stress relieving means for conductor to terminal joint:**  
This subclass is indented under subclass 397. Electrical connector combined with distinct means for carrying the reactive physical load from tensile forces of an electricity transmitting conductor or cable to thereby prevent that physical load from being transmitted to electricity transmitting joint.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 401, for a contact comprising an insulation cutter having a slot edge for cutting insulation, with a stress relieving means to engage the conductor at a second axial location.
- 407, for a contact comprising an insulation cutter having a slot edge for cutting insulation, wherein the contact is a portion of an elongated channel, with a stress relieving means.
- 449+, for an electrical connector with stress relieving means for conductor to terminal joint, generally, and see the Search Notes thereunder.
- 400 With distinct surface holding conductor in slot:**  
This subclass is indented under subclass 397. Electrical connector having a configuration such as to block movement of the strandlike conductor out of the contact notch or opening in the conductive body.
- 401 Contact engages conductor at axial location and engages insulation at second axial location to relieve stress at conductor to terminal joint:**  
This subclass is indented under subclass 395. Electrical connector wherein the conductive body has a first portion for making electricity transmitting engagement with the strandlike conductor at a first point along its length and has a second portion for engaging the insulative material surrounding the conductor at a location axially displaced from the first point, wherein the engagement with the insulation is for carrying the reactive physical load from the tensile forces of an electricity transmitting suspended conductor or cable to thereby prevent that physical load from being transmitted to the electricity transmitting joint.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 339, for a contact comprising an insulation cutter having a slot edge for cutting insulation, wherein the contact engages the conductor at axially spaced points, with a stress relieving means.
- 407, for a contact comprising an insulation cutter having a slot edge for cutting insulation, wherein the contact is a portion of an elongated channel, with a stress relieving means.
- 449+, for an electrical connector with stress relieving means for conductor to terminal joint, generally, and see the Search Notes thereunder.
- 402 Single conductive member having plural slots formed by three or more fingers for connecting plural conductors:**  
This subclass is indented under subclass 395. Electrical connector comprising a unitary platelike conductive body having a second notch or opening therein wherein each notch or opening is formed by a pair of extensions and wherein the first and second notch or opening utilize a common extension, intended to receive and make electrical contact with a first and a second electrically conductive member and transmit electrical current therebetween.
- 403 From different margins of contact:**  
This subclass is indented under subclass 402. Electrical connector wherein the first pair of extensions project in a first direction and the second pair of extensions project in a different direction.
- (1) Note. Usually the contact from which the extensions of this subclass project is planar such that the extensions project from the planar edges.
- 404 Plural contacts, each formed by slot between pair of fingers:**  
This subclass is indented under subclass 395. Electrical connector including a first conductive body having a notch or opening therein formed by a pair of extensions and including a second conductive body having a notch or opening therein formed by a pair of extensions intended to electrically contact first and second electrically conductive members.
- 405 Longitudinally and laterally staggered contacts:**  
This subclass is indented under subclass 404. Electrical connector wherein the first notch or opening of the first conductive body is in a first plane normal to the axis of the conductive member, wherein the notch or opening of the

second conductive body is in a second different plane normal to the axis of the conductive member, and wherein the notch or opening of the first conductive body is not in axial alignment with any such notch or opening in the second conductive body.

SEE OR SEARCH THIS CLASS, SUBCLASS:

494, for an electrical connector including or for use with a tape cable wherein the cable is splayed into dual rows of contacts.

**406 Contact is portion of elongated channel:**

This subclass is indented under subclass 395. Electrical connector wherein the platelike conductive body either is, or is part of, a structure which in cross-section is circular or U-shaped.

(1) Note. The elongated channel of this subclass may house the strandlike conductor and the means having V-shaped notch is positioned generally transversely of the extent of the channel.

**407 With stress relieving means for conductor to terminal joint:**

This subclass is indented under subclass 406. Electrical connector combined with distinct means for carrying the reactive physical load from the tensile forces of an electricity transmitting suspended conductor or cable to thereby prevent that physical load from being transmitted to the electricity transmitting joint.

SEE OR SEARCH THIS CLASS, SUBCLASS:

339, for a contact comprising an insulation cutter having a slot edge for cutting insulation, wherein the contact engages the conductor at axially spaced points, with a stress relieving means.

401, for a contact comprising an insulation cutter having a slot edge for cutting insulation, with a stress relieving means for conductor to terminal joint, generally, and see the Search Notes thereunder.

449+, for an electrical connector with stress relieving means for conductor to terminal joint, generally, and see the Search Notes thereunder.

**408 More than one conductor in same slot:**

This subclass is indented under subclass 395. Electrical connector specifically intended to receive a plurality of distinct electricity transmitting strandlike members in a common notch or opening.

**409 Pivoting cutter, pivoting means to operate cutter, or pivoting means to move conductor against cutter:**

This subclass is indented under subclass 391. Electrical connector (1) wherein the penetrating contact moves with respect to the remainder of the device about an axis less than 360° when making electrical contact; (2) having a component to move the penetrating contact wherein the component moves with respect to the remainder of the device about an axis less than 360°; or (3) a. comprising an electrical connector having a base and having a component to move the strandlike conducting member relative to the base against the penetrating contact, or b. comprising a baseless electrical connector having a component to move the strandlike conducting member with respect to any part of the device (e.g., with respect to the penetrating contact), wherein the component moves with respect to the remainder of device about an axis less than 360° when moving the conductor.

**410 Pivoting cutter:**

This subclass is indented under subclass 409. Electrical connector wherein the penetrating contact moves with respect to the remainder of the device about an axis less than 360° when making contact.

**411 Comprising screw, screw operated cutter, or screw means to move conductor against cutter:**

This subclass is indented under subclass 391. Electrical connector (a) wherein the penetrating contact is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when making contact; (b) having with a component to move the penetrating contact wherein the component is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the

- remainder of the device when moving the contact; or (c) a. comprising an electrical connector having a base and having a component to move the strandlike conducting member relative to the base and against the penetrating contact, or b. comprising a baseless electrical connector having a component to move the strandlike conducting member with respect to any other part of the device (e.g., with respect to the penetrating contact), wherein the component is distinct from the contact, is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when moving the conductor.
- 412 Screw means to move conductor against cutter:**  
This subclass is indented under subclass 411. Electrical connector (a) having a base and a component to move the strandlike conducting member relative to the base and against the penetrating contact, or (b) comprising a baseless electrical connector having a component to move the strandlike conducting member with respect to any other part of the device (e.g., with respect to the penetrating contact), wherein the component is helically ribbed and supported for rotation about the helical axis as guided by the rib with respect to the remainder of the device when moving the conductor.
- 413 Single element cutting and connecting plural conductors:**  
This subclass is indented under subclass 412. Electrical connector wherein the contact is intended to penetrate and electrically connect two conducting members.
- 414 Lamp or electron tube socket or base:**  
This subclass is indented under subclass 412. Electrical connector particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment excluding vacuum maintaining envelope; or comprising the electrical connector of such a light radiating member or amplifying or switching member.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.
- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto, (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact



and insulation other than the conductor sheath.

**415 Screw threads pierce insulation:**

This subclass is indented under subclass 411. Electrical connector wherein the penetrating contact is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when making contact, and wherein the rib edge is utilized to penetrate and make electrical contact.

**416 Piercing means comprising end of screw:**

This subclass is indented under subclass 411. Electrical connector wherein the penetrating contact is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when making contact, and wherein the axially most advanced portion of the ribbed member is utilized to penetrate and make electrical contact.

**417 Rectilinearly moving operator:**

This subclass is indented under subclass 391. Electrical connector including a driver to move the penetrating contact, which driver moves along a straight path.

**418 Contact member cutting to contact first conductor and contacting second conductor:**

This subclass is indented under subclass 391. Electrical connector including a member having a first portion for penetrating and making electrical contact with a first electricity transmitting member and having a second portion for making electrical contact with a second electricity transmitting member, wherein the contact member is of conductive material so that it transmits electricity from one of the transmitting members to the other.

- (1) Note. Both joints formed by the contact member of this subclass may be readily made and broken; i.e., each connection is of type provided for under the definition of this class.

**419 Lamp or electron tube socket or base:**

This subclass is indented under subclass 418. Electrical connector particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment excluding vacuum maintaining envelope; or comprising the electrical connector of such a light radiating member of amplifying or switching member.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 182, for a lamp or electron tube socket including arc suppressing or extinguishing means.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 541, for a plural lamp or electron tube sockets including supporting means therefor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 611+, for a connector or contact having vitreous-type envelope secured thereto, e.g., a base of a lamp or vacuum tube).

- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.
- 420 Flexibly tensioned strap:**  
This subclass is indented under subclass 391. Electrical connector wherein the penetrating contact is pliable and is adapted to encircle the conductor with which it is to make contact and is to be drawn radially toward the conductor by application of tensile forces to the ends thereof.
- 421 Crimped:**  
This subclass is indented under subclass 391. Electrical connector wherein the penetrating contact is also secured in a nonremovable manner to a conductor by being stressed beyond its elastic limit when brought into engagement with that conductor.
- (1) Note. The device herein includes a detachable electrical connector combined with nondetachable electrical connector.
- SEE OR SEARCH CLASS:  
174, Electricity: Conductors and Insulators, subclass 84 for a crimped electrical connector without a surface for detachable connection.
- 422 For use with tape cable:**  
This subclass is indented under subclass 421. Electrical connector intended to be used with an electrical cable\* having 3 or more conductors all of which are extending in a common plane.
- 423 Cutting by peripheral end of sheath encircling crimped contact:**  
This subclass is indented under subclass 421. Electrical connector comprising a member adapted to be wrapped about a strandlike insulated conductor including an extremity intended to curl in and penetrate through the insulation and make electrical contact with the conductor.
- 424 Cutting by stamped out tooth of sheath encircling crimped contact:**  
This subclass is indented under subclass 421. Electrical connector comprising a member adapted to be wrapped about a strandlike insulated conductor including a portion partially cut out thereof such that this portion presents an edge adapted to penetrate the insulation and make electrical contact with the strandlike conductor.
- 425 Nail like cutter:**  
This subclass is indented under subclass 391. Electrical connector wherein the penetrating contact is an axially extending member, is generally circular in cross-section and is intended to penetrate the insulation making electricity transmitting engagement with an underlying conductor by movement along the axis of the contact.
- 426 Passing through insulation to make contact:**  
This subclass is indented under subclass 389. Electrical connector intended to penetrate through a nonconductor and make electricity transmitting contact with the underlying conducting member.
- 427 Axially penetrating the elongated conductor:**  
This subclass is indented under subclass 387. Electrical connector wherein the penetrating contact makes engagement with the strandlike conductor by relative movement along the axis thereof.
- 428 Comprising screw or screw operated means:**  
This subclass is indented under subclass 427. Electrical connector (a) wherein the penetrating contact is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when making contact; or (b) having a component to move the penetrating contact wherein the component is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when moving the penetrating contact.
- 429 Screw threads engage conductor:**  
This subclass is indented under subclass 428. Electrical connector wherein the rib edge is utilized to penetrate and make electrical contact.

- 430 Contact permanently secured to a conductor, e.g., crimped, soldered, etc.:**  
This subclass is indented under subclass 427. Electrical connector wherein the penetrating contact is also secured in a nonremovable manner to an electrical conductor.
- 431 Comprising screw, screw operated cutter, or screw means to move conductor against cutter:**  
This subclass is indented under subclass 387. Electrical connector (a) wherein the penetrating contact is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when making contact; (b) having with a component to move the penetrating contact wherein the component is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when moving the contact; or (c) a. comprising an electrical connector having a base and having a component to move the strandlike conducting member relative to the base and against the penetrating contact, or b. comprising a baseless electrical connector having a component to move the strandlike conducting member with respect to any other part of the device (e.g., with respect to the penetrating contact), wherein the component is distinct from the contact, is helically ribbed and supported for rotation about the helical axis and longitudinal movement along the helical axis as guided by the rib with respect to the remainder of the device when moving the conductor.
- 432 Screw operated pivoted cutter:**  
This subclass is indented under subclass 431. Electrical connector having a helically threaded component to move the penetrating contact wherein the contact is adapted to swing about a fixed pivot with respect to the remainder of the device when making engagement with the conductor.
- 433 Annular cutter:**  
This subclass is indented under subclass 431. Electrical connector wherein the penetrating contact is tubular in shape and has a cutting edge at the end thereof.
- 434 Annular cutter:**  
This subclass is indented under subclass 387. Electrical connector wherein the penetrating contact is tubular in shape and has a cutting edge at the end thereof.
- 435 U-shaped clamp:**  
This subclass is indented under subclass 387. Electrical connector wherein the penetrating contact is comprised of a pair of generally parallel arms connected together at one end and adapted to grippingly engage a conductor therebetween.
- 436 Resiliently biased:**  
This subclass is indented under subclass 387. Electrical connector wherein the penetrating contact is urged by the force of a member stressed within its elastic limit.
- 437 Finger:**  
This subclass is indented under subclass 436. Electrical connector wherein the penetrating contact has the shape of an elongated protuberance.
- 438 Resilient finger:**  
This subclass is indented under subclass 437. Electrical connector wherein the penetrating contact is supported for movement laterally thereof by flexure within its elastic limit.
- 439 Plural fingers:**  
This subclass is indented under subclass 438. Electrical connector including two or more elongated protuberances intended to make electrical contact with a single mating contact.
- 440 Spaced along longitudinal axis of engagement:**  
This subclass is indented under subclass 438. Electrical connector adapted to be brought into mating relationship with another electrical connector in a given direction including a first protuberance at a second, different location along that direction.
- 441 Adapted to grip upon withdrawal of mating part:**  
This subclass is indented under subclass 438. Electrical connector of such configuration that the protuberance will exert greater penetrating force resulting from pulling the contact\* of a

cooperating electrical connector out of current transmitting with respect thereto.

**442 Crimped:**

This subclass is indented under subclass 387. Electrical connector adapted to be stressed beyond its elastic limit in penetrating and making electrical contact.

- (1) The contact of this subclass normally includes a portion for being stressed beyond its elastic limit, a nondetachable connection of a type not included in this class and includes a portion for detachable electrical connection.

**443 Having slot edge for cutting:**

This subclass is indented under subclass 387. Electrical connector wherein the penetrating contact is a platelike conductive body having a first margin provided with a notch or opening therein such that the stranded conductor when moved to a certain position with the notch or opening is passively urged against the first margin by a second margin with sufficient force to penetrate the conductor and make electrical contact therewith.

- (1) Note. Penetration may be made by both the first margin and the second margin.

SEE OR SEARCH THIS CLASS, SUBCLASS:

395, for a contact having a slot edge for penetrating through an insulative sheath.

**444 Piercing into support structure:**

This subclass is indented under subclass 387. Electrical connector wherein the penetrating contact is adapted to cut into structure for supporting the connector against the force of gravity.

**445 WITH OR HAVING FLEXIBLE GUARD OR SUPPORT FOR CABLE OR CONDUCTOR:**

This subclass is indented under the class definition. Electrical connector combined with or including a nonrigid or swinging member for protection or supporting an electricity transmitting strandlike member with respect to the means for making an electrical transmitting

joint to protect the member against injury at or near the means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

2+, for movably mounted cable guards having contact thereon which slide or roll over the corresponding contacts to the connector body during movement of the cable guards.

476.1+, for a rigid sleeve, tube, etc., through which a cable extends which serves as a handle for a connector body.

SEE OR SEARCH CLASS:

267, Spring Devices, subclass 178 for coil springs, per se, which may be attached to a connector body to serve as a resilient support for the line cord.

**446 Pivotal:**

This subclass is indented under subclass 445. Electrical connector wherein the protecting member is secured to the electrical connector for movement with respect thereto about an axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

164+, for an electrical connector including two components pivotally attached together for relative movement, combined with an intermediate pliable conductor.

**447 Resilient:**

This subclass is indented under subclass 445. Electrical connector wherein the nonrigid or swinging supporting member elastically directs the electricity transmitting strandlike member or assembly in a particular direction.

**448 Coil spring concentric with cable or conductor:**

This subclass is indented under subclass 447. Electrical connector wherein the elastically directing member is helically wound about the longitudinal axis of the electricity transmitting strandlike member.

**449 WITH STRESS RELIEVING MEANS FOR CONDUCTOR TO TERMINAL JOINT:**

This subclass is indented under the class definition. Electrical connector combined with distinct means for carrying the reactive physical load from the tension of an electricity transmitting suspended conductor or cable to thereby prevent that physical load from being transmitted to the electricity transmitting joint.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 296+, for means to hold a pair of coupling parts together which may inherently relieve load on a conductor from being transmitted to a contact.
- 399, for a contact comprising an insulation cutter having a slot edge for cutting insulation, wherein the contact engages the conductor at axially spaced points, with a stress relieving means.
- 401, for a contact comprising an insulation cutter having a slot edge for cutting insulation, with a stress relieving means to engage the conductor at a second axial location.
- 407, for a contact comprising an insulation cutter having a slot edge for cutting insulation, wherein the contact is a portion of an elongated channel, with a stress relieving means.
- 455+, for a connector having a flexible or movably mounted conductor or cable guard.
- 604+, for a connector in which the conductor or cable is embedded in molded insulation or sealing material.

**SEE OR SEARCH CLASS:**

- 24, Buckles, Buttons, Clasps, etc., subclasses 115+ for a cord or rope holder having or constituting a stress reliever not limited to use with an electrical conductor.
- 174, Electricity: Conductors and Insulators, subclasses 65 and 135 for a strain reliever limited to use with an electrical conductor but not claiming connector structure.

- 257, Active Solid-State Devices (e.g., Transistors, Solid-State Diodes), subclass 178, 179, and 669 for devices with electrical conductor (including lead frame) stress/strain relief.

**450 Drop cord attaching means, e.g., block or rosette:**

This subclass is indented under subclass 449. Electrical connector intended to support the gravitational load of a vertically extending conductor cable and prevent transmission of that load to the electricity transmitting joint.

- (1) Note. In the installation of a suspended lamp fixture (e.g., a chandelier) the load of the fixture may be applied directly to a suspension means (e.g., a chain) and at no time be applied to the conductor cable but is not transmitted to the electricity transmitting joint is included in this subclass.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 531, for an electrical coupling part with flexible suspension means.
- 576, for a supporting means for a coupling part to be engaged by suspension means.

**451 Including provision to attach tether:**

This subclass is indented under subclass 449. Electrical connector wherein the means receiving the physical load is specially adapted to receive a nonenclosed, strandlike, load bearing member and transmit the physical load thereto.

**452 Including provision to attach to stress bearing portion of conductor:**

This subclass is indented under subclass 449. Electrical connector intended for use with an electricity transmitting, strandlike assembly including a strandlike component intended to support the physical load of that assembly, which device is specially adapted to receive the force of the physical load from that component.

**453 Enlargement engaging means:**

This subclass is indented under subclass 449. Electrical connector intended for use with an electricity transmitting, strandlike member or assembly that is uniformly rodlike in external configuration but is provided with a raised sur-

- face for load bearing engagement by the means for receiving that load.
- (1) Note. A knot engaging means is included herein.
- (2) Note. The raised surface may be part of a member that is either fixedly or loosely attached to the strandlike member or assembly.
- 454 Including longitudinally threaded connector part to effect gripping of enlargement:**  
This subclass is indented under subclass 453. Electrical connector including a member having a screwlike rib intended to be positioned coaxially with the electricity transmitting, strandlike member or assembly and to effect gripping of the raised surface by rotation of the screwlike rib about its axis.
- 455 Distinct cable attached enlargement means:**  
This subclass is indented under subclass 453. Electrical connector adapted for load bearing engagement with a separate raised surface element fastened to the electricity transmitting, strandlike member or assembly.
- (1) Note. The enlargement means of this subclass may be loosely attached to the cable.
- 456 Curved conductor path:**  
This subclass is indented under subclass 449. Electrical connector wherein the means to receive the physical load includes a nonlinear way for the electricity transmitting strandlike member or assembly to frictionally engage and transmit the physical load thereto.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
450, for a drop cord attaching means including a curved, stress relieving way to receive the electrical cable extending therefrom.
- 457 Means comprising notched or apertured body:**  
This subclass is indented under subclass 456. Electrical connector including a distinct member having an opening therealong or there-through to frictionally engage and receive the physical load of the strandlike member or assembly.
- 458 Platelike body:**  
This subclass is indented under subclass 457. Electrical connector wherein the distinct member is a planar member having a uniformly thick cross section.
- 459 Conductor clamping and shaping:**  
This subclass is indented under subclass 456. Electrical connector including a member adapted to grip the strandlike member or assembly with sufficient force to change the physical configuration of the strandlike member or assembly.
- 460 Conductor gripped by or entirely within connector housing:**  
This subclass is indented under subclass 449. Electrical connector including a chamber defined by wall portions which encompass the electricity transmitting joint and also partially or completely encompass the means for receiving the physical load, which means is forced into frictional engagement with the electricity transmitting strandlike member or assembly.
- 461 Including longitudinally threaded connector part to effect gripping of conductor:**  
This subclass is indented under subclass 460. Electrical connector including a member having a screwlike rib intended to be positioned coaxially with the electricity transmitting strandlike member or assembly to effect friction engagement thereof by rotation of the screwlike ribbed portion about its axis.
- 462 Distinct clamp actuated by threaded connector part:**  
This subclass is indented under subclass 461. Electrical connector including a separate member forced into frictional engagement with the strandlike member or assembly by the member having a screwlike ribbed portion.
- 463 Eccentric gripping means:**  
This subclass is indented under subclass 460. Electrical connector wherein the means for frictional engagement with the strandlike member or assembly is mounted for pivotal movement about an axis on the device such that an extending portion moves for such frictional engagement.

**464 By pliant, conductor encircling strap:**

This subclass is indented under subclass 460. Electrical connector wherein the means for making frictional engagement includes a flexible band for binding the strandlike member or assembly.

SEE OR SEARCH THIS CLASS, SUBCLASS:

471, for an electrical connector with a stress relieving means wherein the conductor is gripped outside the connector housing by a distinct encircling strap.

**465 Longitudinally divided connector housing grips conductor:**

This subclass is indented under subclass 460. Electrical connector wherein the chamber is formed by a first and a second shell like structure which together encompass the electricity transmitting joint and wherein the shell structures meet along a line also parallel to the electricity transmitting strandlike member or assembly and make frictional engagement therewith.

**466 With additional contacts comprising coupling part mating along axis normal to conductor:**

This subclass is indented under subclass 465. Electrical connector including a second portion also making electrical contact with another connector, wherein the second portion is a coupling part\* and wherein it is brought into engagement with the mating part by movement in a direction perpendicular with respect to the cable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

468, for an electrical connector with stress relieving means wherein the conductor is gripped by or entirely within the connector housing with additional contacts comprising a coupling part mating along an axis normal to the conductor.

473, for an electrical connector with stress relieving means wherein the conductor is gripped outside the connector housing by a distinct clamp with additional contacts comprising a coupling

part mating along an axis normal to the conductor.

**467 Hinged connector housing parts:**

This subclass is indented under subclass 465. Electrical connector wherein the first and second shell like structures are secured together such that they may be moved apart by movement along a pivot fixed with respect to each structure.

**468 With additional contacts comprising coupling part mating along axis normal to conductor:**

This subclass is indented under subclass 460. Electrical connector including a second portion also making electrical contact with another connector, wherein the second portion is a coupling part\* and wherein it is brought into engagement with the mating part by movement in a direction perpendicular with respect to the cable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

466, for an electrical connector with stress relieving means wherein the conductor is gripped by a longitudinally divided connector housing with additional contacts comprising a coupling part mating along an axis normal to the conductor.

473, for an electrical connector with stress relieving means wherein the conductor is gripped outside the connector housing by a distinct clamp with additional contacts comprising a coupling part mating along an axis normal to the conductor.

**469 Transverse conductor gripping screw, or with means to transversely move conductor gripping means:**

This subclass is indented under subclass 460. Electrical connector wherein the strandlike member or assembly is frictionally engaged (a) by a helically ribbed member that interfits with the remainder of the connector to be moved axially into engagement with the strandlike member when rotated about its axis; or (b) by a member moving radially with respect to the strandlike member or assembly with separate structure to cause radial movement of the member.

**470 Conductor gripped outside connector housing by distinct clamp:**

This subclass is indented under subclass 449. Electrical connector including a chamber defined by wall portions which encompass the electricity transmitting joint, wherein the means for receiving the physical load is located outside the chamber, and wherein the means for receiving the physical load is forced into frictional engagement with the electricity transmitting strandlike member or assembly.

**471 By pliant conductor encircling strap:**

This subclass is indented under subclass 470. Electrical connector wherein the means for making frictional engagement includes a flexible band for binding the strandlike member or assembly.

SEE OR SEARCH THIS CLASS, SUBCLASS:

464, for an electrical connector with a stress relieving means wherein the conductor is gripped by or entirely within the connector housing, by an encircling strap.

**472 With means to transversely move conductor gripping means:**

This subclass is indented under subclass 470. Electrical connector combined with means to force the means for receiving physical load radially toward the electricity transmitting strandlike member or assembly.

**473 With additional contacts comprising coupling part mating along axis normal to conductor:**

This subclass is indented under subclass 472. Electrical connector including a second portion also making electrical contact with another connector, wherein the second portion is a coupling part\* and wherein it is brought into engagement with the mating part by movement in a direction perpendicular with respect to the cable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

466, for an electrical connector with stress relieving means wherein the conductor is gripped by a longitudinally divided connector housing with addi-

tional contacts comprising a coupling part mating along an axis normal to the conductor.

468, for an electrical connector with stress relieving means wherein the conductor is gripped by or entirely within the connector housing with additional contacts comprising a coupling part mating along an axis normal to the conductor.

**474 INCLUDING OVERSTRESS PREVENTING MEANS:**

This subclass is indented under the class definition. Electrical connector including provision to positively prevent application of more than a predetermined amount of force to a component of the device.

**475 Frangible element:**

This subclass is indented under subclass 474. Electrical connector including a weakened area intended to break upon application of a predetermined amount of force to prevent more than the predetermined amount of force to be transmitted to another component of the device.

**476.1 INCLUDING HANDLE OR DISTINCT MANIPULATING MEANS:**

This subclass is indented under the class definition. Electrical connector combined with or having (a) particular means to be engaged by an operative's hand or (b) a particular handheld implement that is separate from the connector and is used for maneuvering the connector randomly into assembly and connection with another connector.

(1) Note. A structure disclosed as being used for grasping by an operative is in this and the indented subclasses only when there is novelty in the handle feature.

(2) Note. A handle for operating a relatively movable portion of a connector is not included herein.

**477 For attachment of connector to overhead conductor:**

This subclass is indented under subclass 476.1. Electrical connector wherein the particular means for maneuvering the device serves to assemble and electrically connect the device



with an electric power line that is at a location physically higher and beyond the reach of the operative.

- (1) Note. An illumination lamp which may be gripped by a particular means for manipulation is included in this and the indented subclasses only if the envelope of the lamp is modified specifically for receipt of the manipulation means.

**478 With conductor inside handle or manipulating means:**

This subclass is indented under subclass 477. Electrical connector wherein the particular means for maneuvering the device is generally tubular and includes a conductor therein for transmitting electrical current to the contact.

**479 Including handle operated screw to effect gripping of overhead conductor:**

This subclass is indented under subclass 477. Electrical connector including means to be manipulated by a hand held implement comprising a helically ribbed member adapted to move a contact member into intimate engagement with the overhead electrical power line when turned about its axis.

**480 Distinct manipulating means; e.g., hot stick:**

This subclass is indented under subclass 476.1. Electrical connector comprising a particular hand held implement that is separate from the connector for maneuvering the connector randomly into assembly and connection with another connector.

**481 Randomly manipulated implement:**

This subclass is indented under subclass 476.1. Electrical connector intended to be coupled with a mating connector such that the assembly thereof comprises a unit that is maneuverable at the will of the operative.

SEE OR SEARCH CLASS:

219, Electric Heating, for a soldering iron complete with an electric heating element.

**482 Test probe:**

This subclass is indented under subclass 481. Electrical connector comprising a generally rodlike member having an elongated portion adapted to be grasped by the hand of an opera-

tive for random manipulation thereof and having a contact\* extending from the axial extremity thereof.

- (1) Note. The contact may comprise a coupling part\* for interfitting with a particular mating part\*

SEE OR SEARCH THIS CLASS, SUBCLASS:

169, for a convertible test probe.

219, for a test probe convertible by internal change to selectively cooperate with a different contact.

**483 Coupling part:**

This subclass is indented under subclass 476.1. Electrical connector specially adapted to mate or interengage with a specific complementary electrical connector.

**484 Including bale or loop:**

This subclass is indented under subclass 483. Coupling part including a particular means to be engaged by an operator's hand or to be received by a hand held implement, which means is (a) arcuate in shape and secured to or integral with the remainder of the coupling part.

**485 WITH PROVISION TO DISSIPATE, REMOVE, OR BLOCK THE FLOW OF HEAT:**

This subclass is indented under the class definition. Electrical connector combined with means for spreading, lowering the level of, or preventing transmission of, thermal energy.

SEE OR SEARCH THIS CLASS, SUBCLASS:

196, for an electrical connector with a retainer or passageway for liquid material to dissipate, remove, or block the flow of heat.

**486 Tube clamp:**

This subclass is indented under subclass 485. Electrical connector for use with the glass envelope of an electron tube and comprising opposing members adapted to grip the envelope to transfer thermal energy from the envelope to another location.

- (1) Note. The tube clamp of this subclass may transfer heat to a support panel for the tube socket.
- 487 Distinct heat sink:**  
This subclass is indented under subclass 485. Electrical connector wherein a separate element is intimately attached to an electrical connector for absorbing or storing thermal energy.
- 488 WITH INDICATING OR IDENTIFYING PROVISION:**  
This subclass is indented under the class definition. Electrical connector combined with means for providing discernible denotation of a condition, e.g., visible or audible; or with provision notching information, e.g., recognizable indicia, etc.
- (1) Note. A designating color is considered to provide "notching information" for this subclass.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
315, for a coupling part with coupling retaining means, comprising a bayonet having a coupling indicating indicia or signal.
- SEE OR SEARCH CLASS:  
40, Card, Picture, or Sign Exhibiting, for the structure of a sign, label, tag or other identifying means which may be used in conjunction with a connector.  
340, Communications: Electrical, subclass 656 for a connector combined with electrical signal means to indicate flow of electricity through a connector.
- 489 Connection indicating provision:**  
This subclass is indented under subclass 488. Electrical connector wherein the means for providing visible, audible or other discernible denotation signals when a connector part is properly coupled to either another connector part or an electricity transmitting strandlike member or assembly.
- (1) Note. A signal that is turned off by the making of a connection is included herein.
- 490 Indicator light:**  
This subclass is indented under subclass 489. Electrical connector wherein the signal means is a lamp which lights upon proper coupling of a connector part to either another connector part or an electricity transmitting strandlike member or assembly.
- (1) Note. The light also usually indicates a complete electrical circuit by the connector part.
- SEE OR SEARCH CLASS:  
340, Communications: Electrical, subclass 656 for connector combined with electrical signal means to indicate flow of electricity through a connector.
- 491 Distinct indicia bearing member:**  
This subclass is indented under subclass 488. Electrical connector wherein the means for providing visible denotation of a condition, nature or position of a connector is a discrete labeled element attached to the connector part.
- (1) Note. The label, per se, usually consists of numbers or letters.
- 492 INCLUDING OR FOR USE WITH TAPE CABLE:**  
This subclass is indented under the class definition. Electrical connector comprising the termination of or for attachment with an electricity transmitting cable\* including more than three conductors wherein all the conductors are arranged in the same plane extending therealong.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
67, for a flexible preformed panel circuit with provision to conduct electrical current to another, superposed, panel circuit arrangement.  
77, for an electrical connector that is part of a flexible preformed circuit arrangement.  
260, for a coupling part with actuating means urging its contact to move laterally toward a mating part having an open slot to receive a tape cable.

- 493 For connection to rigid preformed panel circuit arrangement, e.g., PCB:**  
This subclass is indented under subclass 492. Electrical connector for use with a prefabricated sheetlike part on which circuit elements are preplaced and fixed.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
55+, for a printed circuit board in combination with an electrical connector.
- 494 Single cable end into dual rows of contacts:**  
This subclass is indented under subclass 492. Electrical connector including first and second rows of electrical contacts\* adapted to receive the termination of a flat cable and splay the conductors thereof such that a plurality of the conductors engages the first row contacts in a first plane parallel to the plane of the conductors and another plurality of the conductors engage the second group of contacts in a second plane distinct from and parallel with the first.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
405, for an electrical connector including an insulation cutting contact having plural longitudinally and laterally staggered contacts, each formed by a slot between a pair of fingers.
- 495 With mating connection region formed by bared cable:**  
This subclass is indented under subclass 492. Electrical connector particularly adapted to receive a cable end wherein the insulative material has been removed from a substantial portion thereof.
- 496 Bared cable wrapped into U-shape about insertion projection:**  
This subclass is indented under subclass 495. Electrical connector including a member adapted to engage the terminal end of a conductor and force the conductor into a cooperating portion of the connector such that the conductor is formed at least 180° about the forcing member.
- 497 With shield, ground conductor, or ground commoning means:**  
This subclass is indented under subclass 492. Electrical connector combined with either (a) means to prevent radiation of electrical energy, (b) means intended to transmit and or maintain the device at earth potential, or (c) means to maintain multiple components at a neutral potential.
- 498 Plural cables to multicontact connector or single cable branching to plural connectors:**  
This subclass is indented under subclass 492. Electrical connector comprising a device adapted to receive a plurality of distinct electrical cables\* or comprising a plurality of electrical connectors for use with a single cable.
- (1) Note. "A plurality of electrical connectors for use with a single cable" may comprise: a. Plural connectors along the side of the cable, b. A connector at each of opposite ends of the cable, c. A connector at each leg of a branched cable or, d. Any combination of above.
- 499 Including connector housing surrounding cable:**  
This subclass is indented under subclass 492. Electrical connector having an encasing structure adapted to enclose the connector and a portion of the electricity transmitting cable\*.
- 500 ENERGY CELL SUBSTITUTION DEVICE INCLUDING PLURAL CONTACTS (E.G., JUMPER) OR WITH SUPPORT MEANS FOR ENERGY CELL:**  
This subclass is indented under the class definition. Electrical connector (a) including two or more means for making current transmitting contact and adapted to be used in place of a storage battery or (b) combined with means to hold a storage battery.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
189, for an electrical connector with or comprising a removable circuit modifying arrangement.  
502+, for a flaccid bridging conductor combined with a plurality of electrical connectors.

- 507+, for a rigid bridging conductor with a contact surface at each end.
- 501 WITH STORAGE MEANS FOR FLACCID CONDUCTOR:**  
This subclass is indented under the class definition. Electrical connector intended to be used with a pliable strandlike member for transmitting electricity to the transmitting joint wherein the transmitting member is generally elongated; combined with means to receive and accommodate temporarily a surplus portion of the electricity transmitting means.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
4, for interrelated electrical connectors relatively movable during use, with storage means for flaccid conductor.
- 502 WITH FLACCID CONDUCTOR AND WITH ADDITIONAL CONNECTOR SPACED THEREALONG:**  
This subclass is indented under the class definition. Electrical connector combined with an electricity transmitting member that is generally elongated and readily yieldable transversely of its length to the force of gravity and with a second electrical connector under the class definition wherein the first and second connector are each electrically and physically attached to the transmitting member at distinct locations along the length of the transmitting member.
- (1) Note. A conductor shaped with a flexible loop portion is generally considered flaccid, even though it is disclosed as a bendable, stiff wire or spring.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
189, for an electrical connector with or comprising a removable circuit modifying arrangement.  
500, for an energy cell substitution device including plural contacts or for an electrical connector including support means for an energy cell.  
507+, for a rigid bridging conductor with a contact surface at each end.
- 503 Adapted to interconnect vehicles:**  
This subclass is indented under subclass 502. Electrical connector intended to be used with a first and a second land vehicle wherein one of the connectors is intended to engage one of the vehicles and the electricity transmitting member is intended to thereby transmit electricity from one of the vehicles to the other.
- 504 Adapted to connect to a battery:**  
This subclass is indented under subclass 502. Electrical connector intended to be used with an electricity storage cell.
- 505 And with third connector spaced therealong:**  
This subclass is indented under subclass 502. Electrical connector combined with a third electrical connector under the class definition.
- (1) Note. The third connector of this subclass may be electrically connected to either, both or neither of the other two connectors.
- 506 Connector comprising pivoted spring biased clamp:**  
This subclass is indented under subclass 502. Electrical connector wherein the member for making electrical contact is adapted to grippingly engage the cooperating contact by yieldable urging of a resilient member.
- 507 JUMPER (OR SHORT CIRCUITING COUPLING PART):**  
This subclass is indented under the class definition. Electrical connector including a first and a second contact surface interconnected by a conductor (a) comprising a coupling part\* to interfit with a particular mating connector and maintain two portions of that mating connector at the same electrical potential (i.e., bridge the portions of the mating connectors); or (b) to transport electricity from one connector to another.
- (1) Note. An "adapter" is capable of functioning to transmit electricity from one member to another; however that is not the intended function of an adapter. Rather, the intended function of an adapter is to allow interfitting of two members that are not physically compat-

ible. Therefore, an adapter is not included in this and the indented subclasses.

- (2) Note. A fuse or fuse holder is capable of functioning to transmit electricity from one another; however, that is not necessarily the intended function of a fuse or holder. Rather usually, the intended function of a fuse or fuse holder is to limit the quantity of electricity flowing through the device. Therefore, a fuse or fuse holder is not included in this and the indented subclasses unless it has the intended function of transmitting electricity (e.g., a jumper may include a fuse).

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 189, for an electrical connector with or comprising a removable circuit modifying arrangement.
- 500, for an energy cell substitution device including plural contacts or for an electrical connector including support means for an energy cell.
- 502+, for a flaccid bridging conductor combined with a plurality of electrical connectors.

**508 Adapted to be used with power measuring meter:**

This subclass is indented under subclass 507. Electrical connector particularly intended to bridge two contacts of a watt-hour measuring device or to bridge two contacts of a connector for receiving a watt-hour measuring device.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 517, for a power measuring meter coupling part, generally.

**509 Coupling part comprising short circuiting cover or manipulatable supporting means:**

This subclass is indented under subclass 507. Electrical connector which is a coupling part\* (a) to engage and cover at least two contacts of a mating part and electrically connect (bridge) those two contacts; or (b) to provide structure to be received by an operative for random movement of the device and a mating part to which it is attached.

- (1) Note. Included herein is a fuse substitution coupling part, as well as a lamp substitution coupling part usable to supply current to another lamp wired in series therewith.

**510 To bridge post-type contacts:**

This subclass is indented under subclass 507. Electrical connector to be used to transmit electrical current from one upstanding member to another upstanding member rigidly associated and in the same plane with the first.

**511 Including plural prongs:**

This subclass is indented under subclass 507. Electrical connector comprising an electrical conductor between a first and a second male mating part.

**512 Including plural female contacts:**

This subclass is indented under subclass 507. Electrical connector comprising an electrical conductor between a first and second mating parts having a recessed contact\* for receiving the contact of each mating part.

**513 Having spring biased contact:**

This subclass is indented under subclass 507. Electrical connector including a contact\* with a portion thereof adapted to yield within its elastic limit to urge a portion thereof into engagement with another contact or including a contact and an additional member adapted to yield within its elastic limit to urge the contact into engagement with another contact.

**514 Parallel or supplemental nonshielded path:**

This subclass is indented under subclass 507. Electrical connector wherein the conductor is to provide for passage of electrical current in addition to that of another conductor, and is not to function to prevent radiation of undesirable electrical energy therethrough.

- (1) Note. The device of this subclass may, for example, serve as a conductor (a) providing a passageway for electrical current in addition to another conductor, thereby reducing the overall impedance to flow or (b) bridging a section of another conductor to allow repair of that section without removal of the second and with no break in current flow.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

515, for similar structure having an electrical connector at only one end of the conductor.

**515 PARALLEL OR SUPPLEMENTAL NON-SHIELDED PATH:**

This subclass is indented under the class definition. Electrical connector combined with a conductor to provide for passage of electrical current in addition to that provided by another conductor, wherein the conductor is not to function to prevent radiation of undesirable electrical energy therethrough.

- (1) Note. The device of this subclass may, for example, serve as a conductor (a) providing a passageway for electrical current in addition to another conductor, thereby reducing the overall impedance to flow; or (b) bridging a section of another conductor to allow repair of that section without removal of the section and with no break in current flow.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

514, for similar structure including an electrical contact at each end of the conductor.

**516 WITH PROVISION TO ISOLATE CIRCUITRY BY SEVERANCE OF BRIDGING ELEMENT:**

This subclass is indented under the class definition. Electrical connector including a conductive component adapted to be torn or cut away therefrom to separate a portion of conductive material from electrical cooperation within the device.

- (1) Note. Included herein is a "duplex receptacle" having bridging structure such that the upper and lower outlets are in the same electrical circuit, wherein the bridging structure is adapted to be broken or severed to allow each of the outlets to be part of different electrical circuit. A "duplex receptacle" is known as such in the building trade.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 166+, for an electrical connector convertible by internal change to selectively cooperate with a different contact.
- 176, for a female coupling part convertible to a male coupling part by addition of prong.
- 177, for a coupling part convertible to a distinct shape by addition of a nonremovable element or by removal of a nonreusable element.
- 217+, for a device having several types of connectors available without modification of the device, but structurally limited so that if one type is used, use of another will be prevented.
- 518, for a coupling part convertible to a different format by substitution of a different contact.

**517 POWER MEASURING METER COUPLING PART:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* which is the base of a watt-hour measuring device or adapted to engage and be electrically connected with the base of a watt-hour measuring device.

- (1) Note. Watt-hour meters are somewhat standardized in overall configuration adapted to be mounted on the wall of a permanent structure, presenting a generally circular base, and having four, five or more vertically disposed blade type contacts extending from the base thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 146, for a contact preventer or retractable cover part adapted to fit between coupled connectors (e.g., power measuring meter).
- 167, for an electrical connector convertible by internal change to selectively cooperate with a different contact, comprising a connector for a power measuring meter.
- 508, for a jumper adapted to be used with a power measuring meter.

**518 COUPLING PART CONVERTIBLE TO DIFFERENT FORMAT BY SUBSTITUTION OF DIFFERENT CONTACT:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* particularly adapted to have a contact\* thereof removed and to receive as a replacement therefor another contact of different shape than the first so that the device will interfit with a different mating part\*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 166+, for an electrical connector convertible by internal change to selectively cooperate with a different contact.
- 176, for a female coupling part convertible to a male coupling part by addition of prong.
- 177, for a coupling part convertible to a distinct shape by addition of a nonremovable element or by removal of a nonreusable element.
- 217+, for a device having several types of connectors available without modification of the device, but structurally limited so that if one type is in use, use of another will be prevented.
- 516, for an electrical connector with provision to isolate circuitry by severance of a bridging element.

**519 WITH PROVISION TO RESTRICT ENVIRONMENT EFFECTS:**

This subclass is indented under the class definition. Electrical connector combined with means to prevent or inhibit electrochemical oxidation or the gradual chemical disintegration of the connector, or prevent or inhibit exposure of the connector to a detrimental gas or liquid.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 190+, for an electrical connector having a retainer or passageway which may restrict environmental effects.
- 271+, for a connector having a gasket or packing for a joint between coupled parts to exclude corrosive vapors.
- 387+, for a connector having cutting or scraping means for the purpose of removing corrosion.

524, for a connector made of corrosion resistant conducting material.

**520 Sacrificial material:**

This subclass is indented under subclass 519. Electrical connector wherein the means to restrict environmental effects comprises a portion thereof adapted to preferentially electrochemically oxidize or chemically disintegrate instead of or prior to other connector components.

- (1) Note. The material may be a replaceable part of the connector or made of a substance which corrodes more rapidly than the other connector materials.

**521 Including contact cover or case:**

This subclass is indented under subclass 519. Electrical connector with means to inhibit exposure thereof comprising a sealed housing wherein the electricity transmitting joint is encased to substantially seal out gas and moisture.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 125+, for an electrical connector having a spark or glow plug cover.
- 201+, for a connector combined with a liquid filled storage chamber encompassing the contact.

**522 Connector comprising or mating with tapered post, e.g., storage battery terminal:**

This subclass is indented under subclass 521. Electrical connector comprising an elongated, rodlike contact having a conical electricity transmitting surface; or comprising a conical socket for receiving such a rodlike contact.

**523 Having elastic or heat shrunk cable grip:**

This subclass is indented under subclass 521. Electrical connector wherein at least part of the sealing structure comprises a sleeve or member adapted to contract resiliently or upon application of heat thereto to tightly surround an electricity transmitting strandlike member or assembly.

**524 CORROSION RESISTANT CONDUCTING MATERIAL OTHER THAN LEAD:**

This subclass is indented under the class definition. Electrical connector in which an electricity transmitting member is made from a substance other than substantially pure metallic lead, to prevent or inhibit electrochemical oxidation or the gradual disintegration of the connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

519+, for a connector combined with means to prevent or inhibit corrosion.

**525 FOR DUAL INLINE PACKAGE (DIP):**

This subclass is indented under the class definition. Electrical connector intended to be used with a very small panel circuit arrangement on which circuit elements are preplaced and fixed including a first and a second straight row of three or more contacts on each of two opposite marginal extremities.

- (1) Note. The member with which the connector of this subclass is to be used includes circuitry that is integrated as a package in which the circuitry is not readily accessible.
- (2) Note. "Very small panel circuit arrangement", implies that the member is a pre-fabricated sheetlike part on which circuit elements are preplaced and fixed, (i.e., a printed circuit) and that circuitry is so small that, if it were exposed, its details could not ordinarily be seen by the naked eye.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70+, for a preformed panel circuit arrangement with provision to conduct electricity from panel circuit arrangement with provision to conduct electricity from panel circuit to another panel circuit including a dual inline package (DIP).

264, for a coupling part with actuating means urging contact to move laterally with respect to rest of coupling and toward mating part comprising a

contractile receptacle for receiving a dual inline package (DIP).

330+, for an electrical connector with coupling movement-actuating means or retaining means in addition to contact of coupling part for receiving a dual inline package (DIP).

526, for an aligning means for a dual inline package (DIP).

**526 ALIGNING MEANS FOR DUAL IN-LINE PACKAGE (DIP):**

This subclass is indented under the class definition. Device for directing contacts of a very small panel circuit arrangement on which the circuit elements are preplaced and fixed including a first and a second straight row of three or more contacts on each side of two opposite marginal extremities.

- (1) Note. This subclass does not require that the claim set forth a contact; rather, included herein is a structure to be used in conjunction with a DIP wherein neither the DIP nor mating structure is claimed.
- (2) Note. The member with which the device of this subclass is to be used includes circuitry that is integrated as a package in which the circuitry is not readily accessible.
- (3) Note. "Very small panel circuit arrangement", implies that the member is a pre-fabricated sheetlike part on which circuit elements are preplaced and fixed, (i.e., a printed circuit) and that circuitry is so small that, if it were exposed, its details could not ordinarily be seen by the naked eye.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70+, for a preformed panel circuit arrangement with provision to conduct electricity from panel circuit to another panel circuit including a dual inline package (DIP)

264, for a coupling part with actuating means urging contact to move laterally with respect to rest of coupling part and toward mating part compris-



- ing a contractile receptacle for receiving a dual inline package (DIP).
- 330+, for an electrical connector with coupling movement-actuating means or retaining means in addition to contact of coupling part for receiving a dual inline package (DIP).
- 525, for an electrical connector for a dual inline package (DIP), generally.

**527 WITH SUPPORTING MEANS FOR COUPLING PART:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* combined with particular means for holding or retaining the complete coupling part in operational position and against the force of gravity.

- (1) Note. For classification herein the coupling part is either attached directly to some static structure such as a wall or floor, or is affixed to some support or base member, such as an outlet box, panel member, or chassis surface.
- (2) Note. Mere attachment of a contact portion of a coupling part to the insulation is not considered to be supporting means for this and the indented subclasses, in that the insulation is actually part of the coupling part itself.
- (3) Note. The device of this subclass must be a complete coupling part without the supporting means. However, the retaining means may be a component part of another "connector". For example, a lamp socket is a coupling part; a device having a screw to hold such a socket to a base and to a supporting panel is to be found in this and the indented subclasses even though that screw also functions as a contact\* for connection with another distinct connector.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 89, for an electrical connector including an elastomeric or nonmetallic conductive, inductive shield or arc suppressing means.
- 190+, for similar sealing means used with an electrical connector with means for

- retaining or having a passageway for fluent material.
- 230, for a coupling part to receive a fluorescent or neon lamp having sealing element or material for cooperation with a coupled lamp.
- 271+, for an electrical connector with a sealing element or material for cooperation with a coupled connector, generally.
- 283, for the sealed interfitting of coupled connector part housings.
- 384+, for a electrical connector with cushioning support structure.
- 586+, for any connector having a contact carried by flexible or resilient insulation and having a sealing joint between coupled parts.
- 604+, for a connector with an external cable or conductor embedded in insulative sealing material.

**528 Nonuse covering means, e.g., connector storage means:**

This subclass is indented under subclass 527. Coupling part wherein the holding or retaining means comprises means to encase the coupling part when that part is not in engagement with a mating part.

**529 And including appurtenant means for supporting other structure:**

This subclass is indented under subclass 527. Coupling part combined with structure to hold against gravity structure in addition to the coupling part assemblage.

- (1) Note. Included herein is an electrical connector and additional housing structure fixedly attached thereto intended to support another structure, such as a lamp.
- (2) Note. Included herein is an electrical connector and a hook for supporting a flexible suspension means.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 313, for a coupling part having appurtenant means for supporting other structure with a relatively pivotable concentric movement-actuating or retaining ring.

- 334, for a coupling part having appurtenant means for supporting other structure with a relatively pivotable concentric movement-actuating means or retaining means in addition to the contact thereof.
- 343, for a coupling part having appurtenant means for supporting other structure comprising a coupling part movable about an axis, generally, with coupling movement-actuating means or retaining means in addition to the contact thereof.
- 351, for a coupling part having appurtenant means for supporting other structure including a retaining means comprising a finger or stretchable sleeve.
- 361, for a coupling part having appurtenant means for supporting other structure including a retaining means comprising a helically-threaded member.
- 450, for an electrical connector combined with means to support the load of a suspended lamp wherein tension is applied to the conductor cable such that the load of the cable is not transmitted to the contact of the connector.
- 520, for an electrical connector combined with a flexible suspension means to support that connector.
- SEE OR SEARCH CLASS:**
- 248, Supports, for a supporting structure combined with an electrical connector if the support is to function independently of the electrical connector. For example, a wall hanging lamp base that receives a portion of the support of the lamp base from a contact that fits into a wall receptacle is not considered to function independently of the connector and is to be found in this class (Class 439). On the other hand, a similar wall hanging lamp base that is secured totally to the wall for support and includes a connector to be plugged into an independent wall receptacle is to be found in Class 248.
- 362, Illumination, subclasses 382+ for any combination of a support with significant structure of a light source or a light source support having structural features limited to use with a light source support having structural features limited to use with a light source. See the line expressed in the definition of Class 362, subclasses 382+.
- 530 And including electrical contact for load bearing:**  
This subclass is indented under subclass 529. Coupling part wherein the electricity conducting joint includes a contact\* for transmitting electricity, wherein the contact is adapted to interfit with a mating contact member and to support the coupling part and the additional structure, at least partially, against the force of gravity.
- 531 Flexible suspension means, e.g., chain or strand:**  
This subclass is indented under subclass 527. Coupling part wherein the means for holding or retaining the coupling part is generally limp and capable of exerting tensile forces only.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 450, for a drop cord attaching means comprising a stress relieving means.
- 576, for similar structure wherein the suspension means is not flexible.
- 532 Interfitting with channel or double rail:**  
This subclass is indented under subclass 527. Coupling part wherein the means for holding or retaining the coupling part is particularly adapted to engage a retaining groove or both of a pair of parallel bars such that the coupling part may selectively be positioned at any of an infinite number of locations along the groove or bars.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 32+, for interrelated connectors relatively movable in straight line during use.
- 121+, for an electrical connector for interfitting with an uninterrupted support rail or an uninterrupted contact.
- 533 Also supporting mating part:**  
This subclass is indented under subclass 527. Coupling part wherein the means for holding or retaining the coupling part serves in addition to

hold or retain the connector intended to mate with the coupling part.

**534 Universally or pivotally adjustable supporting elements:**

This subclass is indented under subclass 527. Coupling part including a first and a relatively positionable second holding or retaining means wherein (a1) the two means are connected together such that neither can rotate more than 360° but one can pivot with respect to the other about a nonrotary axis; (a2) the two means are connected together such that rotation of one about a first axis is accompanied by corresponding rotation of the other about a second axis which intersects the first axis at a point, wherein the means are able to pivot about any other axis passing through that point; or (b) one of the means moves about a fixed axis with respect to the other; wherein the movement is to reposition one of the holding or retaining means with respect to the other.

- (1) Note. The pivotal movement of this subclass is controlled; e.g., a pliable connecting rod allowing similar movement is not included herein.
- (2) Note. Under clause (a1) of this definition, the end of the movable member opposite from the pivot can move in the manner of a pencil when writing a letter "O".

SEE OR SEARCH THIS CLASS, SUBCLASS:

6+, for relatively movable conductors arranged for universal movement including relatively moving mutually engaging contacts to transmit electricity during such movement.

11+, for relatively movable conductors arranged for pivotal movement including relatively moving mutually engaging contacts to transmit electricity during such movement.

164+, for an electrical connector including two components pivotally attached together for relative movement, combined with an intermediate pliable conductor.

**535 Outlet box:**

This subclass is indented under subclass 527. Coupling part wherein the holding or retaining means comprises a container for encasing the coupling part, which container is particularly adapted to be inserted into the wall to its interior through the wall or ceiling or a building with an access way to its interior through the wall or ceiling and wherein the coupling part intended to transmit electrical power to a mating part through the access way.

SEE OR SEARCH THIS CLASS, SUBCLASS:

536+, for a coupling part combined with the face plate of an outlet box, but not including the encasing portion of the outlet box.

**536 Supporting means comprising face plate or closure member for outlet box:**

This subclass is indented under subclass 527. Electrical connector wherein the holding or retaining means comprises the front side of a container for encasing an electric power supply for normal household use, or comprising a planar member for enclosing such a container.

SEE OR SEARCH THIS CLASS, SUBCLASS:

535, for a coupling part combined with an outlet box.

**537 For ceiling box:**

This subclass is indented under subclass 536. Coupling part wherein the holding or retaining means is intended to be used in conjunction with an encasing container in the overhead, horizontal portion of a room to provide access to the outlet from beneath the horizontal portion.

**538 Outlet receptacle mounting flange:**

This subclass is indented under subclass 527. Coupling part comprising a power supply connector for normal household use wherein the holding or retaining means is a generally thin panel extending laterally from the coupling part to be detachably secured to a container therefor.

**539 Yoke:**

This subclass is indented under subclass 538. Coupling part wherein the holding or retaining means is generally longer than the transverse dimension of the power supply connector, is U-shaped to embrace the body of the connector, and is attached to the connector at a central portion thereof such that opposite ends thereof are accessible for detachable securement to the container.

**540.1 Supporting plural, independent coupling parts:**

This subclass is indented under subclass 527. Coupling part wherein the means is also for holding or retaining another distinct coupling part.

**541 Plural lamp or electron tube sockets:**

This subclass is indented under subclass 540.1. Coupling part particularly adapted to detachably receive and electrically couple to a first and a second member each of which is to radiate light, or comprises electrical amplifying or switching means utilizing an environment excluding, vacuum maintaining envelope.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for lamp or electron socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.

414, for a lamp or electron tube socket or base including a conductor against the cutting contact.

419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.

558, for a lamp electron tube socket extending into a supporting panel.

602, for a lamp or electron tube socket or base including flexing insulation.

611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).

661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.

**541.5 Stacked right-angle connector for use on printed circuit board (i.e., PCB):**

This subclass is indented under subclass 540.1. Coupling part wherein one of the coupling parts (a) includes plural contacts in lateral alignment, (b) is particularly adapted to be mounted on a printed circuit board, and (c) extends first normally away from the plane of the PCB, then parallel to said plane.

**542 Elongated member supporting connector at its extremity or member for interfitting with such an elongated member:**

This subclass is indented under subclass 527. Coupling part wherein the means for holding or retaining is generally rodlike and is intended to support the connector at its greatest axial extent; or is the structure for making structural engagement with a generally rodlike member intended to make that engagement at its greatest axial extent.

**543 Threaded shaft or tube:**

This subclass is indented under subclass 542. Coupling part wherein the rodlike member may be hollow along its axis and a helically ribbed at its greatest extent for interfitting with a cooperating portion of the held or retained structure.

**544 Coupling part or mating part extending into panel opening:**

This subclass is indented under subclass 527. Coupling part wherein the holding or retaining means comprises or engages a generally planar sheet having an opening therethrough wherein a contact of the coupling part or of a mating part\* is intended to extend through that opening when the parts are mated.

**545 With securing by movement of coupling part in plane of panel:**

This subclass is indented under subclass 544. Coupling part secured to the planar sheet by first being passed through the opening and then being moved in a direction parallel to the sheet for locking engagement therewith.

**546 Movement about connective axis; e.g., bayonet:**

This subclass is indented under subclass 545. Coupling part wherein the movement parallel to the sheet is movement about an axis passing through the device and perpendicular to the sheet.

**547 To preformed panel circuit arrangement:**

This subclass is indented under subclass 546. Coupling part wherein the planar sheet is a component on which circuit elements are preplaced and fixed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

55+, for a prefabricated sheetlike part on which circuit elements are fixed, wherein the circuit elements are claimed as a part of the combination.

**548 With sealing to panel:**

This subclass is indented under subclass 546. Coupling part having provision to close off passage of moisture, dust, or other foreign matter between the coupling part and the sheet.

(1) Note. The disclosure of the device herein must specify restriction of the passage to exclude foreign matter.

**549 Resilient gripping of panel:**

This subclass is indented under subclass 546. Coupling part including means adapted to flex within its elastic limit to bias the coupling part

with respect to the planar sheet to enhance engagement therewith.

**550 With opening encircling retaining collar:**

This subclass is indented under subclass 544. Coupling part combined with an annular member adapted to engage the coupling part and the sheet and secure them together; wherein the annular member is adapted to extend about and be coaxial with the opening through the generally planar sheet.

(1) Note. The device of this subclass must comprise an electrical connector, the collar may also comprise an electrical connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

551, for a collar having a concentric thread opening or insert for a retaining screw.

**551 Concentrically screw threaded collar:**

This subclass is indented under subclass 550. Coupling part wherein the annular member is helically ribbed about its axis for interfitting with corresponding helical grooves on the device.

(1) Note. A part of the collar, e.g., an insert, may be helically ribbed along the collar axis to receive a screw.

SEE OR SEARCH THIS CLASS, SUBCLASS:

550, for a collar having a concentric opening without screw threads, for a retaining screw.

**552 Including resilient securing:**

This subclass is indented under subclass 544. Coupling Part including a component adapted to be stressed within its elastic limit to serve to prevent undesired separation of the coupling part and the planar sheet.

(1) Note. A coupling part forced into an opening in the sheet to prevent undesired separation (i.e., force fitted) is included herein only if there is disclosure of a component being stressed with its elastic limit.

**553 By resilient member on panel:**

This subclass is indented under subclass 552. Coupling part wherein the component stressed within its elastic limit is an integral part of the planar sheet.

- (1) Note. A component permanently secured to the coupling part is considered to be an integral part thereof.

**554 Panel circuit arrangement:**

This subclass is indented under subclass 552. Coupling part wherein the planar sheet is a component on which circuit elements are preplaced and fixed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 55+, for prefabricated sheetlike part on which circuit elements are fixed, wherein the circuit elements are claimed as a part of the combination.

**555 With means to deform or lock resilient means:**

This subclass is indented under subclass 552. Coupling part combined with additional structure to (a) stress the component adapted to be stressed within its elastic limit beyond its elastic limit at a localized point, or (b) to block movement of the component adapted to be stressed within its elastic limit to prevent separation of the device from the sheet.

**556 With sealing to panel:**

This subclass is indented under subclass 552. Coupling part having provision to close off passage between the coupling part and the sheet of moisture, dust, or other foreign matter.

- (1) Note. The disclosure of the device herein must specify restriction of the passage to exclude foreign matter.

**557 Laterally flexed finger on coupling part:**

This subclass is indented under subclass 552. Coupling part wherein the component adapted to be stressed within its elastic limit is an integral part thereof, is elongated such that a remote portion engages the sheet, and is adapted to be stressed within its elastic limit normally of its elongation.

- (1) Note. A resilient finger permanently secured to the coupling part is considered to be an integral part thereof.

**558 Including lamp or electron tube socket:**

This subclass is indented under subclass 557. Coupling part particularly adapted to detachably receive and electronically couple to a member intended to radiate light, or to a member including electrical amplifying or switching means utilizing an environment excluding, vacuum envelope.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 56+, for a preformed panel circuit arrangement with an electrical for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.
- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 414, for a lamp to electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also

- engage (and interconnect) a second conductor.
- 541, for plural lamp or electron tube sockets including supporting means therefor.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.
- 559 With sealing to panel:**  
This subclass is indented under subclass 544. Coupling part having provision to close off passage between the coupling part and the sheet of moisture, dust, or other foreign matter.
- (1) Note. The disclosure of the device herein must specify restriction of the passage to exclude foreign matter.
- SEE OR SEARCH CLASS:
- 277, Seal for a Joint or Juncture, for a generic sealing means or process, subclasses 602+ for a static contact seal intended for use on a pipe, conduit or cable.
- 560 Coupling part secured to panel by stressing beyond elastic limit:**  
This subclass is indented under subclass 544. Coupling part attached to the generally planar sheet by permanent deformation of a member.
- (1) Note. Permanent deformation is such that the member will not resiliently return to its original shape.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 741+, for a connector comprising insulation other than a conductor sheath with a metallic connector or contact secured to the insulation by permanent deformation of the metallic part.
- 870, for a metallic connector or contact having means for securing to unclaimed insulation other than a conductor sheath by permanent deformation of the metallic part.
- 561 By stressing panel beyond elastic limit:**  
This subclass is indented under subclass 560. Coupling part wherein the member deformed for attachment is the generally planar sheet.
- 562 Coupling part including panel engaging shoulder:**  
This subclass is indented under subclass 544. Coupling part having a portion intended to extend laterally beyond the margin of the opening in the generally planar sheet and intended to supportingly contact a planar surface of the sheet.
- 563 Comprising detachable or adjustable flange:**  
This subclass is indented under subclass 562. Coupling part wherein the laterally extending sheet contact portion is a relatively thin, flat member having a planar surface to engage a substantial portion about the planar surface of the sheet outside the margin of the opening and is either removable from the device or is positionable with respect thereto.
- 564 Directly attached to panel by elongated fastener in tension (e.g., rivet, bolt, or screw):**  
This subclass is indented under subclass 562. Coupling part secured to the rigid body by a generally rodlike member subjected primarily to tensile forces.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 573, for similar structure wherein the coupling part or mating part does not extend into a panel opening.
- 565 With opposed, cooperating panel engaging member:**  
This subclass is indented under subclass 562. Coupling part combined with an element intended to contact the sheet on an opposing planar surface from that contacted by the laterally extending portion such that the planar sheet is gripped between the element and the laterally extending portion.

**566 For permanent attachment to panel, e.g., by welding:**

This subclass is indented under subclass 562. Coupling part intended to be secured to the planar sheet in a manner requiring destruction for removal.

- (1) Note. The device of this subclass has not yet been secured to the panel upon such securement, since it is of a permanent nature, the panel becomes a part of the device.

**567 Having resilient means engaging panel opening:**

This subclass is indented under subclass 527. Coupling part wherein the holding or retaining means comprises a generally planar sheet having an opening therethrough, the device including a component adapted to be strained within its elastic limit and engage the margin of the opening by yieldable urging thereof as the device tends to return to its original shape to prevent undesired separation of the coupling part (or mating part) and the planar sheet.

- (1) Note. A coupling part with a securing means forced into an opening in the sheet to prevent undesired separation (press fit) is included herein.

**568 Coupling part supported by randomly manipulated appliance (e.g., electric iron):**

This subclass is indented under subclass 527. Coupling part comprising a component part of an electricity using member that is the last unit of an electrical circuitry and is adapted to be moved about at the will of an operative.

**569 Flange on coupling part:**

This subclass is indented under subclass 527. Coupling part having a relatively thin, flat portion extending outwardly from the coupling part, having a planar surface adapted to supportingly engage the holding or retaining means.

**570 Plural detachable flanges:**

This subclass is indented under subclass 569. Coupling part including a first and a second relatively thin, flat portion extending outwardly from the coupling part, each having a planar surface adapted to supportingly engage

the holding or retaining means, wherein the first and second portions are removable from the device.

**571 Comprising or for use with supporting panel:**

This subclass is indented under subclass 527. Coupling part that is, or is adapted to be secured to, a rigid body having a relatively flat surface.

SEE OR SEARCH CLASS:

403, Joints and Connections, subclasses 230+ for a joint or connection for securing a rodlike body to a base or plate member; and see section IV of the definition of this class (439).

**572 Conductor extending into panel opening:**

This subclass is indented under subclass 571. Coupling part wherein the rigid body includes a passageway therethrough and wherein a member for transmitting electrical current to the coupling part is adapted to pass therethrough.

**573 Directly attached to panel by elongated fastener in tension (e.g., rivet, bolt, or screw):**

This subclass is indented under subclass 571. Coupling part secured to the rigid body by a generally rodlike member subjected primarily to tensile forces.

SEE OR SEARCH THIS CLASS, SUBCLASS:

564, for similar structure including a coupling part extending into a panel opening.

**574 Means to clamp:**

This subclass is indented under subclass 527. Coupling part including a first engaging surface and a second opposing engaging surface adapted to cooperate and grip other structure therebetween and thereby support the coupling part.

**575 Resilient clamp:**

This subclass is indented under subclass 574. Coupling part wherein both gripping surfaces are component parts of the coupling part and are drawn into gripping relationship by flexure of a member with its elastic limit.



**576 To be engaged by suspension means:**

This subclass is indented under subclass 527. Coupling part wherein the means for holding or retaining the device is intended to in turn be engaged by a member that is physically limited to support the device against gravity by the application of tensile forces only.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

450, for a drop cord attaching means comprising a stress relieving means.

531, for similar structure in combination with a suspension means that is flexible.

**577 COMBINED WITH NONELECTRICAL FEATURE:**

This subclass is indented under the class definition. Electrical connector in combination with additional structure (1) not relating to the electrical connector and (2a) not provided for elsewhere, or (2b) of such limited detail as to fail to meet the requirements of the Class providing for the additional structure.

**578 INCLUDING OR FOR USE WITH COAXIAL CABLE:**

This subclass is indented under the class definition. Electrical connector having one or more contacts\* adapted to be either (a) electrically secured in one-to-one relationship to one or more conductors\* of an elongated plural-conductor cable\* or (b) electrically coupled to one or more contacts of a complementary mating connector, the contacts of which being securable in one-to-one relationship to one or more conductors of an elongated plural-conductor cable, the elongated cable having an inner conductor centrally disposed within the cable and extending along the longitudinal axis thereof and further having at least one tubular outer conductor concentrically surrounding and fixedly spaced apart from the inner conductor, and wherein the conductors of the cable are electrically insulated from one another.

- (1) Note. The term "coaxial cable" is interpreted to encompass any form of coaxial transmission line having the defined coaxial configuration of conductors and may include, for example, a cable having flexible coaxial conductors with flexible

insulation interposed between the conductors or rigid conductors disposed in spaced coaxial relationship.

- (2) Note. A connector of this and the indented subclasses usually has a contact configuration similar to the coaxial cables used therewith in that the connector often has an inner contact centrally disposed within the connector and has a tubular-shaped outer contact concentrically surrounding and fixedly spaced apart from the inner contact by means of an intermediate layer of insulation.
- (3) Note. The inner, centrally-disposed conductor of the cable may also be tubular in cross-section, in which case the cable comprises inner and outer tubular conductors held in fixed spaced-apart concentric relation from one another.
- (4) Note. The outer tubular conductor of a coaxial cable is often used as an electrostatic or inductive shield for the inner signal-carrying conductor (or conductors) or used as the common return or grounded line of an electrical circuit.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 92+, particularly subclasses 98+ for an electrical connector having a specific provision to electrically connect a portion thereof to the earth for the purpose of providing a safety ground for the electrical connector.
- 274, 275 and 279, for an electrical connector, which may be of a coaxial cable type, combined with a distinct cable sheath sealing element or material.
- 394, for a coaxial-cable type electrical connector having a cutter-type electrical contact for piercing the insulative sheath of a coaxial cable.
- 607.01, through 607.59, for an electrical connector adapted to be electrically connected to a conductor or cable other than a coaxial cable and which provides electrostatic or inductive shielding or internally disposed contacts.

**579 Having means for interconnecting outer conductors of three or more cables:**

This subclass is indented under subclass 578. Electrical connector including means for electrically joining the corresponding outer conductor type cables so that the respective outer conductors are maintained at a common electrical potential.

**580 For cable having three or more coaxial conductors:**

This subclass is indented under subclass 578. Electrical connector particularly adapted to be mechanically and electrically connected to a coaxial-conductor type cable having at least three coaxially disposed conductors or connected to a mating connector which has, or is adapted to have, such a cable connected thereto.

**581 Adapted to join cable conductors to different type conductors (e.g., to PCB conductors):**

This subclass is indented under subclass 578. Electrical connector particularly adapted to electrically connect at least one of the conductors of a coaxial-conductor-type cable to a conductor other than a conductor of another coaxial-conductor-type cable.

- (1) Note. The connector may, for example, electrically connect the outer conductor of a coaxial cable to a planar conductive shield or ground panel; or it may electrically connect the conductors disposed on a printed circuit board, to conductive contacts of an electrical circuit component, or to individual wire-type conductors.

**582 Adapted to secure cables perpendicular to one another or a cable perpendicular to coupling axis:**

This subclass is indented under subclass 578. Electrical connector either (a) having means for securing thereto and electrically interconnecting two coaxial-conductor-type cables in such a manner that the longitudinal axes of such secured cables are disposed at a right angle to one another; or (b) comprising a coupling part\* having the longitudinal axis along which it is to be coupled to its mating coupling part\* disposed at a right angle to the longitudi-

nal axis of a coaxial-conductor type-cable secured thereto.

**583 Having screw-threaded or screw-thread operated cable grip:**

This subclass is indented under subclass 578. Electrical connector wherein the coaxial-conductor-type cable is clamped or secured by and directly to the connector; and the clamping or securing force is caused by the motion resulting from the rotation of a screw-threaded member carried by the connector.

**584 With radially compressible cable grip:**

This subclass is indented under subclass 583. Electrical connector wherein at least a portion of the coaxial-conductor-type cable is clamped or secured either within or between radially movable means operated by the screw-threaded member.

- (1) Note. The radially movable clamping or securing means may be a unitary part of the screw-threaded member.

**585 Having crimpable metallic cable conductor grip:**

This subclass is indented under subclass 578. Electrical connector wherein the coaxial-conductor-type cable is clamped or secured directly to the connector by a conductive clamping or securing part comprised of malleable metallic material; the cable being conductively clamped or secured to the connector by permanently bending or deforming the malleable part over or onto a conductor of the cable.

**586 COUPLING PART INCLUDING FLEXING INSULATION:**

This subclass is indented under the class definition. Electrical connector comprising a coupling part\* in part of yieldable, nonconductive material; wherein the yieldability is utilized in the use or assembly of the device.

- (1) Note. An electrical connector having flexible insulation, e.g., of rubber, is included in this subclass only if the flexibility of the rubber is "utilized in the use or assembly of the device", e.g., to effect a tight, sealing fit; to allow the clip enclosed therein to be manually gripped; etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 2, for interrelated electrical connectors relatively movable during use with antivibration mounting.
- 86+, for an electrical connector having an elastomeric or nonmetallic conductive portion.
- 89, for an electrical connector including an elastomeric or nonmetallic conductive, inductive shield or arc suppressing means.
- 190+, for similar sealing means used with an electrical connector with means for retaining or having a passageway for fluent material.
- 230, for a coupling part to receive a fluorescent or neon lamp having sealing element or material for cooperation with a coupled lamp.
- 271+, for an electrical connector with a sealing element or material for cooperation with a coupled connector, generally.
- 283, for the sealed interfitting of coupled connector part housings.
- 382+, for an electrical connector including flexing insulation, generally.
- 527+, for a wall, plate or panel mounting or attaching means with a connector part sealed thereto.
- 604+, for a connector with an external cable or conductor embedded in insulative sealing material.

**587 Sealing:**

This subclass is indented under subclass 586. Electrical connector wherein the yieldable nonconductive material serves to close off passage through the device of moisture, dust, or other foreign matter.

- (1) Note. The disclosure of the coupling part herein must specify restriction of the passage to exclude foreign matter.

**588 Resilient, coupling part encircling jacket:**

This subclass is indented under subclass 587. Coupling part including an encasing member thereabout of yieldable nonconductive material serving to close off passage to the interior of the device of moisture, dust or other foreign matter.

**589 Within rigid coupling part shell:**

This subclass is indented under subclass 587. Coupling part wherein the nonconductive sealing material is within a generally inflexible, encasing housing.

**590 Storage strip for plurality of coupling parts:**

This subclass is indented under subclass 586. Coupling part wherein the yieldable nonconductive material serves to support the coupling part for subsequent use and also serves to support additional similar coupling parts for subsequent use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 885, for a strip of detachable contacts, generally.

**591 Coupling part for use between duplicate coupling parts (e.g., sandwiched between printed circuit boards):**

This subclass is indented under subclass 586. Coupling part comprising a member for transmitting electricity from a second to a third such device wherein the second and third such devices are identical in configuration to each other in the areas intended to interfit with the first device.

- (1) Note. The connector of this subclass is intended to be used in series between a power source and a user of electricity. This subclass is not intended to include a connector for receiving power through a base portion and transmitting that power to a pair of connectors, even though the connectors of the pair are identical, e.g., a device to connect two electric lamps to a single lamp socket is not included herein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 66, for a coupling part of the type found herein combined with a preformed panel circuit arrangement, e.g., a printed circuit board.
- 91, for an electrical connector including an elastomeric or nonmetallic conductive portion adapted to be sandwiched between preformed panel circuit arrangement.

**592 Insulation distorted by or to effect coupling action:**

This subclass is indented under subclass 586. Coupling part wherein engagement with a mating part changes the shape of the yieldable, nonconductive material, or wherein the yieldable, nonconductive material is normally forced to change its shape in the act of bringing about such mating.

(1) Note. Insulation distorted by or to effected uncoupling is included herein.

**593 Receptacle adapted to bias contact and cause indirect gripping of mating contact:**

This subclass is indented under subclass 592. Coupling part wherein the yieldable, nonconductive material is strained within its elastic limit and is adapted to yieldably urge the contact of that device and cause that contact to engage a contact of a mating part more intimately.

**594 Resiliently interlocking coupling part with adjacent modular coupling part:**

This subclass is indented under subclass 586. Coupling part for use in nonconductive relationship with at least one other such coupling part (for transmitting electricity to corresponding mating parts) of substantially identical structure such that the yieldable, nonconductive material of one serves to hold the two coupling parts together.

**595 Hinged or flexed detent on insulation engaging to secure contact within coupling part housing:**

This subclass is indented under subclass 586. Coupling part wherein the yieldable, nonconductive material includes a finger extending into engagement with the contact\* to hold the contact in a fixed location with respect to other portions of the device wherein the finger is pivoted about an axis or bent within its elastic limit along its length by engagement with the contact.

**596 Coupling part housing hinged for coupling part assembly:**

This subclass is indented under subclass 586. Coupling part including an external encasing member of yieldable, nonconductive material comprising a first generally rigid portion, a

second rigid portion, and a connecting intermediate portion adapted to flex and thereby allow the first and second portion to encompass the remainder of the device.

**597 Having plural, laterally spaced prongs or prong sockets:**

This subclass is indented under subclass 586. Coupling part including (1) a first generally rodlike elongated male contact\* extending along an axis for mating with a female contact and including a second generally rod-like elongated male contact extending along a second axis for mating with a second female contact; wherein the first and second axes are parallel and wherein the first and second male contacts are in the same plane normal to their axes; or including (2) a first female contact extending along an axis for mating with a generally rodlike elongated male contact and including a second female contact extending along a second axis for mating with a second generally rodlike elongated male contact wherein the first and second female contacts are in the same plane normal to their axes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

626+, for a rigidly insulated plural contact coupling part.

**598 Coupling part including shell and assembly of contact and contact supporting insulator:**

This subclass is indented under subclass 597. Coupling part comprised of an encased housing and a grouping consisting of an insulative body and a contact supported thereby wherein the components of the grouping are intended to be first brought together and then inserted into the encased housing.

**599 And multiple insulating components:**

This subclass is indented under subclass 597. Coupling part including a portion of yieldable, nonconductive material and including another portion of nonconductive material.

(1) Note. An insulative body about a conductor cable is not considered to be a part of the coupling part in this subclass.

**600 Having laterally spaced prongs:**  
This subclass is indented under subclass 597. Coupling part including a first generally rod-like elongated male contact extending along an axis for mating with a female contact and including a second generally rodlike elongated male contact extending along the second axes for mating with a second female contact; wherein the first and second axis are parallel and wherein the first and second male contacts are in the same plane normal to their axes.

**601 Folded prongs:**  
This subclass is indented under subclass 600. Coupling part wherein the male contacts each are made from a single strip of material folded back on itself at the greatest projection thereof.

**602 Lamp or electron tube socket or base:**  
This subclass is indented under subclass 586. Coupling part particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical or amplifying switching means utilizing an environment including, vacuum maintaining envelope; or comprising the electrical connector of such a light radiating member or amplifying switching member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.  
168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.  
220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.  
226+, for coupling part to receive a fluorescent or neon lamp.  
280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector.  
336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube by bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.

356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resiliently urged laterally of connection with a mating part.

375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.

414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.

419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.

541, for plural lamp or electron tube sockets including supporting means therefor.

558, for a lamp or electron tube socket extending into a supporting panel.

611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).

661+, for a plural contact coupling part including a screw threaded contact and insulation other than the conductor sheath.

**603 Retaining contact within distinct coupling part housing:**

This subclass is indented under subclass 586. Coupling part wherein the yieldable, nonconductive material is urged to hold the contact\* in a fixed location with respect to the other portion of the device.

**604 WITH EXTERNAL CONDUCTOR OR CABLE EMBEDDED IN INSULATIVE SEALING MATERIAL:**

This subclass is indented under the class definition. Electrical connector comprising electricity transmitting contact combined with an electricity transmitting strandlike member with a nonconductive substance molded thereabout forming a physically leakproof junction between the contact and the strandlike member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 89, for an electrical connector including an elastomeric or nonmetallic conductive, inductive shield or arc suppressing means.
- 190+, for similar sealing means used with an electrical connector with means for retaining or having a passageway for fluent material.
- 230, for a coupling part to receive a fluorescent or neon lamp having sealing element or material for cooperation with a coupled lamp.
- 271+, for an electrical connector with a sealing element or material for cooperation with a coupled connector, generally.
- 283, for the sealed interfitting of coupled connector part housing.
- 445+, for a device having a cable embedded in a flexible or movably mounted cable guard.
- 527+, for a wall, plate or panel mounted or attaching means with a connector part sealed thereto.
- 586+, for a coupling part in which a cable and contact are embedded in flexible or resilient insulation.

**605 Lamp or electron tube socket or base:**

This subclass is indented under subclass 604. Coupling part particularly adapted to detachably receive and electrically couple to a member intended to radiate light, or to a member including electrical switching means utilizing an environment excluding, vacuum maintaining envelope; or comprising the electrical connector of such a light radiating or switching member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 56+, for a preformed panel circuit arrangement with an electrical connector for connection to a lamp or electron tube.
- 168, for a lamp or electron tube socket or base convertible by internal change to selectively cooperate with a different contact.
- 220, for a lamp or electron tube socket or base adapted to engage a mating connector in alternative manners.

- 226+, for a coupling part to receive a fluorescent or neon lamp.
- 280, for a lamp or electron tube socket or base having a resilient housing for sealing with a coupled connector
- 336, for a lamp or electron tube socket adapted to receive a cooperating lamp or tube bayonet action, including a movement-actuating means or retaining means in addition to the contact of the socket.
- 356, for a lamp or electron tube socket including a retaining means comprising a finger or stretchable sleeve resilient urged laterally of connection with a mating part.
- 375, for a lamp or electron tube socket or base with a guiding means for mating of a coupling part.
- 414, for a lamp or electron tube socket or base including a conductor sheath penetrating contact and screw means to move the conductor against the cutting contact.
- 419, for a lamp or electron tube socket or base including a conductor sheath penetrating contact adapted to cut to engage a first conductor and to also engage (and interconnect) a second conductor.
- 558, for a lamp or electron tube socket extending into a supporting panel.
- 602, for a lamp or electron tube socket or base including flexing insulation.
- 611+, for a connector or contact having vitreous-type envelope secured thereto (e.g., a base of a lamp or vacuum tube).
- 661+, for a plural contact coupling part including a screw-threaded contact and insulation other than the conductor sheath.

**606 Molded connector body:**

This subclass is indented under subclass 604. Electrical connector wherein a nonconductive substance is shaped about the electricity transmitting strandlike member not only to form a leakproof junction but also to form the configuration of the structural member.

**607.01 ELECTROMAGNETIC OR ELECTRO-STATIC SHIELD:**

This subclass is indented under the class definition. Subject matter comprising a conductive screen means for preventing or reducing the detrimental effect induced within a connector or contact\* due to capacitive or inductive coupling.

(1) Note. Since there are included herein connectors of the type adapted to be electrically connected to a cable\* having an outer conductive shield concentrically surrounding the longitudinal axis of the cable, there is a similarity between the connectors for coaxial cables found in subclasses 578-585 and some of the connectors included in this and the indented subclasses. The similarity relates, however, only to the tubular outer contact, because the shielded-cable connectors included in these subclasses (607.01) are adapted to be secured to cables having at least one inner conductor whose longitudinal axis does not extend along the longitudinal axis of the cable, whereas the connectors in subclasses 578-585 are adapted to be secured only to cables in which the longitudinal axes of all of the conductors coincide with the longitudinal axis of the cable.

(2) Note. Since electric fields induce noise voltages capacitively, it is common to surround a connector or contact with a grounded conducting shield in order to reduce stray pickup from external sources or crosstalk between mutually insulated contacts. Since external magnetic fields induce noise currents inductively, it is common to surround a connector or contact with a high-permeability ferromagnetic enclosure which reduces the intensity of magnetic fields.

SEE OR SEARCH THIS CLASS, SUBCLASS:

88, through 90, for an electrical connector which includes an elastomeric or nonmetallic conductive portion and which provides anti-inductive shielding.

92, through 108, for an electrical connector having a specific provision to electrically connect a portion thereof to the earth for the purpose of providing a safety ground for the electrical connector, and see Note (2) above, and see the Notes appended to subclass 92.

125, through 128, particularly subclass 126 for a spark plug cover or shield of an electrostatic suppressing nature.

274, through 279, for an electrical connector combined with a distinct cable sheath sealing element or material, which connector may also provide inductive or capacitive shielding.

578, through 585, for an electrical connector specifically adapted for use with coaxial cables, which connector often includes an inductive or capacitive shielding function, and see Note (1) above.

941, for an electrical connector with means other shielding material as defined for this subclass for suppressing crosstalk.

**607.02 Shield formed of conductive and dielectric materials in dielectric (e.g., plastic coated with metal or filled with metal particles):**

This subclass is indented under subclass 607.01. Subject matter wherein shield housing is formed of an insulative body coated or plated with a thin metal layer or is formed of an insulative body filled with metal particles to provide a shielding or static discharge effect.

SEE OR SEARCH THIS CLASS, SUBCLASS:

88, through 90, for an electrical connector which includes an elastomeric or nonmetallic conductive portion and which provides anti inductive shielding.

**607.03 Conductive coating surround mutually isolated contacts:**

This subclass is indented under subclass 607.02. Subject matter wherein the conductive material both surrounds and provides a conductive shield between a set of separate contacts.

**607.04 Shield with cutout to receive shield of mating connector to reduce field effects:**

This subclass is indented under subclass 607.01. Subject matter wherein at least one of the shields includes an opening formed to receive a portion of the shield of the mating connector to increase shielding effects.

**607.05 Shielding individually surrounding or interposed between mutually insulated contacts (i.e., 'single' connector with divider):**

This subclass is indented under subclass 607.01. Subject matter wherein having two or more mutually insulated electrical paths to form an electrical joint, wherein the shield surrounds or is inserted in a portion of contacts, so that contacts are shielded from the one or more other contacts.

- (1) Note. The conductive shielding may be formed around, but spaced apart from, a portion of one or more contacts, so that the contact is inductively screened from the one or more other contacts.
- (2) Note. The conductive shielding may be interposed between two or more contacts, so that the contacts are inductively screened from one another.

**607.06 Planar shields separating multiple (three or more) thin connector modules:**

This subclass is indented under subclass 607.05. Subject matter wherein the connector is formed of an assembly of thin flat insulative contact supporting members and thin planar shields located between the insulative contact supporting members.

**607.07 For mounting on PCB:**

This subclass is indented under subclass 607.06. Subject matter including structure to attach the shield to a printed circuit board.

**607.08 Shield with divider wall separating contacts (includes wall formed by ground contacts):**

This subclass is indented under subclass 607.05. Subject matter wherein shielding structure is formed by conductive members or walls that form compartments for receiving individual or pairs of contacts\*.

**607.09 For mounting on PCB:**

This subclass is indented under subclass 607.08. Subject matter including structure to attach the shield to a printed circuit board.

**607.1 Three or more rows and columns of contact spaces, formed by shield walls:**

This subclass is indented under subclass 607.09. Subject matter wherein the shield is formed as a unitary housing with walls forming compartments for contacts and there being at least three rows and columns of compartments.

**607.11 Right angle connection on PCB:**

This subclass is indented under subclass 607.09. Subject matter wherein the connector is fixed upon and electrically joined to a printed circuit board and is arranged with its mating connection direction substantially perpendicular to the plane of the printed circuit board.

**607.12 Planar shield with openings for individual contacts:**

This subclass is indented under subclass 607.05. Subject matter wherein the shield is a flat conductive member having apertures that receive contacts\*.

**607.13 Shield housing mounted on PCB:**

This subclass is indented under subclass 607.05. Subject matter wherein means for surrounding and supporting the shield are fixed upon and electrically joined to a printed circuit board.

**607.14 Socket for receiving edge type connector or integrated circuit:**

This subclass is indented under subclass 607.13. Subject matter wherein the shield housing has an opening shaped for receipt of a leading edge of an electronic circuit member such as a printed circuit board or an opening shaped for receipt of a memory chip package.

**607.15 With conductive housing part separating wires:**

This subclass is indented under subclass 607.05. Subject matter wherein conductive walls of the connector\* define separate passages for wires adjacent to their connection to contacts of the connector\*.



**607.16 Vacuum tube socket:**

This subclass is indented under subclass 607.05. Subject matter wherein the shield encloses an insulative body having openings for receiving male or pin-like contacts of mating connector and the openings are arranged at positions on a circle that surrounds the central axis of the insulative body.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

607.59, for vacuum tube socket in electromagnetic or electrostatic shield, per se.

**607.17 Resilient conductive means providing additional electrical path between mating outer shield members (e.g., spring or gasket):**

This subclass is indented under subclass 607.01. Electrical connector wherein the shield comprises a conductive member for surrounding one or more mutually-insulated contacts\* and has a deformable electrical connection to a complementary counterpart.

- (1) Note. The shield is electrically engaged with the shield counter-contact, the conductive path of the shield means extends over both the coupling part and its counterpart and wherein the shield of the coupling part further includes an additional conductive element having a portion thereof either engaged or adapted to be engaged with the shield of the coupling part and having a resilient portion thereof engageable with the screen counter-contact or the counterpart.
- (2) Note. When the coupling part and its counterpart are joined together, an additional conductive path is formed between the conductive screen member of the coupling part and the conductive screen member of the counterpart.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

827, for plug having separate resilient means extending externally around or outwardly through rigid plug body.

843, for socket having separate conductive spring located within or extending into rigid socket body.

**607.18 Conductive gasket (i.e., flat gasket or O-ring):**

This subclass is indented under subclass 607.17. Subject matter wherein the deformable connection is comprised of a flat sheet like member or a ring of substantially circular or square cross section.

- (1) Note. These type spring members are typically formed of elastomeric material.

**607.19 Conductive spring on exterior of corresponding shield:**

This subclass is indented under subclass 607.17. Subject matter wherein the deformable connection is mounted onto the shield of one connector so as to surround at least a portion of that shield.

**607.2 Shield for electro-optical transceiver:**

This subclass is indented under subclass 607.01. Subject matter wherein the shield encloses a connector that includes circuitry for transforming optical signals to electrical signals.

- (1) Note. This subclass provides for nominally recited optical transceivers.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

607.24, for shield surrounds diverse type connectors including optical connectors but not optical transceiver connectors.

**607.21 For plural transceiver housings:**

This subclass is indented under subclass 607.2. Subject matter wherein the shield houses two or more transceivers.

- (1) Note. Transceiver housings are mounted to be adjacent or in a specific arrangement to one another.

**607.22 IC card type:**

This subclass is indented under subclass 607.01. Subject matter wherein the shield is formed to enclose a printed circuit board and includes an electrical connector at one end for insertion into a slot-like receiver (socket) of an electronic apparatus.

- (1) Note. IC card type is usually a thin housing formed by top and bottom shield covers.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 76.1, for housings that enclose a printed circuit board and include an electrical connector at one end of the housing.  
607.33, for receiving IC card.

SEE OR SEARCH CLASS:

- 361, Electricity: Electrical Systems and Devices, subclass 737 for an IC card or card member that encloses a printed circuit board.

**607.23 Shield encloses plural connectors (i.e., modular or stacked):**

This subclass is indented under subclass 607.01. Subject matter wherein the shield encloses two or more connectors\*.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 541.5, for stacked right-angle connector for use on a printed circuit board.

**607.24 Shield surrounds diverse type connectors (i.e., surrounds optical and electrical connectors):**

This subclass is indented under subclass 607.23. Subject matter wherein the shield encloses two or more structurally different connector housings.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 607.2, for shield for electro-optical transceiver (all mounted on printed circuit board).

**607.25 Shield with plural ports for separate mating connectors:**

This subclass is indented under subclass 607.23. Subject matter wherein the shield includes plural openings so that each one forms a port for receipt of a separate mating connector as it is connected to one of the connectors associated with the shield.

**607.26 RJ type sockets:**

This subclass is indented under subclass 607.25. Subject matter wherein each of the shielded connectors includes a rectangular opening with resilient contacts on one side and a latch engaging shoulder on the opposite interior side.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 607.38, for RJ sockets in shield mounted on printed circuit board.

- (1) Note. RJ type sockets are typically used in telecommunications.

**607.27 Outer shield surrounds inner shield (i.e., single connector with one hollow shield about another hollow shield):**

This subclass is indented under subclass 607.01. Subject matter wherein, for a single connector, one shield substantially fully encloses another (inner) shield.

**607.28 With connection of shield to metal grounding panel:**

This subclass is indented under subclass 607.01. Subject matter wherein the shielded connector includes structure for conductively joining the shield to a grounded mounting panel that supports either the connector or another to which it can be mated.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 939, for an electrical connector having a shield with grounding of the shield to a conductive mounting panel that supports either the connector or the connector to which it is to be mated.

**607.29 Expansion card bracket (usually L-shaped bracket for computer cards):**

This subclass is indented under subclass 607.28. Subject matter wherein the shield is or includes an elongated bracket that is attachable to an edge of a printed circuit board and is used to shield and mount the printed circuit board to an interior wall of an electronic apparatus housing.

**607.3 With conductive gasket (e.g., flat gasket or O-ring):**

This subclass is indented under subclass 607.28. Subject matter including a separate conductive member that is fitted between a shield of a connector and a metal panel and that electrically connects the shield of a connector and the metal panel.

**607.31 For receiving PCB edge or IC card as mating member:**

This subclass is indented under subclass 607.01. Subject matter wherein the shield protects and provides access to a connector which includes an elongated slot for receiving PCB edge or IC card as mating member and includes contacts mounted within the connector for engaging counter-contacts on the inserted member.

**607.32 Right angle connector on PCB:**

This subclass is indented under subclass 607.31. Subject matter wherein the connector and the shield are fixed upon and electrically joined to a printed circuit board and are arranged so that the mating connection direction is substantially perpendicular to the plane of the printed circuit board.

**607.33 For receiving IC card:**

This subclass is indented under subclass 607.32. Subject matter wherein the shield and connector receive a printed circuit board or integrated circuit enclosed in thin card-like housing.

SEE OR SEARCH THIS CLASS, SUBCLASS:

76.1, for housings that enclose a printed circuit board and include an electrical connector at one end of the housing.  
607.22, for IC card type.

SEE OR SEARCH CLASS:

361, Electricity: Electrical Systems and Devices, subclass 737, for an IC card or card member that encloses a printed circuit board.

**607.34 With connection of shield to connector contact :**

This subclass is indented under subclass 607.01. Subject matter wherein a conductive element provides a conductive path between one of the connector contacts and the shield.

SEE OR SEARCH THIS CLASS, SUBCLASS:

95, for grounding structure with connection of the ground contact to a connector container or housing.

**607.35 Shield mounted on printed circuit board:**

This subclass is indented under subclass 607.01. Subject matter including structure to attach the shield to a printed circuit board.

SEE OR SEARCH THIS CLASS, SUBCLASS:

544, for a connector housings mounted to a panel with a portion of the connector housing or its mating part extending into the panel opening.

569, for a connector housing mounted by using a flange on the connector housing.

571, for a connector housing mounted to a supporting panel.

**607.36 Shield surface-mounted to PCB (i.e., without penetration of the PCB):**

This subclass is indented under subclass 607.35. Subject matter including structure to attach the shield electrically and structurally to a surface of a PCB without penetration of the PCB, e.g., to a conductive pad or trace on the surface of the PCB.

**607.37 With separate conductive member fixing shield to PCB (e.g., resilient or threaded latch):**

This subclass is indented under subclass 607.35. Subject matter wherein a distinct, electrically conductive structural member, such as a conductive fastener is attached to the shield and passed into or through an aperture in a PCB to connect the shield electrically and structurally to the PCB.

**607.38 For RJ socket:**

This subclass is indented under subclass 607.35. Subject matter wherein the shielded connector includes a rectangular opening with resilient contacts on one side and a latch engaging shoulder on the opposite interior side.

- (1) Note. Shield encloses RJ socket and both are mounted to PCB.
- (2) Note. RJ type sockets are typically used in telecommunications.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

607.26, for RJ sockets in shield with plural ports for separate mating connectors.

**607.39 Vertically mounted wafer edge connector:**

This subclass is indented under subclass 607.35. Subject matter wherein the connector includes a greater number of contacts along a line perpendicular to the PCB plane than the number along a line parallel to the PCB (i.e., thin connector with one or two vertical rows of contacts).

**607.4 Parallel connector on PCB:**

This subclass is indented under subclass 607.35. Subject matter wherein the connector is fixed upon and electrically joined to a printed circuit board and is arranged with its mating connection direction substantially parallel to the plane of the printed circuit board.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

79, for a connector housing with contacts formed into a right angle shapes and to be mounted on a printed circuit board.

**607.41 Having means for electrically connecting shield of shielded cable to connector shield member:**

This subclass is indented under subclass 607.01. Electrical connector wherein the conductive shield member of a coupling part includes means specifically adapted to electrically connect a conductive shielding sheath of a shielded cable to the conductive shield member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 98, through 99, for an electrical connector having a safety grounding provision and having means for grounding to a conductive sheath of a cable.
- 274, 275, and 279, for an electrical connector combined with a distinct cable sheath sealing element or material, which connector may also provide inductive or capacitive shielding.
- 578, through 585, for similar structure where the shielded cable is a 'coaxial cable'. See this class, subclass 578 definition and Note (1).

**607.42 For armored cable:**

This subclass is indented under subclass 607.41. Subject matter wherein the inner conductors of the shielded cable are enclosed in a metal sheath that provides significant mechanical protection of the conductors and typically is formed with adjacent convolutions.

**607.43 For RJ plug:**

This subclass is indented under subclass 607.41. Subject matter wherein the connector is a type that is generally rectangular in shape and includes a row of rigid contacts along only one side and usually include a latch along the other side.

- (1) Note. RJ plug is typically used in telecommunications.

**607.44 With added means connecting cable shield to external structure (i.e., to panel or to terminal block casing):**

This subclass is indented under subclass 607.41. Subject matter wherein a further conductive member, such as a wire, is used to electrically connect the cable shield to a structural body.

- (1) Note. A structural body such as a metal panel that supports the connector to which the cable shield is joined.

**607.45 For cable with two outer shields:**

This subclass is indented under subclass 607.41. Subject matter wherein the cable includes two or more conductive shielding sheaths with one surrounding the other.

**607.46 Connector with internal PCB (i.e., shield soldered to PCB in housing):**

This subclass is indented under subclass 607.41. Subject matter wherein the connector includes a printed circuit board and the conductive sheath of the cable is conductively attached to a terminal of the PCB.

**607.47 Longitudinally divided shield parts:**

This subclass is indented under the subclass 607.41. Subject matter wherein the shield is formed by a first and a second shell like structure and wherein the structures meet along a line parallel or coplanar to the axis of the shielded cable and the cable enters the shield between the two shell like structures.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

607.56, for longitudinally divided shield parts in a multi-part shield body.

465, 731, and Digest 906, for connectors with longitudinally divided housing parts where the housing parts do not necessarily provide a shielding.

**607.48 At least one shield part crimpable to cable shield:**

This subclass is indented under the subclass 607.47 Subject matter wherein one of the shells is deformable to become permanently and conductively joined to the cable shield.

**607.49 For flat cable:**

This subclass is indented under subclass 607.47. Subject matter wherein the shielded cable is in a basically planar or ribbon form with the conductors arranged in one or more rows having at least three conductors in each row.

**607.5 Connected to cable shield by crimping:**

This subclass is indented under subclass 607.41. Subject matter wherein the shield housing is deformable to become permanently and conductively joined to the cable shield.

**607.51 Insulative cover surrounding shield (includes overmolding):**

This subclass is indented under subclass 607.5. Subject matter wherein the shield is substantially enclosed by a body of insulative material that fits closely about the shield.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

604, for an electrical connector housing which is joined to a cable and in which the cable and at least a portion of the housing are embedded in insulative material.

**607.52 Connected by portion of shield fitting beneath cable shield or by penetration of cable:**

This subclass is indented under subclass 607.41. Subject matter wherein electrical connection to the cable shield is accomplished by forming a portion of the shield housing or a part joined thereto to extend into the interior of the cable shield or to pierce through the material of the cable shield.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

394, for a connector including a penetrating contact that is to pierce the shield (outer conductor) of a coaxial cable.

**607.53 Shield extends over mating face (i.e., shield at mating face extends between contact openings):**

This subclass is indented under subclass 607.01. Subject matter wherein the shield includes a portion that overlays a face of an insulative housing of the connector that is opposed to a face of the mating connector and a portion of the shield at such face extends between its contact openings contacts or between the contact openings of the mating face.

**607.54 Shield formed by folding:**

This subclass is indented under subclass 607.01. Subject matter wherein the shield is produced as a planar member and is folded to surround insulative body of the connector.

**607.55 Multi-part shield body:**

This subclass is indented under subclass 607.01. Subject matter wherein the shield housing is formed in two or more major sections which are assembled to provide a substantially full enclosure for surrounding connector insulative body.

**607.56 Longitudinally divided shield parts:**

This subclass is indented under subclass 607.55. Subject matter wherein the shield is formed by a first and a second shell like structure and wherein the structures meet along a line parallel or coplanar to the axis of the shielded cable and a cable enters the shield between the two shell structures.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

607.47, for longitudinally divided shield parts in means for electrically connecting shield of shielded cable to connector shield member.

465, 731, and Digest 906 for connectors with longitudinally divided housing parts where the housing parts do not necessarily provide a shielding.

**607.57 With insulative cover or overmolding:**

This subclass is indented under subclass 607.56. Subject matter wherein the shield is substantially enclosed by a body of insulative material that fits closely about the shield.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

604, for an electrical connector housing which is joined to a cable and in which the cable and at least a portion of the housing are embedded in insulative material.

**607.58 Insulative cover or overmold surrounds shield:**

This subclass is indented under subclass 607.01. Subject matter wherein the shield is substantially enclosed by a body of insulative material that fits closely about the shield.

**607.59 Vacuum tube socket:**

This subclass is indented under subclass 607.01. Subject matter wherein the shield encloses an insulative body having openings for receiving male or pin-like contacts of mating connector and the openings are arranged at positions on a circle that surrounds the central axis of the insulative body.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

607.16, for vacuum tube socket in shielding individually surrounding or interposed between mutually insulated contacts.

**611 WITH VITREOUS-TYPE ENVELOPE (E.G., BASE OF LAMP OR VACUUM TUBE):**

This subclass is indented under the class definition. Electrical connector carried by or secured to a hollow glasslike body constituting a container for an electrically operative element of an electric lamp, electric space discharge device, or other electrical component.

- (1) Note. Class 313, Electric Lamp and Discharge Devices, is the generic class for electric lamp and electric space discharge devices. For a complete listing of where the various combinations and sub-combinations of such devices may be found and also the line between the classes providing for the aforementioned subject matter, attention is directed to the class definition of Class 313.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

226+, for a coupling part specially designed to receive a fluorescent or neon lamp, and see the Search Notes appended thereto for the various locations provided for the bases of lamps or vacuum tubes or for complementary coupling parts designed to mate with such bases.

638+, for a device including two or more plural-contact coupling parts combined in one integral unit, which coupling parts may be either similar in structure to lamp or vacuum tube base or complementary coupling parts for mating with lamp or vacuum-tube-type bases.

660+, for a plural-contact coupling part comprising a receptacle or plug, which receptacle or plug may be a base of lamp or vacuum tube, a coupling part similar in structure to such a lamp or vacuum tube base, or a com-

plementary coupling part for mating with either of the above.

**SEE OR SEARCH CLASS:**

313, Electric Lamp and Discharge Devices, for the combination of an electric lamp or discharge device, where significant lamp or discharge structure is recited, and a connector for connecting such device with an electric circuit, and see section XI of the class definition of that class (313) for the line between Class 313 and Class 439.

**612 Connector or contact secured to each end of double-ended envelope:**

This subclass is indented under subclass 611. Electrical connector wherein the glasslike body has two electrically operative ends, each end of which carries a contact\*, carries a contact-carrying connector, or is formed into a contact-carrying connector.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

226+, for a coupling part specially designed to receive a fluorescent or neon lamp.  
620.26, for an electrical connector combined with a named fuse or including a housing for fully enclosing a fuse, which electrical connector may be designed to receive a cartridge-type fuse having a contact at each end thereof.  
698, for a plural-contact receptacle specially designed to transversely receive an elongated fuselike component having a contact at each end thereof.

**613 Connector of the type having only concentric annular contacts or annular contact disposed concentrically about an axial contact:**

This subclass is indented under subclass 611. Electrical connector wherein the glasslike body carries a connector of the type having at least two contacts\* which are spaced-apart and electrically insulated one from the other the connector forming a coupling part\* specially adapted to mate or interengage with a complementary plural-contact-carrying counterpart\*, so that a readily separable electrical joint having at least two mutually-insulated electrical paths may be formed, and wherein one of the contacts is disposed symmetrically around and

spaced from the longitudinal axis along which the coupling part is intended to be engaged and coupled with its counterpart, all points on the symmetrical contact at any point along said axis being equally spaced from said axis, and wherein the outer of the contacts is either (a) disposed on the longitudinal axis along which the coupling part is intended to be engaged and coupled with its counterpart or (b) also disposed symmetrically around and spaced from the said longitudinal axis in such a manner that all points on the second said symmetrical contact at any point along said axis is equally spaced from said axis a distance different from the corresponding contact-to-axis points on the first said symmetrical contact, whereby the symmetry of the contacts of the coupling part is such that the contacts will make electrical connection with their mating counter-contacts\* regardless of the angular disposition of the coupling part about the longitudinal axis of engagement with its counterpart.

(1) Note. Included also in this and the indented subclasses are patents in which the connector carried by the glasslike body is disclosed to be of the type defined above, but in which the claims recite only one of the contacts.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

641+, 649, 662+, 672, 675, and 734+, for plural-contact coupling part having at least one annular contact disposed concentrically around the longitudinal axis of engagement with its counterpart, such coupling part usually having an axial contact or another annular contact coaxial with the longitudinal axis.

**614 Having three or more contacts (e.g., for three-way lamp):**

This subclass is indented under subclass 613. Electrical connector wherein the coupling part carried by the glasslike body carries at least three contacts which are spaced-apart and electrically insulated from one another, and wherein at least two of the contacts are disposed symmetrically around and spaced apart from the longitudinal axis along which the coupling part is intended to be engaged and coupled with its counterpart.

**615 Having screw-thread-coupling contact:**

This subclass is indented under subclass 613. Electrical connector wherein one of the contacts of the coupling part carried by the glasslike body carries screwthreads for the purpose of electrically and mechanically coupling to a mating screw-thread-coupling counter-contact carried by a mating counterpart.

SEE OR SEARCH THIS CLASS, SUBCLASS:

641+, 659, 662+, and 734+, for a plural-contact coupling part having a cylindrical or annular, screw-thread-coupling contact disposed concentrically around the longitudinal axis of engagement with mating screw-thread-coupling counterpart.

**616 Having bayonet-coupling contact:**

This subclass is indented under subclass 611. Electrical connector wherein the connector carried by the glasslike body forms a coupling part\* specially adapted to mate or interengage with a complementary counterpart\*, so that a readily separable electrical joint may be formed, and wherein the coupling part either (a) carries a contact\* which itself extends or which has a pin or projection thereon which extends radially of the longitudinal axis along which the coupling part is intended to be coupled to its counterpart, or (b) has an abutment extending circumferentially about the longitudinal axis along which the coupling part is intended to be coupled to its counterpart, and wherein the coupling part and its counterpart are retained in coupled relationship either by the radially extending pin or projection on the contact, being received behind the circumferentially extending abutment, the engaging motion being first along the longitudinal coupling axis and then a partial turning about the said coupling axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

613, for a coupling part carried by a glasslike body in which the coupling part has an annular, bayonet-coupling contact around an axial contact.

644, 648 and 672+, for plural-contact coupling part having one or more bayonet-coupling contacts.

**617 Plug having spaced, longitudinally engaging, prong-like contacts:**

This subclass is indented under subclass 611. Electrical connector wherein the connector carried by the glasslike body has extending therefrom at least two elongated, fingerlike contacts\* which are spaced-apart and electrically insulated one from another, the connector further forms a coupling part\* specially adapted to mate and interengage with a complementary counterpart having prong-receiving contacts, so that an electrical joint having at least two mutually insulated electrical paths may be formed, and wherein the longitudinal axes of the elongated, fingerlike contacts are disposed parallel to the longitudinal axis along which the coupling part is intended to be engaged with its counterpart.

SEE OR SEARCH THIS CLASS, SUBCLASS:

647, and 651+, for a single unit containing two or more plural-contact coupling parts, at least one of the coupling parts being a plug having two or more spaced, longitudinally engaging, pronglike contacts.

655, and 692+, for a coupling part comprising a plug having two or more spaced, longitudinally engaging, pronglike contacts.

**618 Having three or more circularly arranged contacts (e.g., base of vacuum tube):**

This subclass is indented under subclass 617. Electrical connector wherein the coupling part carried by the glasslike body has at least three elongated, fingerlike contacts extending therefrom, and wherein the fingerlike contacts are so arranged on the face of the glasslike body or the coupling part secured thereto that they will fall on the circumference of a circle.

**619 Having only two duplicate contacts arranged bilaterally symmetric about longitudinal axis of engagement:**

This subclass is indented under subclass 611. Electrical connector wherein the connector carried by the glasslike body carries only two identical contacts which are spaced-apart and electrically insulated one from the other, the connector further forming a coupling part\* specially adapted to mate or interengage with a



complementary contact-carrying counterpart\*, so that an electrical joint having only two mutually-insulated electrical paths may be formed, and wherein the two spaced-apart contacts taken together are disposed bilaterally symmetric about the longitudinal axis along which the coupling part is intended to be engaged and coupled with its mating counterpart.

- (1) Note. The bilaterally symmetric disposition of the two duplicate contacts of the connectors in this subclass also means that each contact is annularly spaced about the longitudinal axis of engagement 180 degrees from the other contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 699.1, for a coupling part having only two duplicate contacts arranged bilaterally symmetric about the longitudinal axis of engagement but which is not combined with a glasslike body.

**620.01 WITH CIRCUIT COMPONENT OR COMPRISING CONNECTOR WHICH FULLY ENCLOSES CIRCUIT COMPONENT:**

This subclass is indented under the class definition. Subject matter including electrical connector either (a) combined with a functioning electrical circuit device; or (b) comprising a holder, casing, or housing adapted to substantially completely surround an unclaimed functioning electrical circuit device, which holder, casing, or housing further carrying at least one contact\* for electrically engaging a contact of the circuit device.

- (1) Note. The following functioning electrical circuit devices are specifically excluded from this and the indented subclasses since, for the most part, they are provided for elsewhere within this class (439): energy cells or batteries (both the dry cell and storage types), spark plugs of the type designed for internal combustion engines, lamps, vacuum tubes, interference filters of the type combined or used with contacts of inductively or capacitively shielded connectors, and a power measuring meter coupling part.

- (2) Note. Some examples of functioning electrical circuit devices which may be included herein are: fuses, resistors (including resistive heating elements), capacitors, inductors or coils, transformers relays, switches, transistors, solid-state diodes or rectifiers, transducers, such as earphones, microphones, piezoelectric devices, photocells, etc., and measuring or detection devices, such as meters, strain gauges, and seismometers, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 76.1, for housing enclosing printed circuit board.  
 125, for a connector having a spark or glow plug cover.  
 126, for inductive shielding, e.g., radio disturbance, etc.  
 130, for a multicontact internal combustion engine distributor cap or a multicontact mating part therefor.  
 500, for an energy cell substitution device including plural contacts, e.g., jumper, etc., or a connector with support means for an energy cell.  
 517, for a power-measuring meter coupling part.  
 525, for a connector for a dual-in-line package.  
 526, for an aligning means for a dual-in-line package.  
 527, for supporting means for coupling part.  
 607, for an interference-filter-type contact for use in providing inductive or capacitive shielding.  
 611, for vitreous-type envelope, e.g., base of lamp or vacuum tube, etc.  
 754, for a metallic clamp-type connector for a storage battery terminal.  
 890, for a contact terminal for a functioning electrical component.  
 893, for a distinct covering means for covering a functioning electrical component.

**620.02 Lamp socket or lamp base:**

This subclass is indented under subclass 620.01. Subject matter wherein the connector is formed to receive a device that provides illu-

mination or the connector is the support of a device that provides illumination.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 490, for an electrical connector including a lamp that functions as an indicator.
- 611, for lamp bases not in combination with a circuit component.

SEE OR SEARCH CLASS:

- 313, Electric Lamp and Discharge Devices, subclasses 318.01 through 318.11 with envelope and base.
- 315, Electric Lamp and Discharge Devices: Systems, subclasses 291 through 311 for current and/or voltage regulation.

**620.03 Coaxial connector:**

This subclass is indented under subclass 620.01. Subject matter wherein the connector has a single centrally located contact and an annular contact surrounding the centrally located contact.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 578, for connector for use with coaxial cables.
- 675, for coaxial connectors.

**620.04 Termination circuit (usually with resistors):**

This subclass is indented under subclass 620.01. Subject matter wherein the connector is used in a circuit to provide impedance at the open position, usually by including resistors in the connector.

SEE OR SEARCH CLASS:

- 338, Electrical Resistors, subclass 220 for detachable electrical connector.

**620.05 Ferrite (i.e., magnetic core):**

This subclass is indented under subclass 620.01. Subject matter wherein the connector has magnetic properties that are used to prevent electromagnetic interference.

**620.06 For connector mounted on printed circuit board (PCB):**

This subclass is indented under subclass 620.05. Subject matter wherein the connector is fixed upon and electrically joined to a printed circuit board.

**620.07 Having significant filtering:**

This subclass is indented under subclass 620.05. Subject matter wherein the ferrite connector has particular filtering in addition to the ferrite material.

**620.08 Non-fuse excessive current preventer (e.g., varistor, PTC material, or circuit breaker, etc.):**

This subclass is indented under subclass 620.01. Subject matter wherein the connector is intended to block current above a preset level.

- (1) Note. Fuses are excluded from this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 181, for connectors with arc suppressing or extinguishing means.

SEE OR SEARCH CLASS:

- 218, High-Voltage Switches With Arc Preventing or Extinguishing Devices, subclasses 1 through 158 for arc preventing or extinguishing devices.
- 361, Electricity: Electrical Systems and Devices, subclasses 1 through 138 for safety systems and protection of systems and devices.

**620.09 Capacitive filter (i.e., filter, capacitor, diode adjacent each contact):**

This subclass is indented under subclass 620.01. Subject matter wherein the connector blocks the flow of direct current and permits the flow of alternating current at selected frequencies.

SEE OR SEARCH CLASS:

- 333, Wave Transmission Lines and Networks, subclass 260 for connectors with structures or devices for modifying characteristics of a transmission line.

**620.1 With housing shield or metal shell:**

This subclass is indented under subclass 620.09. Subject matter wherein the connector is formed of an insulating housing surrounded on at least two sides by metallic material that substantially covers the associated housing sides.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

607, for connectors having or providing inductive or capacitive shield.

**620.11 Registered jack (RJ) plug or socket:**

This subclass is indented under subclass 620.1. Subject matter wherein the connector includes a rectangular opening with resilient contacts on one side and a latch engaging shoulder on the opposite interior side.

- (1) Note. The term "RJ" stands for "registered jack" and is a general term for electrical connectors. Registered jacks, sometimes described as RJ-XX, are a series of telephone connection interfaces (receptacle and plug) that are registered with the U.S. Federal Communications Commission e.g., RJ-11, RJ-14, RJ-45, etc.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

617, for registered jack (RJ) plug or socket in a right-angle connector on a printed circuit board (PCB) that includes or covers an additional component.

620.23, for registered jack (RJ) plug or socket in a connector with an internal component.

**620.12 Right-angle connector on printed circuit board (PCB):**

This subclass is indented under subclass 620.1. Subject matter wherein the connector is adapted to be mounted to a printed circuit board by having mating contacts that are parallel to the plane of the printed circuit board.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

620.16, for a right-angle connector on printed circuit board (PCB) including or covering an additional component.

**620.13 Having component (e.g., filter, capacitor, or diode, etc.) integral with/or fitted into contact:**

This subclass is indented under subclass 620.1. Subject matter wherein the connector is directly mounted to or located within a single contact.

**620.14 Planar filter with openings for contacts:**

This subclass is indented under subclass 620.1. Subject matter wherein the connector is formed as a flat member with passages for each one of the associated contacts that block certain frequencies.

**620.15 Connector (e.g., plug, socket, etc.) on printed circuit board (PCB) includes or covers additional component:**

This subclass is indented under subclass 620.01. Subject matter wherein the connector is mounted onto a printed circuit board and supports or is located directly over a component, such as a resistor or a capacitor, etc., that is supplemental to the main function of the connector.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

69, where one micro panel circuit (wafer) overlies another micro panel circuit.

**620.16 Right-angle connector:**

This subclass is indented under subclass 620.15. Subject matter wherein the connector is adapted to be mounted to a printed circuit board by having mating contacts that are parallel to the plane of the printed circuit board.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

620.12, for a right-angle connector on printed circuit board (PCB) with housing shield or metal shell combined with capacitive filter.

**620.17 Registered jack (RJ) plug or socket:**

This subclass is indented under subclass 620.16. Subject matter wherein the connector includes a rectangular opening with resilient contacts on one side and a latch engaging shoulder on the opposite interior side that is used in telecommunications.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

620.11, for registered jack (RJ) plug or socket with housing shield or metal shell and that include a capacitive filter.

620.23, for registered jack (RJ) plug or socket in a connector with an internal component.

**620.18 Housing having plural registered jack (RJ) plugs or sockets:**

This subclass is indented under subclass 620.17. Subject matter wherein the connector has more than one registered jack (RJ) plug or socket.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

540.1, for supporting plural, independent coupling parts.

**620.19 With shield surrounding housing:**

This subclass is indented under subclass 620.17. Subject matter wherein the connector is formed of an insulating housing surrounded on at least two sides by metallic material that substantially covers the associated housing walls.

**620.2 Socket for dual inline package (DIP) or printed circuit board (PCB):**

This subclass is indented under subclass 620.15. Subject matter wherein the connector is of the receptacle type and is intended for mating with contacts on a printed circuit board to be inserted edgewise into the receptacle or with contacts of a small panel circuit of the type having straight rows of contacts, the rows located along opposite edges of the panel circuit.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

59, for sockets or receiving edges of printed circuit boards.

68, for sockets for DIPs, ICMs, chips, wafers, etc.

70, for dual inline package.

**620.21 Connector (e.g., power plug, registered jack (RJ) plug, adapter, outlet box, etc.) with internal component (except fuse):**

This subclass is indented under subclass 620.01. Subject matter wherein the connector includes an insulative housing that supports contacts, such as prongs or sockets, etc., and the housing surrounds the added electrical component, such as a resistor or capacitor, etc., but the component cannot be a fuse.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

490, for connector with lamps as internal components.

SEE OR SEARCH CLASS:

336, Inductor Devices, subclass 107 for connector with inductor or coil. (Also see 336/DIG.)

338, Electrical Resistors, subclass 220 for connector housing with resistor.

363, Electric Power Conversion Systems, subclass 146 for connector with power conversion means.

**620.22 Component on printed circuit board (PCB) in connection housing:**

This subclass is indented under subclass 620.21. Subject matter wherein the connector housing encloses a printed circuit board and the added electrical component is mounted on and electrically joined to the printed circuit board.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

76.1, for printed circuit board (PCB) in connector housing.

**620.23 Registered jack (RJ) plug or socket:**

This subclass is indented under subclass 620.21. Subject matter wherein the connector includes a rectangular opening with resilient contacts on one side and a latch engaging shoulder on the opposite interior side.

(1) Note. Usually used in telecommunications.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

620.11, for registered jack (RJ) plug or socket with housing shield or metal shell in a capacitive filter.

620.17, for registered jack (RJ) plug or socket in a right-angle connector on printed circuit board (PCB) including or covering an additional component.

**620.24 Small component on printed circuit board (PCB) (e.g., 2- or 3-lead component, etc.,) capacitor, resistor, or piezoelectric:**

This subclass is indented under subclass 620.01. Subject matter wherein the connector is mounted onto a printed circuit board and includes contacts for mating engagement with contacts of an electrical component such as a resistor or capacitor.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

68, for micro panel circuit component on printed circuit board (PCB).

68 through 73, for connectors for receiving micro panel circuit components, such as integrated circuit modules, etc.

500, for energy cell (battery) on printed circuit board (PCB).

**620.25 Socket or printed circuit board (PCB) for the small component:**

This subclass is indented under subclass 620.24. Subject matter wherein the connector includes at least two wall-like portions that are arranged to surround the small component when the small component is electrically joined to the connector.

**620.26 With or for fuse:**

This subclass is indented under subclass 620.01. Electrical connector wherein the functioning electrical circuit device is an electrical safety device comprising a wire or strip of fusible metal that melts and interrupts the circuit when the current exceeds a specified amperage.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

698, for receptacle for transversely receiving elongated fuse-like component having contact at each end.

SEE OR SEARCH CLASS:

337, Electricity: Electrothermally or Thermally Actuated Switches, subclasses 186 through 216 and 227-272 for carriers or holders for fuses.

**620.27 Box with plural fuses (automobile power distribution box):**

This subclass is indented under subclass 620.26. Subject matter wherein the connector includes two or more sets of contacts, each set of contacts arranged for receiving a separate fuse.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

76.2, for automotive junction box.

**620.28 Cylindrical fuse in cylindrical holder:**

This subclass is indented under subclass 620.26. Subject matter wherein the connector is formed in a cylindrical shape and is adapted to receive a fuse having a cylindrical shape with contacts formed at each end as portions of the cylindrical body.

(1) Note. Excludes fuses of cylindrical shape but with contact blades at each end.

**620.29 Comprising coupling part housing for enclosing fuse (includes outlet box or face-plate):**

This subclass is indented under subclass 620.26. Electrical connector comprising a holder, casing, or housing for supporting and surrounding the fuse component; which holder, casing, or housing also comprises a coupling part\* carrying at least two mutually insulated contacts\*, the coupling part being specially adapted to mate with a complementary coupling part\*.

**620.3 Fuse enclosed in plug of type having two or three prongs (i.e., standard-type plug used at wall outlets):**

This subclass is indented under subclass 620.29. Subject matter wherein the coupling part is an insulative body having two or three longitudinally engaging prong-like contacts on one face and the fuse enclosed in the insulative body.

**620.31 Plug is an adapter (includes connector for second plug):**

This subclass is indented under subclass 620.3. Subject matter wherein the connector is adapted to be disposed between two plural contact coupling parts and provides an intermediate conductive path between contacts of the two coupling parts.

**620.32 Right-angle plug (wiring at right angle to plug prongs):**

This subclass is indented under subclass 620.3. Subject matter wherein the connector has a cable with wiring joined to the prongs of the connector, the cable extending at 90° to the axes of the connector plug prongs.

SEE OR SEARCH THIS CLASS, SUBCLASS:  
694, for right-angle plug not in combination with circuit component.

**620.33 Fuse with flat coplanar blades or receiver for such fuse:**

This subclass is indented under subclass 620.29. Subject matter wherein the connector has contacts adapted to receive a fuse having planar terminals at each end of the fuse, the terminals positioned in the same plane.

**620.34 Fuse removably held in holder for plug-in step:**

This subclass is indented under subclass 620.26. Subject matter wherein the connector is a portable insulative body for detachably retaining a fuse and having contacts with ends engaging the terminals of the fuse and other ends manageable into engagement with contacts of a mating connector.

(1) Note. Holder may include pivotally mounted cover.

**623 CABLE COMPOSED OF MUTUALLY INSULATED CONDUCTORS HAVING SEPARATELY CARRIED CONDUCTOR END TERMINALS:**

This subclass is indented under the class definition. Electrical connector comprising an electrical cable\* having two or more conductors\* physically held together in association one with the other, but electrically insulated one from the other, and at least two of the mutually insulated conductors have separate terminal\* connectors secured conductively thereto at the ends thereof.

(1) Note. By "separate terminal connectors" is meant that the terminal connectors of the various conductor ends are not physically held together by a common insulating body in a manner similar to the structures found in subclasses 626+ and 709+.

**624 PLURAL CONTACTS DISPOSED INTERMEDIATE ENDS OF CABLE HAVING SHEATH ENCLOSING MUTUALLY INSULATED CONDUCTORS (E.G., SEISMIC TYPE CABLE):**

This subclass is indented under the class definition. Electrical connector comprising an electrical cable\* having two or more conductors\* physically held together in association with one another by a surrounding insulating covering, the conductors being electrically insulated from one another, at least two of the mutually insulated conductors have contacts\* secured conductively thereto at one or more locations spaced-apart from the ends thereof and from the ends of the insulating covering, and wherein the insulating covering leaves the contacts exposed to the exterior thereof, so that the contacts may be exterior thereof, so that the contacts may be electrically engaged by complementary mating contact carried by one or more connectors separate from and independent of the cable.

(1) Note. A stranded conductor is considered to be a single conductor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

502+, for an electrical connector combined with a flaccid conductor and with an

additional connector spaced therealong.

**625 WITH INSULATION OTHER THAN CONDUCTOR SHEATH:**

This subclass is indented under the class definition. Electrical connector at least a part of which includes electrically insulating material exclusive of that forming an insulating covering of conductor\* or cable\* secured thereto, the said insulating covering being carried by the conductor and being separate from the insulation of the connector.

- (1) Note. The "insulating material" of this and the indented subclasses must be a part of the connector or contact structure rather than being merely the insulating covering on a conductor or cable secured to the connector or contact. The recitation of such insulated conductor in the claims is ignored for the purpose of classification in this and the indented subclasses.
- (2) Note. Patents are classified in this and the indented subclasses when any claimed element is disclosed to be of insulating material (or known to be of insulating material) even though the claims do not specifically recite that such element is of insulating material.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 754+, and 775+, for a metallic connector or contact in which no insulating part is recited in the claims.
- 865+, for a metallic connector or contact having means for engaging the insulating covering of a conductor and in which no insulating part, other than the insulating covering on a conductor, is claimed.
- 869+, for a metallic connector or contact having thereon means designed specifically for enabling it to be secured to insulation (e.g., an unclaimed insulating panel) other than the insulating covering on a conductor and in which no insulating part, other than the insulating covering on a conductor, is claimed.

874+, 877+ and 883, for a metallic connector or contact in which no insulating part is recited in the claims.

**626 Plural-contact coupling part:**

This subclass is indented under subclass 625. Electrical connector comprising an electrically insulating body carrying a plurality of current-carrying contacts\* in a relatively fixed spaced-apart relation one with another, but electrically insulated one from another, the insulating body and the contacts together forming a unitary coupling part\* specially adapted to mate or interengage with a complementary plural-contact-counterpart\*, so that, when the contacts are electrically engaged in one to one relationship with the complementary counter-contacts\* carried by the counterpart, a readily separable electrical coupling joint having at least two mutually insulated electrical paths is formed.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 226+, for a coupling part specially designed to receive a fluorescent or neon lamp.
- 296+, for a coupling part having either (a) separate means to forcibly bring together into coupled relationship the coupling part and its complementary counterpart or (b) means separate from the current-carrying parts of the coupling part to maintain the coupling part in coupled relationship with its complementary counterpart.
- 578+, for an electrical connector specialized for use with coaxial cable.
- 623, for a cable composed of plural, mutually insulated conductors, each conductor separately carrying a conductor end terminal and having no other insulating body for supporting the end terminals.
- 709+, for an insulating body having plural, mutually insulated, electrically conductive connectors, terminals, contacts, or conductor-securing means in which the insulating body and the current-carrying parts together do not form a coupling part, and therefore the current-carrying parts neither receive nor join with plural contacts carried by a unitary insulating body specifically designed to be coupled thereto.

723+, and all of the subclasses following subclass 723 which are indented under 625, for an electrical connector combined with insulation other than a conductor sheath, which connector includes only a single electrically conductive path, connector, terminal, contact, or conductor securing means or includes only (in subclasses 723+) plural, electrically interconnected connectors, terminals, contacts, or conductor securing means.

**627 For direct simultaneous contact with plural battery or cell terminals:**

This subclass is indented under subclass 626. Coupling part which is particularly adapted to make intimate (and otherwise unsupported) electrical engagement simultaneously with at least two battery or cell terminals.

**628 Single-contact connector for interposition between two plural-contact coupling parts (e.g., adaptor):**

This subclass is indented under subclass 626. Coupling part comprising a coupling member having but a single electrical path, which single-path coupling member being specifically adapted to be disposed between two noncomplementary, plural-contact coupling parts (which by themselves cannot be directly joined or coupled to one another) so that the two noncomplementary coupling parts may be electrically joined by the intermediate coupling member; the single-path coupling member providing an intermediate electrically conductive means between a contact on one coupling part and a contact on the other coupling part while allowing another contact on the said one coupling part to directly engage another contact on the said other coupling part.

- (1) Note. The subclass may include, for example, a device for changing a push-pull-coupling plug to a screw-thread-coupling plug by adding a screw shell contact member to one of the contacts of the push-pull coupling plug.

SEE OR SEARCH THIS CLASS, SUBCLASS:

166+, for an electrical connector convertible by internal change to selectively cooperate with a different contact.

176, for a female coupling part convertible to a male coupling part by the addition of a prong.

177, for a coupling convertible to distinct shape by the addition of a nonremovable element or by removal of a nonreusable element.

518, for a coupling part convertible to a different format by substitution of a different contact.

**629 For coupling to edge of printed circuit board or to coupling part secured to such edge:**

This subclass is indented under subclass 626. Coupling part specially adapted to be electrically connected either directly or indirectly to a printed circuit board\* so that the conductors or circuit elements on the printed circuit board may be electrically connected to the contacts of the coupling part, and wherein the coupling part is further either (a) specifically adapted to be engaged and coupled directly to an edge portion of the printed circuit board, the edge portion having counter-contacts thereon electrically connected to the mutually-insulated conductors or circuit elements on the printed circuit board, so that the edge portion constitutes a mating counterpart for the coupling part, or (b) specifically adapted to be engaged and coupled to mating plural-contact-carrying counterpart which, in turn, is mechanically and electrically connected to an edge portion of the printed circuit board.

SEE OR SEARCH THIS CLASS, SUBCLASS:

55+, for a coupling part combined with a printed circuit board.

325+, for a coupling part with coupling movement-actuating means or additional retaining means for coupled connectors, which coupling part may be specifically adapted to be coupled to an edge of a printed circuit board or to a connector secured to such edge.

439, for a coupling part specially adapted to electrically interconnect a printed circuit board to a multiconductor tape cable.



**630 Having elongated slot for receiving edge of printed circuit board:**

This subclass is indented under subclass 629. Coupling part having a long, narrow, channel-like aperture or cavity extending therein and into which the edge portion of a printed circuit board is to be inserted and thereby directly coupled to the coupling part, and wherein the aperture or cavity has a plurality of contacts mounted in the vicinity of the interior thereof and spaced therealong, so that the contacts are engaged by the corresponding counter-contacts spaced along the edge portion of the printed circuit board whenever the printed circuit board is located within the aperture or cavity.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 59+, for the combination of preformed panel circuit arrangement and a mating connector which receives the edge of the panel circuit.
- 260, for a coupling part having actuating means urging a contact to move laterally relative to the coupling part and toward contact of mating part, which coupling part further includes an open slot for receiving a preformed panel circuit arrangement or tape cable.
- 267, for a coupling part having a handle or means to move a contact laterally to permit uncoupling, which coupling part further includes an open slot for receiving a panel circuit arrangement.
- 325+, for a coupling part with coupling movement-actuating means or retaining means, which coupling part designed to receive the edge of a planar board moving parallel to the plane thereof.
- 377+, for an electrical connector with means for guiding the side of a movable panel (e.g., a circuit board).

**631 Plural slots for electrically interconnecting plural printed circuit boards:**

This subclass is indented under subclass 630. Coupling part having a plurality of the long, narrow, channel-like apertures or cavities extending therein for simultaneously receiving the edge portion of a corresponding plurality of printed circuit boards, and wherein one or more of the contacts associated with one aperture or

cavity is electrically connected to the one or more counter-contacts spaced along the edge portion of at least one other printed circuit board.

- (1) Note. The one or more electrically interconnected contacts associated with individual apertures or cavities may consist of a single integral conductive member or comprise separate conductive members interconnected by direct contact or by some electricity transmitting means.

**632 Providing direct contact between contacts of printed circuit board and different type conductors:**

This subclass is indented under subclass 630. Coupling part wherein each of the contacts spaced along the channel-like aperture or cavity is either formed from the end portion of a wire-type conductor or is the end terminal secured to the end portion of a wire-type conductor, so that the counter-contacts spaced along the edge portion of a printed circuit board may be in direct or touching engagement with the wire-type conductors secured to the coupling part without the utilization of any other separate, intermediary contacts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 492+, for a coupling part providing direct contact of conductors of a tape cable secured thereto to conductors of another tape cable secured to a counterpart or to counter-contacts spaced along the edge of a printed circuit board.

**633 Having polarizing means:**

This subclass is indented under subclass 630. Coupling part further having indexing or keying means formed thereon or attachable thereto, which indexing or keying means is intended to cooperate with complementary indexing or keying means on a mating counterpart, so that either (a) the various contacts of the coupling part must always be associated with the same corresponding counter-contacts on its counterpart whenever the coupling part is joined or coupled to its counterpart, or (b) the coupling part must be capable of being joined or coupled to only one specific, but to no other, counterpart among a plurality of counterparts

which are all structurally identical except for some variation of the indexing or keying means thereon.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

677+, for a coupling part having polarizing means, and see the search notes appended thereto.

**634 Having multipart insulating body:**

This subclass is indented under subclass 630. Coupling part wherein the body of insulation is segmental, divided, or otherwise composed of an assembly of two or more sections.

- (1) Note. The multipart insulating body in this subclass refers only to a single coupling part. Thus, two discrete coupling parts joined to form an electrical joint are not considered to be subject matter for this subclass unless each of the individual coupling parts is composed of a multipart insulating body.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

599, 684, 686+, 695+, and 701, for a coupling part having a multipart insulating body.

712+, 724 and 731, for an electrical connector having a multipart insulating body.

**635 Relative movement of insulating parts alters contact pressure:**

This subclass is indented under subclass 634. Coupling part wherein at least two of the segments or sections of insulation are so mounted to one another as to enable movement of one segment or section relative to the other in response to the printed circuit board being inserted into or withdrawn from the channel-like aperture or cavity, and wherein each of the contacts has at least a portion thereof movable in response to the movement of the one insulating segment or section, so that, whenever a printed circuit board is either inserted into or withdrawn from the aperture or cavity, the edge portion of the printed circuit board engages and moves the movably mounted segment or section which then moves the movable portion of the contacts to alter the pressure that they apply to the counter-contacts of the printed circuit board.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

325+, for a coupling part with coupling movement actuating means or retaining means in addition to contact of coupling part, which coupling part is adapted to receive the edge of a planar board moving parallel to the plane thereof.

**636 Contacts within slot engage opposite sides of printed circuit board:**

This subclass is indented under subclass 630. Coupling part wherein the contacts mounted in the vicinity of the channel-like aperture or cavity are arranged or formed so that they engage the opposite planar sides of the printed circuit board in the vicinity of the edge portion thereof when the printed circuit board is located within the aperture or cavity.

**637 Separate mutually insulated contacts on opposite longitudinal sides of slot:**

This subclass is indented under subclass 636. Coupling part wherein the contacts are arranged in two spaced-apart rows with each row of contacts extending parallel to and spaced apart from the long transverse axis of the opening to the aperture or cavity, and wherein the contacts in one row are electrically insulated from the contacts in the other row.

**638 Two or more plural-contact coupling parts combined in one integral unit:**

This subclass is indented under subclass 626. Device comprising a single unitary structure having two or more spaced but electrically connected plural-contact coupling parts embodied therein.

- (1) Note. This and the indented subclasses may include, for example, a unitary device commonly known as a cube tap, duplex receptacle\*, twin receptacle, or multiple receptacle, etc.; and also included herein is that type of unitary device often referred to as an adapter which has, for example, a plural-contact receptacle at one end and a plural-contact plug at the other end.

## SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 61, for an electrical connector combined with a preformed panel circuit which is specifically designed to receive plural panel circuit edges.
- 105, for an adapter with a safety grounding provision.
- 107, for a duplex receptacle with a safety grounding provision.
- 119, for an uninterrupted support rail or uninterrupted contact with an adapter.
- 124, for a candle-simulation-type electrical connector comprising an adapter.
- 218+, for a coupling part which may be alternatively joined with any one of plural mating coupling parts having different configurations or with a mating coupling part from any one of plural, distinct directions.
- 228, and 235, for a device comprising plural coupling parts for receiving plural fluorescent or neon lamps.
- 236, for an adapter for receiving a fluorescent or neon lamp.
- 300, for a adapter retained in connection with a mating coupling part by the presence of a distinct coupling part.
- 323, for an adapter with coupling part retaining means in addition to the contact comprising a movable threaded ring.
- 355, for a device with coupling part retaining means in addition to the contact comprising plural independent coupling parts.
- 365, for an adapter with coupling part retaining means in addition to the contact comprising a helically threaded member.
- 540.1+, for a means for supporting plural independent coupling parts.
- 578+, for an electrical connector including or for use with a coaxial cable, which connector may constitute two or more plural-contact coupling parts combined in one integral unit.
- 628, for a single-contact electrical connector for interposition between two plural-contact coupling parts.
- 631, for an electrical connector comprising plural slots for electrically interconnecting plural printed circuit boards.

**639 Unit includes three or more diverse types of coupling parts:**

This subclass is indented under subclass 638. Device wherein there are at least three different types of plural-contact coupling parts contained within the single unitary structure.

- (1) Note. Two coupling parts are considered to be "different" if a mating plural-contact counterpart adapted to be coupled with one coupling part cannot be coupled with the other coupling part. Thus, a plural-contact plug having a male screw-thread-coupling contact and a plural-contact receptacle having a female screw-thread-coupling contact, even though complementary to one another, constitute "different" types of plural-contact coupling parts. Similarly, two receptacles having spaced prong-receiving contacts which differ in number, arrangement (i.e., relative spacing therebetween), cross-sectional shape, or size constitute "different" types of receptacles if a plug having spaced pronglike contacts is capable of mating with one receptacle but not with the other.

**640 One coupling part of unit repositionable relative to another thereof:**

This subclass is indented under subclass 638. Device wherein at least one of the coupling parts contained within the single unitary structure is connected or joined to the unitary structure in such a manner that the said coupling part is movable or shiftable from one position or location to another relative to another coupling part contained within the unitary structure.

- (1) Note. The coupling parts of these devices are not adapted to be continuously varied during use, but are only arranged so that they may be intermittently adjusted. A device including interrelated connectors specifically designed with parts relatively movable during use may be found in subclasses 1+.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

1+, for interrelated connectors having parts relatively movable during use, and see (1) Note. above.

**641 Unit includes coupling part having screw-thread-coupling contact:**

This subclass is indented under subclass 638. Device wherein at least one of the plural-contact coupling parts contained within the unitary structure carries a contact which either has screw threads formed thereon or has equivalent screw-thread-engaging means thereon which cooperates, by means of a relative screw motion therebetween, with screw-threads or screw-thread-engaging means formed on a mating counter-contact, so that the coupling part may be screw coupled with and thereby electrically joined to a mating, plural-contact counterpart carrying a screw-thread-coupling counter-contact.

(1) Note. A document which discloses solely a device encompassed by the subclass definition set forth herein, but which fails to specifically claim screw-threading on an annularly-shaped contact shell, is also included in this and the indented subclasses.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

296+, for coupling part adapted to be screw-thread-coupled to a mating counter-part, but in which the screw-thread-coupling means is not formed on a contact.

**642 Plug having surrounding screw-thread-coupling contact:**

This subclass is indented under subclass 641. Device wherein the plural-contact coupling part having the screw-thread-coupling contact further comprises a plug, and wherein the screw-thread-coupling contact is formed cylindrically around a protruding male portion of the plug and the said contact further has screw threads disposed about the exterior surface portion thereof, so that the plug may be screw coupled with and thereby electrically joined to a mating plural-contact receptacle having a complementary screw-thread-coupling counter-

contact either located within or forming the plug-receiving recess thereof.

**643 Combined with plural receptacles with each having internal screw-thread-coupling contact:**

This subclass is indented under subclass 642. Device wherein the single unitary structure, in addition to having embodied therein the plug with the externally disposed screw-thread-coupling contact, also has embodied therein a plurality of plural-contact coupling parts in the form of receptacles, each receptacle includes a contact formed with screw-thread-coupling means adapted to receive therein or therebetween, by means of relative screw motion, the externally disposed screw-thread-coupling counter-contact carried by another plural-contact plug, whereby each receptacle may be screw coupled with and thereby electrically joined to a mating plural-contact plug having a complementary screw-thread-coupling counter-contact externally located thereon.

(1) Note. The screw-thread-coupling contact of any receptacle either may be located within or may form the plug receiving recess of the receptacle.

(2) Note. Usually, the screw-thread-coupling contact of each receptacle is a cylindrically hollow member having screw threads formed on the interior surface portion thereof.

**644 Combined with receptacle having internal bayonet-coupling contact:**

This subclass is indented under subclass 642. Device wherein the single unitary structure, in addition to having embodied therein the plug with the externally disposed screw-thread-coupling contact, also has embodied therein, a plural-contact coupling part in the form of a receptacle having a contact disposed within a recess extending therein, which contact or recess has an abutment extending circumferentially about the longitudinal axis along which the receptacle is intended to be coupled to a mating plural-contact plug having a contact which itself extends or which has a pin or projection thereon which extends radially of the longitudinal axis along which the receptacle and plug are intended to be coupled, and wherein the receptacle and its mating plug are

retained in coupled relationship either by the radially extending contact itself, or by the radially extending pin or projection on the contact, being received behind the circumferentially extending abutment of the receptacle, the engaging motion being first along the longitudinal coupling axis and then a partial turning about the said coupling axis.

**645 Combined with push-pull-coupling receptacle:**

This subclass is indented under subclass 642. Device wherein the single unitary structure, in addition to having embodied therein the plug with the externally disposed screw-thread-coupling contact, also has embodied therein a plural-contact coupling part in the form of a receptacle adapted to receive within the interior portion thereof at least a portion of a complementary plural-contact plug, the receptacle and its complementary plug being intended to be engaged and coupled together solely by linearly pushing the one coupling part directly toward the mating coupling part, and the receptacle and its complementary plug being intended to be disengaged from one another solely by linearly pulling the said one coupling part away from the mating coupling part in the direction opposite to the direction of the coupling motion.

**646 Wherein the receptacle is adapted to receive plug having spaced prong-like contacts:**

This subclass is indented under subclass 645. Device wherein the push-pull-coupling receptacle is adapted to be coupled to a complementary plug having extending therefrom at least two spaced, elongated, fingerlike counter-contacts whose longitudinal axes are parallel to the longitudinal axis along which the one coupling part is intended to be pushed toward and thereby coupled to the other, and wherein the receptacle has at least two correspondingly-spaced contacts for slidingly engaging the elongated fingerlike counter-contacts along the longitudinal axes thereof whenever the one coupling part is pushed toward the other.

**647 Receptacle having internal screw-thread-coupling contact combined with plug having**

**spaced, longitudinally engaging, pronglike contacts:**

This subclass is indented under subclass 641. Device wherein the plural-contact coupling part having the screw-thread-coupling contact further comprises a receptacle, and wherein the screw-thread-coupling contact is adapted to receive therein or therebetween the externally disposed screw-thread-coupling counter-contact carried by a complementary plural-contact plug, so that the receptacle may be screw coupled with and thereby electrically joined to a mating plural-contact plug, having a complementary screw-thread-coupling counter-contact externally located thereon; and wherein the single unitary structure also has embodied therein a plural-contact coupling part in the form of a plug having extending therefrom at least two spaced, elongated, fingerlike contacts for being slidingly engaged along the longitudinal axes thereof by at least two correspondingly spaced counter-contacts of a complementary receptacle, the longitudinal axes of the fingerlike contacts are disposed parallel to the longitudinal axis along which the plug or its complementary receptacle is intended to be pushed toward and thereby coupled to the other.

(1) Note. The screw-thread-coupling contact of the receptacle either may be located within or may form the plug-receiving recess of the receptacle.

(2) Note. Usually, the screw-thread-coupling contact is a cylindrically hollow member having screw-threads formed on the interior surface portion thereof.

**648 Plural receptacles with each having screw-thread-coupling contact:**

This subclass is indented under subclass 641. Device wherein the single unitary structure has embodied therein a plurality of plural-contact coupling parts in the form of receptacles, each receptacle includes a contact formed with screw-thread-coupling means adapted to receive therein or therebetween, by means of relative screw motion, the externally disposed screw-thread-coupling counter-contact carried by a complementary plural-contact plug, so that each of the receptacles may be screw coupled with and thereby electrically joined to a mating plural-contact plug, having a comple-

mentary screw-thread-coupling counter-contact externally located thereon.

- (1) Note. The screw-thread-coupling contact of any receptacle either may be located within or may form the plug-receiving recess of the receptacle.
- (2) Note. Usually, the screw-thread-coupling contact of each receptacle is a cylindrically hollow member having screw threads formed on the interior surface portion thereof.

**649 Unit includes plural receptacles with each having bayonet-coupling contact:**

This subclass is indented under subclass 638. Device wherein the single unitary structure has embodied therein a plurality of plural-contact coupling parts in the form of receptacles, each receptacle has a contact disposed with a recess extending therein, which contact or recess of each of the receptacles has an abutment extending circumferentially about the longitudinal axis along which the receptacle is intended to be coupled to a mating plural-contact plug having a contact which itself extends or which has a pin or projection thereon which extends radially of the longitudinal axis along which the receptacle and plug are intended to be coupled, and wherein each receptacle and its mating plug are retained in coupled relationship either by the radially extending contact itself, or by the radially extending pin or projection on the contact, being received behind the circumferentially extending abutment of the receptacle, the engaging motion being first along the longitudinal coupling axis and then a partial turning about said coupling axis.

**650 Unit includes receptacle for receiving plug having spaced, longitudinally engaging, pronglike contacts:**

This subclass is indented under subclass 638. Device wherein at least one of the plural-contact coupling parts contained within the single unitary structure comprises a receptacle adapted to be coupled to a complementary plug having extending therefrom at least two spaced, elongated, fingerlike counter-contacts whose longitudinal axes are parallel to the longitudinal axis along which the one coupling part is intended to be pushed toward and thereby into engagement with other, and

wherein the receptacle has at least two correspondingly spaced contacts for slidably engaging the elongated fingerlike counter-contacts along the longitudinal axes thereof whenever the one coupling part is longitudinally pushed into embracing relationship with the other.

- (1) Note. Many of the devices included herein are known the art as "duplex receptacles."

SEE OR SEARCH THIS CLASS, SUBCLASS:

107, for a duplex receptacle with a safety grounding provision.

**651 Combined with plug having spaced, longitudinally engaging, pronglike contacts:**

This subclass is indented under subclass 650. Device wherein the single unitary structure, in addition to having embodied therein the receptacle adapted to be coupled to a plug having spaced fingerlike counter-contacts, also has embodied therein a plural-contact coupling part in the form of a plug having extending therefrom at least two spaced, elongated, fingerlike contacts for being slidably engaged along the longitudinal axes thereof by at least two correspondingly spaced counter-contacts of a complementary receptacle, the longitudinal axes of the fingerlike contacts are disposed parallel to the longitudinal axis along which the one coupling part is intended to be pushed toward and thereby coupled to the other.

**652 Wherein the plug is combined with a plurality of the receptacles adapted to receive spaced-prong plug:**

This subclass is indented under subclass 651. Device wherein the single unitary structure has embodied therein the plug having spaced fingerlike contacts extending therefrom, along with a plurality of the receptacles adapted to be coupled to a plug having spaced fingerlike counter-contacts extending therefrom.

**653 Combined with diverse type of coupling part:**

This subclass is indented under subclass 650. Device wherein the single unitary structure, in addition to having embodied therein the receptacle adapted to be coupled to a plug having spaced fingerlike counter-contacts, also has

embodied therein a plural-contact coupling part which is of a type different from the said receptacle.

- (1) Note. Two coupling parts are considered to be “different” if a mating plural-contact counter-part designed for coupling with one of the coupling parts cannot be coupled with the other coupling part. Thus, two plural-contact receptacles having spaced prong-receiving contacts which differ in number, arrangement (i.e., relative spacing therebetween), cross-sectional shape, or size constitute “different” types of receptacles if a plug having spaced pronglike contacts is capable of being coupled to one receptacle but not to the other.

**654 Having receptacle at each of parallel opposed surfaces or sides:**

This subclass is indented under subclass 650. Device wherein the single unitary structure has embodied therein at least two receptacles adapted to be coupled to a complementary plug having extending therefrom at least two spaced, elongated, fingerlike counter-contacts whose longitudinal axes are parallel to the longitudinal axis along which the one coupling part is intended to be pushed toward and thereby into engagement with the other, and wherein at least two receptacles are located on the single unitary structure so that they receive their respective complementary plugs from directions opposite to one another.

- (1) Note. Often the longitudinal engagement axes of the respective, oppositely directed receptacles are also aligned.

**655 Unit includes plug having spaced, longitudinally engaging, pronglike contacts:**

This subclass is indented under subclass 638. Device wherein at least one of the plural-contact coupling parts contained within the single unitary structure comprises a plug having extending therefrom at least two spaced, elongated, fingerlike contacts for being slidingly engaged along the longitudinal axes thereof by at least two correspondingly spaced counter-contacts of a complementary receptacle, the longitudinal axes of the fingerlike contacts are disposed parallel to the longitudinal axis along which the one coupling part is intended to be

pushed toward and thereby coupled to the other.

**656 With common means securing plural conductors to separate contacts:**

This subclass is indented under subclass 626. Coupling part having a single operating means for clamping or forcibly engaging separate external conductors\* each individually to separate mutually insulated contacts of the coupling part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 387+, for a connector having piercing means for contacting external conductors and in which a single operator may be included which effects simultaneous contacting of the plural conductors.
- 711, for an insulating body having a common operator for simultaneously securing separate, mutually insulated contacts or conductor-engaging means thereof to separate external contacts or conductors.
- 756, for a clamp-type connector for storage battery post in which the connector has common means for effecting connection to both a post and a conductor.
- 775+, for various noninsulated types of common means for effecting connection between plural conductors and in which special means for engaging the plural conductors is provided.

**657 Screw-thread operated:**

This subclass is indented under subclass 656. Coupling part wherein the clamping or engaging force is caused by the motion resulting from the rotation of a screw-threaded member.

**658 Having separate through-passageways for enabling securement of intermediate portion of conductors thereto:**

This subclass is indented under subclass 626. Coupling part wherein the insulating body thereof has spaced channels, grooves, or openings extending therethrough, so that each contact of the coupling part may be electrically connected to a point on an external conductor which is spaced from the ends of the conductor.

**659 Coupling part comprises receptacle having internal screw-thread-coupling contact:**

This subclass is indented under subclass 658. Coupling part comprising a receptacle having a contact formed with screw-thread-coupling means adapted to receive therein or therebetween, by means of relative screw motion, the externally disposed screw-thread-coupling counter-contact carried by a mating plural-contact plug, so that the receptacle may be screw coupled with and thereby electrically joined to a mating plural-contact plug having a complementary screw-thread-coupling counter-contact externally located thereon.

SEE OR SEARCH THIS CLASS, SUBCLASS:

661+, for a plural-contact coupling part which may be in the form of a receptacle and in which the receptacle has a screw-thread-coupling contact for receiving a mating plug having a screw-thread-coupling counter-contact externally disposed thereon, and see the search notes appended thereto.

**660 Plural-contact coupling part comprises receptacle or plug:**

This subclass is indented under subclass 626. Coupling part either (a) in the form of a female coupling part denoted as a receptacle which has its contacts located within the interior portion thereof, which receptacle further is adapted to have its contacts receive the counter-contacts located within the interior portion thereof, which receptacle further is adapted to have its contacts receive the counter-contacts either protruding outwardly from or externally disposed on a complementary male coupling part denoted as a plug whenever the receptacle is coupled to the mating plug; or (b) in the form of a male coupling part denoted as a plug which has its contacts either protruding outwardly therefrom or disposed on the exterior surface thereof, which plug further is adapted to have its contacts received by the counter-contacts located within the interior portion of a complementary female coupling part denoted as a receptacle whenever the plug is coupled to the mating receptacle.

**661 Having screw-thread-coupling contact:**

This subclass is indented under subclass 660. Coupling part having a contact which either has screw threads formed thereon or has equivalent screw-thread-engaging means thereon which cooperates, by means of a relative screw motion therebetween, with screw threads or screw-thread-engaging means formed on mating counter-contact, so that the coupling part may be screw coupled to and thereby electrically joined to a mating plural-contact counterpart carrying a mating screw-thread-coupling counter-contact.

- (1) Note. A document which discloses solely a device encompassed by the subclass definition set forth herein, but which fails to specifically claim the screw threading on a cylindrical or annularly-shaped contact, is also included in this and the indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 14, for a connector having a swivel joint between a conductor and a screw-type contact shell.
- 253+, for a coupling part adapted to be coupled to a mating connector, whereby one of the connectors is screw threaded, and the couple is engaged or disengaged without rotary motion.
- 296+, for a coupling part adapted to be screw-thread-coupled to a mating counterpart, but in which the screw-thread-coupling means is not part of a contact.
- 615, for a connector having a screw-thread-coupling contact combined with a vitreous-type envelope.
- 641+, for a single unitary device having two or more plural-contact coupling parts embodied therein and in which at least one of the coupling parts has a screw-thread-coupling contact.
- 659, for a receptacle having separate through-passageways for securing intermediate portion of conductors thereto and having a screw-thread-coupling contact therein.



**662 Screw threads formed on cylindrical or annular contact:**

This subclass is indented under subclass 661. Coupling part wherein the screw-thread-coupling contact is in the form of a short cylindrically-shaped rod, tube, or shell; and wherein the screw threads are disposed on a curved surface of the cylindrically-shaped contact.

**663 Screw-threaded center-contact type:**

This subclass is indented under subclass 662. Coupling part wherein the cylindrically-shaped, screw-thread-coupling contact is disposed substantially on or at the longitudinal axis along which the coupling part engages its mating counterpart.

- (1) Note. The screw-thread-coupling contact of a coupling part included in this subclass is usually the innermost of plural concentric contacts.

**664 Plug having screw-thread-coupling contact and also having resilient or spring-biased center contact:**

This subclass is indented under subclass 662. Coupling part in the form of a plug having the screw-thread-coupling contact either formed cylindrically around or forming the male portion of the plug, the screw threads being disposed about the exterior surface portion of the contact; and wherein the plug further has a second contact centrally located at the end of the plug on the longitudinally axis along which the plug engages its mating receptacle, the second contact either (a) being formed from resilient material for yieldable movement of the portion thereof along the said longitudinal axis of engagement or (b) being resiliently biased for yieldable movement along the said longitudinal axis of engagement by the action of a spring means associated with the plug.

**665 Having mutilated, irregular, interrupted, or discontinuous contact thread:**

This subclass is indented under subclass 662. Coupling part wherein the screw threading disposed on the screw-thread-coupling contact is broken, deformed, or of a noncontinuous helical configuration.

- (1) Note. The discontinuity of the screw threading on a cylindrically-shaped con-

tact shaped shell or tube may be due to the contact shell or tube being composed of an assembly of two or more separate sections which do not touch one another when they are mounted together to form the cylindrical shape.

SEE OR SEARCH THIS CLASS, SUBCLASS:

735, for an annular, screw-threaded contact secured to an insulating body in which the contact has mutilated, irregular, interrupted, or discontinuous screw threading.

**666 Receptacle having internal screw-thread-coupling contact:**

This subclass is indented under subclass 662. Coupling part in the form of a receptacle having the cylindrically-shaped, screw-thread-coupling contact forming the female portion of the receptacle, screw threads being disposed on the interior surface portion of the contact.

**667 And also having resilient or spring-biased center contact:**

This subclass is indented under subclass 666. Receptacle further having a second contact centrally located within the receptacle on the longitudinal axis along which the receptacle receives its mating plug, the second contact either (a) being formed from resilient material for yieldable movement of a portion thereof along the said longitudinal axis of engagement or (b) being resiliently biased for yieldable movement along the said longitudinal axis of engagement by the action of a spring means associated with the receptacle.

**668 Having only push-pull-engaging contacts spaced along longitudinal axis of engagement (e.g., jack-type receptacle or plug):**

This subclass is indented under subclass 660. Coupling part adapted to be coupled to its mating coupling part solely by linearly pushing the one coupling part directly toward and into engagement with the mating coupling part, and the coupling parts are separated solely by linearly pulling the said one coupling part away from the other coupling part in the engaging motion; and wherein the contacts are all either disposed serially along a line parallel to the longitudinal axis along which the coupling part engages its mating coupling part or disposed

serially along two or more lines parallel to but spaced at different distances from the longitudinal axis along which the coupling part engages its mating coupling part.

**669 Plug having cylindrical or annular contacts of substantially the same diameter (e.g., jack-type plug):**

This subclass is indented under subclass 668. Coupling part in the form of a plug, and wherein all of the contacts and the intervening material electrically insulating each of the contacts from one another together form a receptacle-receiving male part which is cylindrical or rodlike in structure.

**670 Having coupling contact requiring successive relative motions in different directions to complete the coupling:**

This subclass is indented under subclass 660. Coupling part either (a) wherein at least one of the contacts thereof has means thereon adapted to cooperate with complementary means on the mating coupling part, or (b) wherein the coupling part has means thereon adapted to cooperate with complementary means on at least one of the counter-contacts of the mating coupling part; and wherein the said means on either the contact or the coupling part enables the coupling part to be locked or retained in coupled engagement with its mating coupling part, the one coupling part being moved first in one direction relative to the other coupling part and then moved in a different direction relative to the other coupling part.

- (1) Note. A configuration or shape of a contact or counter-contact which performs the function specified herein for the means on a contact or counter-contact is also considered to be encompassed by the said means.

**671 Having bayonet-coupling contact:**

This subclass is indented under subclass 670. Coupling part comprising either (a) a plug having a contact which extends or which has a pin or projection thereon which extends radially of the longitudinal axis along which the plug is intended to be coupled to its mating plural-contact receptacle; or (b) a receptacle having a contact disposed within a recess extending therein, which contact or recess has an abutment extending circumferentially about the

longitudinal axis along which the receptacle is intended to be coupled to its mating plural-contact plug; and wherein the plug and its mating receptacle are locked or retained in coupled relationship by the radially extending contact of the plug or by the radially extending pin or projection on the contact of the plug being received behind the circumferentially extending abutment of the receptacle, the engaging motion being first along the longitudinal coupling axis and then a partial turning about the said coupling axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

332+, for a coupling part with a bayonet-type retaining means operating between the coupling part and its mating coupling part, which bayonet-type retaining means is in addition to any retaining means formed or located on one or more contacts of the coupling part.

**672 Bayonet-coupling contact comprises cylindrical-shaped ring or shell:**

This subclass is indented under subclass 671. Coupling part wherein the locking or retaining contact, which requires the engaging motion between the coupling part and its mating coupling part to be first along the longitudinal coupling axis and then a partial turning about the said coupling axis, is further in the form of a short tube or shell-like member having a circularly-shaped cross-section, and wherein the coupling part either (a) is a plug in which the male portion thereof is in the form of a cylinder for insertion into the recess of the mating receptacle and the locking or retaining contact surrounds or forms the male portion of the plug, or (b) is a receptacle in which the female portion thereof is in the form of a cylindrically-shaped recess for receiving the male portion of the mating plug and the locking or retaining contact either is located within and forms the interior cylindrical surface of the female portion of the receptacle or forms the female portion of the receptacle.

**673 Having plural bayonet-coupling contacts:**

This subclass is indented under subclass 671. Coupling part carrying at least two mutually insulated, locking or retaining contacts, each of which requires the engaging motion between

the coupling part and its mating coupling part to be first along the longitudinal coupling axis and then a partial turning about the said coupling axis.

**674 Polarized:**

This subclass is indented under subclass 673. Coupling part further having indexing or keying means formed thereon or attachable thereto, which indexing or keying means is intended to cooperate with complementary indexing or keying means on a mating coupling part, so that either (a) the various contacts of the coupling part must always be associated with the same corresponding counter-contacts on the mating coupling part whenever the coupling part is coupled to its mating coupling part, or (b) the coupling part must be capable of being coupled to only one specific, but to no other, mating coupling part among a plurality of mating coupling parts which are all structurally identical except for some variation of the indexing or keying means thereon.

SEE OR SEARCH THIS CLASS, SUBCLASS:

677+, for a coupling part having polarizing means, and the search notes appended thereto.

**675 Having annular, push-pull-engaging contact concentrically disposed about longitudinal axis of engagement:**

This subclass is indented under subclass 660. Coupling part intended to be coupled to its mating coupling part solely by linearly pushing the one coupling part directly toward and into engagement with the mating coupling part, and the coupling part is separated from its mating coupling part solely by linearly pulling the said one coupling part away from the other coupling part in the direction opposite to the direction of the engaging motion; and wherein at least one of the contacts of the coupling part is in the form of a cylindrically-shaped tube, sleeve, or shell or in form of a circularly-shaped ring, and the axis around which the contact is cylindrically or circularly disposed is coincident with the longitudinal axis along which the coupling part engages its mating coupling part.

**676 Having push-pull engaging contacts spaced along planar side wall transverse to longitudinal engagement axis (e.g., telephone jack or plug):**

**dinal engagement axis (e.g., telephone jack or plug):**

This subclass is indented under subclass 660. Coupling part adapted to be engaged with and disengaged from its mating coupling part solely by movement of one part relative to the other along a straight line passing through both coupling parts; the coupling part includes a planar contact-carrying wall surface extending parallel to the straight line produced by the coupling or uncoupling movement; and the contacts are spaced along a straight line on the planar wall surface perpendicular to the straight line produced by the coupling or uncoupling movement.

SEE OR SEARCH THIS CLASS, SUBCLASS:

344, for a similar plural-contact coupling part having a retaining means in addition to a contact.

**677 Polarized:**

This subclass is indented under subclass 660. Coupling part having indexing or keying means formed thereon or attachable thereto, which indexing or keying means is intended to cooperate with complementary indexing or keying means on a mating coupling part, so that either (a) the various contacts of the coupling part must always be associated with the same corresponding counter-contacts on the mating coupling part whenever the coupling part is coupled to its mating coupling part, or (b) the coupling part must be capable of being coupled to only one specific, but to no other, mating coupling part among a plurality of mating coupling parts which are all structurally identical except for some variation of the indexing or keying means thereon.

SEE OR SEARCH THIS CLASS, SUBCLASS:

92+, for an electrical connector which may be polarized for safety grounding purposes.

633, for a plural-contact coupling part adapted to be coupled to the edge of a printed circuit board, the coupling part further including an indexing or keying means.

674, for a coupling part having plural bayonet-coupling contacts and further

including an indexing or keying means.

**678 By asymmetric disposition or asymmetric shape of duplicate contacts:**

This subclass is indented under subclass 677. Coupling part wherein all of the contact are identical; the identical contacts either (a) are randomly or irregularly disposed on the coupling part and are adapted to engage correspondingly disposed counter-contacts on the mating coupling part, so that the coupling part can be coupled to its mating coupling part at only one relative disposition of the coupling parts; or (b) have an irregular shape, the irregular shape of each contact enabling the contact to engage a complementarily-shaped counter-contact on a mating coupling part in only one relative disposition of the contact and its counter-contact, so that the coupling part can be coupled to its mating coupling part at only one relative disposition of the coupling parts.

**679 By having or receiving contacts of similar type which are unequal in size or shape:**

This subclass is indented under subclass 677. Coupling part either (a) wherein at least one of the contacts carried by the coupling part has a size dimension or a cross-sectional shape different from all the other contacts and yet is still similar in general configuration and structure to the other contacts and still functions to engage its corresponding counter-contact in the same manner as the other contacts, so that the coupling part can be coupled to its mating coupling part at only one relative disposition of the coupling parts; or (b) wherein the body of the coupling part has openings through or into which counter-contacts correspondingly disposed on a mating coupling part must be introduced in order to engage the contacts carried by the coupling part so as to complete the electrical coupling, at least one of the openings has a size dimension or a cross-sectional shape different from all the other openings in order to accommodate counter-contacts having complementary sizes or shapes, so that the coupling part can be coupled to its mating coupling part at only one relative disposition of the coupling parts.

**680 By key or guideway:**

This subclass is indented under subclass 677. Coupling part either (a) having a groove or slot thereon disposed parallel to the axis along which the coupling part engages its mating coupling part, which groove or slot is intended to cooperate with a member carried by the mating coupling part by slidably receiving the member within the groove or slot to fix the relative angular relationship of the coupling parts about the longitudinal engagement axis whenever they are coupled; or (b) having a member thereon adapted to cooperate with a groove or slot disposed on the mating coupling part parallel to the axis along which the coupling part engages its mating coupling part, which member is intended to ride in said groove or slot to fix the relative angular relationship of the coupling parts about the longitudinal engagement axis whenever they are coupled.

SEE OR SEARCH THIS CLASS, SUBCLASS:

374+, for a coupling part having guiding means which may serve to polarize the coupling part.

**681 User adjustable key or guideway:**

This subclass is indented under subclass 680. Coupling part wherein the indexing or keying means, which either provides the groove or slot or provides the member which cooperates with a groove or slot, is further capable of (a) being selectively shifted about on the body of the coupling part from one location to another, (b) being selectively mounted to the body of the coupling part at any one of two or more locations, (c) having its orientation relative to the body of the coupling part selectively changed, or (d) being removed from the body of the coupling part and selectively exchanged for another indexing or keying means having a different indexing or keying characteristic.

**682 Receptacle for receiving plug having spaced, longitudinally engaging, prong-like contacts:**

This subclass is indented under subclass 660. Coupling parts in the form of a receptacle which is adapted to be coupled to a mating coupling part in the form of a plug having extending therefrom at least two spaced, elongated, fingerlike counter-contacts whose longi-

tudinal axes are parallel to the longitudinal axis along which the one coupling part is intended to be linearly pushed toward and thereby into engagement with the other coupling part, and wherein the receptacle carries at least two correspondingly spaced contacts for slidingly engaging the elongated fingerlike counter-contacts along the longitudinal axes thereof whenever the one coupling part is pushed into embracing relationship with the other coupling part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 106+, for a receptacle for receiving a three-prong coupling part including a safety ground prong.
- 218+, for a coupling part having an alternatively connected coupling face.
- 225, for a contact tap between normally engaged coupling parts.
- 226+, for a coupling part having a fluorescent or neon lamp.
- 246+, for an electrical connector having a self-aligning contact.
- 266+, for a coupling part having a handle or means to move a contact laterally to permit uncoupling.
- 374+, for a coupling part with guiding means for mating coupling part.
- 517, for a power measuring meter coupling part.
- 597+, for a coupling part including flexing insulation and having plural, laterally spaced, prong sockets.
- 638+, particularly subclasses 646 and 650+, for a single unitary device including two or more plural-contact coupling parts, at least one of which is a receptacle adapted to receive a spaced-prong plug.

**683 Adapted to receive base connector of electron tube:**

This subclass is indented under subclass 682. Receptacle specifically intended to be coupled to a plug which carries or is intended to carrying an electric space discharge device of the electron-tube type.

- (1) Note. The term "electron tube" is interpreted to mean an electronic device in which conduction by electrons takes place through a vacuum or a gaseous

medium within a sealed glass or metal container and which has various uses based on the controlled flow of electrons. Various specialized types of, or alternative names for, an electron tube include: an X-ray tube, cathode-ray tube, vacuum tube, thermionic tube, or electrical valve (British terminology).

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 56+, 168, 182, 220, 280, 356, 360, 375, 414, 419, 541, 558, 602, and 605, for a receptacle adapted to receive the base connector of an electron tube, which receptacle is combined with other features provided for in this class.

**684 Receptacle body formed of thin, superposed plates or discs of insulation:**

This subclass is indented under subclass 683. Receptacle wherein the insulating body forming the receptacle is composed of a plurality of flat, thin, sheetlike plates of insulation which are layered or stacked one atop another or located in spaced, face-to-face relationship one above another and which carry the contacts.

**685 Having only three prong-receiving recesses arranged to define apices of a triangle:**

This subclass is indented under subclass 682. Receptacle wherein the insulating body of the receptacle has three sockets or apertures extending therein parallel to the longitudinal axis of engagement of the coupling, the openings of the sockets or apertures being nonlinearly arranged across the coupling face of the receptacle; and wherein the receptacle has only three contacts, each of which is located either within or directly behind a said socket or aperture so that the fingerlike counter-contacts extending from the mating plug must be introduced within or passed through the sockets or apertures to complete the electrical coupling.

**686 Having multipart insulating body or casing:**

This subclass is indented under subclass 682. Receptacle wherein the body of insulation is segmental, divided, or otherwise composed of an assembly of two or more sections.

- SEE OR SEARCH THIS CLASS, SUBCLASS:  
 599, 634+, 684+, 695+, and 701, for a coupling part having a multipart insulating body.  
 707, 712+, 724, and 731, for an electrical connector having a multipart insulating body.
- 687 Divided parallel to longitudinal engagement axis (e.g., formed of two casing halves):**  
 This subclass is indented under subclass 686. Receptacle wherein the insulating body is separable along at least one line generally parallel to the longitudinal axis along which the receptacle is intended to engage its mating plug.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
 465+, for an electrical connector comprising a longitudinally divided connector housing for gripping a conductor to provide stress relief for the conductor to terminal joint.  
 696, for a spaced-prong plug having an insulating housing divided parallel to the longitudinal engagement axis of the plug.  
 731, for an electrical connector housing made of insulating material and divided parallel to the longitudinal engagement axis of the connector.
- 688 Formed of superposed planar sheets or plates of insulation:**  
 This subclass is indented under subclass 686. Receptacle wherein the insulating body is composed of a plurality of thin, flat, sheetlike pieces of insulation which are layered or stacked one atop another, or located in spaced, face-to-face relationship one above the other.
- 689 Planar insulating cover overlying insulating body or casing:**  
 This subclass is indented under subclass 686. Receptacle wherein the insulating body is composed of (a) a main contact-carrying housing having an opening leading into an externally accessible interior portion and (b) a separate thin, flat closure member removably secured to the main housing to close-off the opening leading into the interior portion of the housing.
- 690 Insulating parts secured together by screw-threaded means:**  
 This subclass is indented under subclass 686. Receptacle wherein the insulating sections separably forming the insulating body are held together by means having screw threads formed thereon, the screw-thread-carrying means being either a portion of the insulating sections or an additional member cooperating with the sections.
- 691 Having additional resilient member cooperating with contact to increase grip on contact of mating plug:**  
 This subclass is indented under subclass 682. Receptacle including a resilient means operatively associated with at least one of the contacts thereof, but not part of the contact itself, for applying pressure, over and above what the contact itself may apply, to the fingerlike counter-contact of the plug whenever the receptacle and plug are in coupled relationship so as to either help maintain the coupled relationship of the receptacle and plug or enhance the transfer of electrical current from one contact to its mating contact.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
 833, for a metallic spring clip, per se, having a resilient securing part for receiving the end contact of an elongated fuselike component inserted transverse to the longitudinal axis of the component, which spring clip is combined with a separate means to increase the clamping pressure of the spring clip.  
 839, for a metallic connector or contact, per se, having a resiliently urged securing part, which connector or contact is combined with an additional reinforcing spring means.
- 692 Plug having spaced, longitudinally engaging, prong-like contacts:**  
 This subclass is indented under subclass 660. Coupling part in the form of a plug having extending therefrom at least two spaced, elongated, fingerlike contacts whose longitudinal axes are parallel to the longitudinal axis along which the one coupling part is intended to be linearly pushed toward and into engagement

with its mating coupling part, and wherein the contacts of the plug are slidingly engaged along the longitudinal axes thereof by the counter-contacts of the mating receptacle whenever the one coupling part is pushed into embracing relationship with its mating coupling part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 106+, for a three-prong coupling part including a ground prong.
- 149+, for an electrical connector combined with a prong cover.
- 266+, for a coupling part having a handle or means to move a contact laterally to permit uncoupling, and see the Search Notes appended thereto for the bases of lamps or electron tubes.
- 374+, for a coupling part with guiding means for mating with a complementary coupling part.
- 568, for a coupling part supported by a randomly manipulated appliance (e.g., electric iron).
- 597+, for a coupling part including flexing insulation and having plural, laterally spaced, prongs.
- 617+, for a plug having spaced, longitudinally engaging, prong contacts combined with a vitreous-type envelope.
- 638+, particularly subclasses 647, 651+ and 655, for a single unitary device which includes two or more plural-contact coupling parts, at least one of the coupling parts being a spaced-prong plug.

**693 With insulative covering about part of protruding portion of each contact:**

This subclass is indented under subclass 692. Plug wherein each of the contacts protruding from the insulating body of the plug has an additional coating or sheath formed of insulating material which encloses or covers a part of the outwardly protruding portion of the contact.

- (1) Note. Generally, the purpose of the insulative sheath covering a portion of the pronglike contacts is to prevent electrical shock to the person who may inadvertently grasp the pronglike contacts with his hand while plugging or unplugging

the plug into or from its mating receptacle.

**694 Having wire conductor receiving passageway extending perpendicular to longitudinal axes of contacts:**

This subclass is indented under subclass 692. Plug having a socket or aperture extending into the insulating body thereof generally at a right angle to the longitudinal axes of the fingerlike contacts, which sockets or aperture is intended to receive a wire-type or cable-type conductor therein for electrical securement to one or more of the contacts.

**695 Having multipart insulating body:**

This subclass is indented under subclass 692. Plug wherein the body of insulation is segmental, divided, or otherwise composed of an assembly of two or more sections.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 599, 634+, 684+, 686+, and 701, for a coupling part having a multipart insulating body.
- 707, 712+, 724, and 731, for an electrical connector having a multipart insulating body.

**696 Divided parallel to longitudinal engagement axis (e.g., formed of two casing halves):**

This subclass is indented under subclass 695. Plug wherein the insulating body is separable along at least one line generally parallel to the longitudinal axis along which the plug is intended to engage its mating receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 465+, for an electrical connector comprising a longitudinally divided connector housing for gripping a conductor to provide stress relief for the conductor to terminal joint.
- 687, for a receptacle for a spaced-prong plug, which receptacle includes an insulating housing divided parallel to the longitudinal engagement axis of the receptacle.
- 731, for an electrical connector housing made of insulating material which is divided parallel to the longitudinal engagement axis of the connector.

**697 Having means other than screw-threaded means for securing wire-type conductor to contact:**

This subclass is indented under subclass 692. Plug including means, other than a means having screw threads thereon, for enabling the end of a wire-type conductor or terminal secured to such end of a wire-type conductor to be mechanically and electrically fastened or clamped to a contact carried by the plug.

- (1) Note. The conductor may be either separably secured to the contact (e.g., by a resiliently biased portion of the contact) or permanently secured to the contact (e.g., by crimping a portion of the contact onto the conductor or by soldering the conductor to the contact).

**698 Receptacle for transversely receiving elongated fuselike component having contact at each end thereof:**

This subclass is indented under subclass 660. Receptacle specifically adapted to be electrically coupled to a narrow, tube-shaped plug having a counter-contact located at each of the longitudinally spaced-apart ends thereof, the plug being intended to be moved into coupled engagement with the receptacle by pushing the plug toward the receptacle along a line perpendicular to the longitudinal axis of the plug; and wherein the receptacle has two contacts which are spaced apart from one another along the coupling face thereof a distance approximately equal to the longitudinal length of the plug, so that the longitudinal length of the plug lies along a line passing through the spaced-apart contacts of the receptacle whenever the receptacle is coupled to the plug.

- (1) Note. Usually, the plug adapted to be coupled to the receptacle provided herein is in the form of a cartridge-type fuse.
- (2) Note. The cross-sectional shape of the tube-shaped plug may be circular, square, hexagonal, elliptical, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

239+, for a coupling part specially designed to receive a fluorescent or neon lamp,

which coupling part is further designed for transverse receipt of a lamp contact.

249+, particularly subclass 250, for a receptacle having two directly opposed contact arms for receiving a connector therebetween, one of the contact arms being self-aligning.

830+, for a spring-actuated resilient metallic contact, per se, for receiving an end contact of an elongated fuselike component inserted transverse to the longitudinal axis of the component.

**699.1 Having only two duplicate contacts arranged bilaterally symmetric about longitudinal axis of engagement:**

This subclass is indented under subclass 660. Coupling part carrying only two identical contacts which are spaced apart and electrically insulated from one another, wherein the two contacts taken together are disposed bilaterally symmetric about the longitudinal axis along which the coupling part is intended to be engaged and coupled with its mating coupling part.

- (1) Note. The bilaterally symmetric disposition of the two duplicate contacts of a plug or receptacle in this subclass also means that each contact is annularly spaced about the longitudinal axis of engagement 180 degrees from the other contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

619, for a coupling part having only two duplicate contacts arranged bilaterally symmetric about the longitudinal axis of engagement, wherein the coupling part is carried by a glasslike body.

**699.2 Lamp-receiving socket:**

This subclass is indented under subclass 699.1. Coupling part particularly adapted to detachably receive and electrically couple to a member intended to radiate light utilizing an environment-excluding, vacuum-maintaining envelope.



SEE OR SEARCH THIS CLASS, SUB-CLASS:

336+, for a lamp-receiving socket with coupling-movement actuating means or retaining means in addition to the contact of the coupling part. Also, see the additional search notes therein.

**700 Having spring-biased, plunger-type contact movable along line parallel to longitudinal axis of engagement:**

This subclass is indented under subclass 660. Coupling part wherein at least one of the contacts carried thereby is in the form of a pistonlike member which is mounted for reciprocative movement relative to the coupling part whenever the one coupling part is moved into or out of engagement with its mating coupling part, the reciprocative movement being along a line parallel to the longitudinal axis of the coupling part or parallel to the longitudinal axis along which the coupling part is intended to engage its mating coupling part, and wherein the pistonlike contact member is further resiliently biased for yieldable movement along the said line by the action of a spring means carried by the coupling part.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

824, for a spring-biased butt contact, per se.

**701 Having modular or multipart insulating body:**

This subclass is indented under subclass 660. Coupling part either (a) wherein the body of insulating includes means for enabling the coupling part to be separably joined or assembled with one or more other coupling parts which are substantially identical in structure to the first coupling part so as to build up an assembly composed of any desired number of duplicate coupling parts, or (b) wherein the body of insulation is segmental, divided, or otherwise composed of an assembly of two or more sections.

- (1) Note. The multipart insulating body in this subclass refers only to a single coupling part. Thus, two discrete coupling parts joined to form an electrical joint are not considered to be subject matter

for this subclass unless each of the individual coupling parts is composed of a multipart insulating body.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

594, for a coupling part having flexing insulation for resiliently interlocking with an adjacent modular coupling part.

599, 634+, 684, 686+, and 695+, for a coupling part having a multipart insulating body.

707, 712+, 724, and 731, for an electrical connector having a multipart insulating body.

**702 Insulating body comprising or for use with cylindrical cap and shell type lamp receptacle casing:**

This subclass is indented under subclass 625. Insulating body either (a) in the form of a housing composed of a hollow insulating cylinder and a removable insulating cover for closing off one end of the cylinder, the insulating housing being adapted to contain a plural-contact receptacle which is accessed through the remaining open end of the cylinder by a mating cylindrical plug of the type having one of its contacts in the form of a cylinder or annulus surrounding the cylindrical plug; or (b) adapted to be enclosed within a housing composed of a hollow metallic cylinder and a removable metallic cover for closing off one end of the cylinder, the housing being adapted to contain a plural-contact receptacle which is accessed through the remaining open end of the cylinder by a mating cylindrical plug of the type having one of its contacts in the form of a cylinder or annulus surrounding the cylindrical plug.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

753, for a cylindrical metallic cap and shell-type lamp receptacle casing, per se.

**703 Insulating lining or contact support within separable, metallic cap and shell casing:**

This subclass is indented under subclass 702. Insulating body combined with and enclosed within a housing composed of a hollow metallic cylinder and a removable metallic cover, and wherein the body of insulation either (a) is

in the form of a thin insulating sleeve or tube or in the form of a thin insulating disc so that the metallic cylinder or metallic cover is separated from the plural-contact receptacle by nonconductive material, or (b) has or is adapted to have contacts of conductor securing means secured thereto.

**704 Insulating lining or contact support within metallic cap casing:**

This subclass is indented under subclass 702. Insulating body combined with the removable metallic cover forming part of a housing, and wherein the body of insulation either (a) is in the form of a thin insulating disc located adjacent the interior surface of the cover so that the metallic cover is separated from the plural-material, or (b) has or is adapted to have contacts or conductor securing means secured thereto.

**705 Insulating lining or contact support within metallic shell casing:**

This subclass is indented under subclass 702. Insulating body combined with a hollow metallic cylinder forming part of a housing, and wherein the body of insulation either (a) is in the form of a thin insulating sleeve or tube located adjacent the interior surface of the cylinder so that the metallic cylinder is separated from the plural-contact receptacle by nonconductive material, or (b) has or is adapted to have contacts or conductor securing means secured thereto.

**706 Insulating lining for interior of metallic cap or shell casing:**

This subclass is indented under subclass 702. Insulating body either (a) in the form of a thin insulating sleeve or tube adapted to be located adjacent the interior surface of the hollow metallic cylinder forming part of a housing so that the metallic cylinder is separated from the plural-contact receptacle by nonconductive material, or (b) in the form of thin insulating disc adapted to be located adjacent the interior surface of the removable metallic cover forming part of a housing so that the metallic cover is separated from the plural-contact receptacle by nonconductive material.

**707 Separable insulating cap and shell casing:**

This subclass is indented under subclass 702. Insulating body in the form of a housing composed of a hollow insulating cylinder and a removable insulating cover for closing off one end of the cylinder, the plural-contact receptacle adapted to be enclosed by the housing being electrically coupled to the mating plug though the remaining open end of the cylinder.

SEE OR SEARCH THIS CLASS, SUBCLASS:

703, 704 and 705, for a separable metallic cap and shell casing, or cap or shell portion thereof, combined with an insulating lining or contact support.

753, for a cylindrical metallic cap and shell-type lamp receptacle casing, per se.

**708 Insulating body providing direct contact or engagement of duplicate terminals or conductors:**

This subclass is indented under subclass 625. Electrical connector wherein the insulating body thereof includes means for physically associating either a plurality of identical wire-type conductors\* or a plurality of identical wire-type-conductor end terminals into touching engagement with one another so as to electrically join them together.

(1) Note. Since a connector included in this subclass does not rely upon a contact or any other conductive, current-carrying part to electrically interconnect the duplicate conductors or terminals, a connector in this subclass will often consist entirely of insulation.

(2) Note. The mere recitation in a claim that the identical conductors or terminals are in contact with each other is not sufficient for classification in this subclass. To be classified in this subclass, some structural modification of the connector which particularly adapts it to make an electrical connection in which the connected conductors or terminals directly contact each other must be claimed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

778+, and 792+, for a metallic connector or contact having a movable or resilient securing part for providing direct contact or engagement of plural conductors or conductor end terminals.

**709 Insulating body having plural mutually insulated terminals or contacts (e.g., terminal block):**

This subclass is indented under subclass 625. Electrical connector wherein two or more current-carrying terminals, contacts,\* conductor-securing means, or other metallic connectors are carried by an electrically insulating body in a relatively fixed, spaced-apart relationship with one another and in electrical insulation from one another.

- (1) Note. A connector included in this and the indented subclasses differs from a plural-contact coupling part (as found in subclasses 626+) in that a connector included herein is neither adapted nor in any other way intended to be coupled or mated to a single complementary insulating body carrying plural mutually insulated contacts.
- (2) Note. One common type of connector included herein (usually known as a terminal block or board) has a first means to receive and electrically interconnect separate wire-type conductors or separate wire-type conductor end terminals and has a second means to receive and electrically interconnect another set of separate wire-type conductors or another set of separate wire-type conductor end terminals; the said another set of conductors remaining, however, electrically insulated from the first set of conductors.
- (3) Note. Any of the metallic connectors, terminals, or conductor securing means carried by a terminal block or board included herein may simply be in the form of a screw or nut securing means around which a wire-type conductor is intended to be wound, or it may be in the form of a clip for receiving a complementary wire-type conductor or wire-

type conductor end terminal, but in every case the wire-type conductors received by such terminal block or board are physically separate elements.

- (4) Note. Also included herein (particularly in subclasses 710 and 712+) is a single insulating body (commonly known as a "modular" terminal block or board) which usually has a single current-carrying bus or commoning bar having two or more electrically interconnected terminals, contacts, or conductor-securing means thereon. This "modular" terminal block or board is particularly adapted and intended to be separably joined or assembled with or more other terminal blocks or boards which are substantially identical in structure to the first said block or board, so that an assembly composed of any desired number of identical terminal blocks or boards may be built up. The resultant assembly is thus comprised of a composite insulating body carrying a plurality of mutually insulated terminals, contacts, or conductor-securing means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

723+, for an insulating body carrying spaced, electrically interconnected, duplicate terminals, contacts, conductor-securing means, or other metallic connectors.

**710 Duplicate insulating blocks or boards interconnected by frangible or severable part:**

This subclass is indented under subclass 709. Electrical connector wherein the insulating body thereof is composed of a plurality of identical insulating body parts which are all integrally joined in side-by-side relationship to one another by intervening web means; each body part carries at least one terminal, conductor-securing means, or other metallic connector thereon; and the intervening web means forming integral joint between any two adjacent body parts is adapted to be readily broken or cut so as to enable separation therebetween and to thereby enable utilization of a composite body having any selected number of identical body parts.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 590, for a storage strip made of yieldable nonconductive material carrying a plurality of a similar coupling parts.  
885, for a storage carrying detachable contacts.

**711 With common operator for simultaneously securing separate contacts thereof to separate external contacts or conductors:**

This subclass is indented under subclass 709. Electrical connector having a single manipulatable means thereon for simultaneously clamping or otherwise forcibly engaging two or more separate external contacts or conductors each individually to two or more separate, mutually insulated contacts or conductor-engaging means carried by the connector, so that each contact or conductor-engaging means of the connector may be electrically joined to a respective external contact or conductor.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 387+, for a connector having piercing means for contacting external conductors and in which a single operator may be included which effects simultaneous contacting of the plural conductors.  
656+, for a plural-contact coupling part having a common means for securing plural conductors to separate contacts.  
756, for a clamp-type connector for a storage battery post in which the connector has a common means for effecting connection to both a post and a conductor.  
775+, for various noninsulated types of common means for effecting connection between plural conductors and in which special means for engaging the plural conductors is provided.

**712 Modular or multipart insulating body:**

This subclass is indented under subclass 709. Electrical connector either (a) including means for enabling the connector to be separably joined to or assembled with one or more other connectors which are substantially identical in structure to the first connector so that an assembly composed of any desired number of substantially identical connectors may be built

up, or (b) wherein the body of insulation is segmental, divided, or otherwise composed of an assembly of two or more sections.

- (1) Note. Usually, a “modular” connector (commonly known as a “modular” terminal block or board) carries only current-carrying bus or commoning bar, and the bus or commoning bar in turn carries two or more electrically interconnected terminals, contacts, or conductor-securing means thereon. However, whenever this “modular” block or board is assembled with one or more other “modular” blocks or boards which are similar to the first, the resultant assembly of “modular” terminal blocks or boards forms a composite insulating body carrying a plurality of mutually insulated terminals, contacts, or conductor-securing means.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 599, 634+, 684, 686+, 695+, and 701, for a coupling part having a multipart insulating body.  
707, 724 and 731, for an electrical connector having a multipart insulating body.

**713 Relatively movable insulating body parts:**

This subclass is indented under subclass 712. Electrical connector wherein the insulating sections or segments forming the insulating body are held together by means enabling one of the sections or segments to be moved relative to another while remaining assembled to the one or more other sections or segments.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 296+, for a coupling part with coupling movement actuating means or with retaining means, other than on a contact, for retaining coupled connectors together.  
635, for a coupling part adapted to receive an edge of a printed circuit board and which is composed of relatively movable insulating body parts so that the pressure of the contacts thereof upon the contacts of the printed circuit board may be altered.

**714 Formed of three or more thin, flat, superposed layers, plates, or sheets of insulation:**

This subclass is indented under subclass 712. Electrical connector wherein the insulating body thereof is composed of at least three thin, flat, sheetlike pieces of insulation which are layered in spaced, face-to-face relationship one above another.

**715 Modular insulating block or board:**

This subclass is indented under subclass 712. Electrical connector including means for enabling the connector to be separably joined to or assembled with one or more other connectors which are substantially identical in structure to the first connector so that an assembly composed of any desired number of substantially identical connectors may be built up.

SEE OR SEARCH THIS CLASS, SUBCLASS:

594, for a coupling part having flexing insulation for resiliently interlocking with an adjacent modular coupling part.

701, for a plural-contact receptacle or plug having a modular insulating body.

712, for search notes to related subject matter, and see especially (1) Note appended thereto for a further discussion of the term "modular."

724, for an electrical connector having a modular or multipart insulating body carrying spaced, electrically interconnected, duplicate terminals or contacts.

**716 With support track for receiving plural insulating blocks or boards:**

This subclass is indented under subclass 715. Electrical connector combined with an elongated means for holding or retaining the connector in side-by-side relationship with one or more other connectors which are substantially identical in structure to the first connector so that a plurality of the connectors may be supported together in assembled relationship.

(1) Note. Usually, the elongated means for holding or retaining a plurality of the connectors in assembled relationship is somewhat in the form of an elongated C- or U-shaped channel or rail.

SEE OR SEARCH THIS CLASS, SUBCLASS:

527+, especially subclass 532, for a coupling part combined with a means for supporting the coupling part.

**717 Having integral means to interlock or interfit with a duplicate insulating block or board:**

This subclass is indented under subclass 715. Electrical connector having unitary means thereon adapted to be mated to or interengaged with complementary unitary means on at least one of the other connectors to or with which the first said connector is to be joined or assembled, so that unitary means on the connector cooperating with the complementary unitary means on at least one other connector permits the connectors to be assembled together and maintained in joined relationship.

SEE OR SEARCH THIS CLASS, SUBCLASS:

594, for a coupling part having flexing insulation for resiliently interlocking with an adjacent modular coupling part.

701, for a plural-contact receptacle or plug having a modular insulating body.

**718 Having protective cover formed from insulating material:**

This subclass is indented under subclass 712. Electrical connector wherein the insulating body is composed of (a) a main body member which carries the current-carrying parts of the connector and (b) a closure member which is either movably secured or removably attached to the main body member, the closure member is intended to be manipulated or attached to enclose or otherwise close-off the current-carrying parts from the exterior of the connector or, alternatively, be manipulated or removed to permit access to the current-carrying parts of the connector.

**719 With conductor fanning means:**

This subclass is indented under subclass 709. Electrical connector having thereon means to guide or position a plurality of wire-type conductors so as to prevent entanglement of the conductors whenever they are attached to the connector.

**720 Terminals or contacts secured by permanently bending or deforming metallic part onto insulation:**

This subclass is indented under subclass 709. Electrical connector wherein the terminals, contacts, conductor-securing means, or other metallic connectors are fastened or attached to the insulating body (a) by permanently bending, crimping, or deforming a malleable portion of each terminal, contact conductor-securing means, or other metallic connector onto or into a portion of the insulating body or (b) by permanently bending, crimping, or deforming a separate metallic rivet or other separate portion of the insulating body or onto a portion of each terminal, contact, conductor-securing means, or other metallic connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

741+, for the combination of an insulating body and a metallic connector or contact in which the metallic connector or contact is secured to the insulating body by permanently bending, crimping, or deforming a part thereof or a separate metallic part onto the insulating body.

870, for a metallic connector or contact, per se, which is adapted to be secured to an insulating body by permanently bending, crimping, or deforming a part thereof or a separate metallic part onto the insulating body.

**721 Having three or more spaced, electrically interconnected, duplicate terminals or contacts:**

This subclass is indented under subclass 709. Electrical connector wherein at least one of the mutually insulated terminals, contacts, conductor-securing means, or other metallic connectors carried by the insulating body is spaced apart from and electrically connected to at least two other spaced-apart terminals, contacts, conductor-securing means, or other metallic connectors which are identical to the first said terminal, contact, conductor-securing means, or other metallic connector and which are also carried by the insulating body.

(1) Note. Usually, the three or more spaced, electrically interconnected, duplicate ter-

minals, contacts, conductor-securing means, or other metallic connectors are electrically interconnected by means of a bus bar, neutral bar, shorting bar, or other similar current-carrying means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

723+, for an insulating body with spaced electrically interconnected, duplicate terminals, contacts, conductor-securing means, or other metallic connectors; but in which no other terminals, contacts, conductor-securing means, or other metallic connectors, insulated from the interconnected terminals, etc., are included.

755+, for an uninsulated connector having spaced electrically interconnected means for securing plural conductors or connectors thereto.

**722 Terminals or contacts embedded in insulating body:**

This subclass is indented under subclass 709. Electrical connector wherein the terminals, contacts, conductor-securing means, or other metallic connectors are secured or fastened to the insulating body (a) by applying either heat or pressure to at least a portion of the insulating body to thereby deform it about at least a portion of each terminal, contact, conductor-securing means, or other metallic connector, (b) by casting the metallic parts within or onto the insulating body, (c) by welding the metallic parts and insulating body to one another, or (d) by applying glue or other adhesive cementlike material between the insulating body and the metallic parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

736, for the combination of an insulating body and a metallic connector or contact in which the metallic connector or contact is secured to the insulating body by heat-molding or cold-deforming the insulation about the connector or contact or by means of a casting, welding, or cementing process.

**723 Insulating body with spaced, electrically interconnected, duplicate terminals or contacts:**

This subclass is indented under subclass 625. Electrical connector wherein two or more substantially identical, current-carrying terminals, contacts,\* conductor-securing means, or other metallic connectors are carried by an electrically insulating body in a relatively fixed, spaced-apart relationship with one another, so that any one terminal, contact, conductor-securing means, or other metallic connector is at the same electrical potential as any other.

- (1) Note. Usually, the two or more spaced, electrically interconnected, substantially identical terminals, contacts, conductor-securing means, or other metallic connectors are electrically joined by means of a bus bar, neutral bar, shorting bar, or other similar current-carrying means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

709+, for an insulating body having plural, mutually insulated terminals or contacts in which it often happens that at least one of the mutually insulated terminals, contacts, conductor-securing means, or other metallic connectors is also electrically connected to other spaced-apart terminals, contacts, etc. which are identical to the said at least one terminal, contact etc.

775+, for an uninsulated connector having spaced electrically interconnected means for securing plural conductors or connectors thereto.

**724 Modular or multipart insulating body:**

This subclass is indented under subclass 723. Electrical connector either (a) including means for enabling the connector to be separably joined to or assembled with one or more other connectors which are substantially identical in structure to the first connector so that an assembly composed of any desired number of substantially identical connectors may be built up, the assembly having all terminals, contacts, conductor-securing means, or other metallic connectors thereof electrically joined together; or (b) wherein the body of insulation is seg-

mental, divided, or otherwise composed of an assembly of two or more sections.

SEE OR SEARCH THIS CLASS, SUBCLASS:

599, 634+, 684, 686+, 695+, and 701, for coupling part having a multipart insulating body.

712+, for a modular or multipart insulating body providing or having plural spaced, mutually insulated terminals, contacts, conductor-securing means, or other metallic connectors, and see (1) Note appended thereto.

731, for an electrical connector having a multipart insulating body.

**725 Having movable insulated part for securing conductor or mating connector thereto:**

This subclass is indented under subclass 625. Electrical connector wherein a part of the connector structure is either electrically insulated from the current-carrying portions of the connector or the part itself is formed in whole or in part of insulating material, which part is movable to electrically and mechanically connect a conductor or complementary connector thereto or is movable to electrically and mechanically release or disconnect a conductor or complementary connector therefrom.

- (1) Note. The movable insulated securing part may be, for example, a lever, handle, push button, nut, screw etc.

- (2) Note. A movable insulated part which constitutes merely a sleeve or housing for enclosing a connection and which is moved into position after the connected parts have been brought together has been excluded from this and the indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

266+, for a coupling part having a handle or means to move a contact laterally to permit uncoupling of joined coupling parts.

738, and 750, for a connector in which an insulating tube, sleeve or cap concentrically surrounds at least a portion of the metallic part of the connector, and see (2) Note above.

754+, and 775+, for an uninsulated connector having a movable or resilient securing part.

**726 Clamp-type connector for storage battery post:**

This subclass is indented under subclass 725. Electrical connector specialized or particularly adapted to grasp or be secured to the terminal of a storage battery by compressive or wedging action.

SEE OR SEARCH THIS CLASS, SUBCLASS:

202, for a coupling part comprising a tapered post or a mating part thereof (e.g., a battery post) and having a contact encompassed by a liquid storage chamber.

388, for an electrical connector having a cutter-type contact and adapted to engage a tapered post (e.g., a storage battery terminal).

504, for an electrical connector adapted to connect to a battery and which is combined with a flaccid conductor and with an additional connector spaced therealong.

522, for an electrical connector comprising or mating with a tapered post (e.g., a storage battery terminal), which connector includes a contact cover or case for restricting environmental effects.

754+, for an uninsulated clamp-type connector adapted to be secured to a storage battery terminal.

**727 Screw-thread-operated securing part:**

This subclass is indented under subclass 725. Electrical connector either (a) wherein the movable insulated connecting part carries screw threads thereon whereby the insulated connecting part is moved by screwing or unscrewing the same, or (b) wherein the connector includes another movable member which carries screw threads thereon and which is operatively associated with the movable insulated connecting part so that the insulated connecting part may be moved by screwing or unscrewing the said another movable member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

738, and 750, for a connector in which an insulating tube, sleeve, or cap concentrically surrounds at least portion of the metallic part of the connector, and see (2) Note appended to subclass 725 above.

754+, and 775+, for an uninsulated connector having a screw-thread-operated securing part.

**728 With spring operating on conductive clamp portion of securing part:**

This subclass is indented under subclass 727. Electrical connector wherein the portion of the movable insulated connecting part which directly contacts and connects a conductor or complementary connector to the connector is a movable current-carrying clamp member; and wherein the connector further carries a resilient member operatively associated with the clamp member to resiliently bias or move the clamp member in addition to or independently of the movement of the insulated connecting part so as to facilitate the connection of a conductor or complementary connector to the connector or to facilitate or effect the release or disconnection of a conductor or complementary connector from the connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

729, for a connector having a movable insulated part for securing a conductor or mating connector thereto in which the securing part is spring-operated or resilient, and see the search not appended thereto.

**729 Spring-operated or resilient securing part:**

This subclass is indented under subclass 725. Electrical connector wherein the movable insulated connecting part is resiliently urged or moved in one direction by the action of a resilient portion of the insulated connecting part or by the action of a separate resilient member carried by the connector.



SEE OR SEARCH THIS CLASS, SUB-CLASS:

759, 786+ and 816+, for an uninsulated connector having a spring-operated or resilient securing part.

**730 Terminal connector having insulating tube or sleeve adapted to be crimped or heat-shrunk onto wire conductor:**

This subclass is indented under subclass 625. Electrical connector adapted to be electrically and mechanically secured to an insulated wire-type conductor; the insulating material of the connector is in the form of a hollow, sleevelike member which surrounds the conductive, conductor-securing portion of the connector and is adapted to also surround or receive therein a portion of the insulating covering or coating of the conductor; and the sleevelike member is of an insulating material which is either (a) capable of being plastically deformed by the application thereto of a clamping or crimping pressure, so that the sleevelike member is thereby formed tightly about the insulating covering or coating of the conductor or (b) capable of having its hollow interior plastically reduced in radial size by the application thereto of heat, so that the sleevelike member is thereby formed tightly about the insulating covering or coating of the conductor.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

523, for an electrical connector with a contact cover or case in the form of an elastic or heat-shrunk cable grip for restricting environmental effects.

865+, for metallic terminal connector, per se, which has a conductor sheath engaging means.

**731 Insulating body divided parallel to longitudinal axis of engagement (e.g., formed of two casing halves):**

This subclass is indented under subclass 625. Electrical connector wherein the body of insulation is segmental, divided, or otherwise composed of an assembly of two or more sections or segments; the insulating body being separable along at least one line generally parallel to the longitudinal axis along which the connector is intended to engage and mate with a complementary connector.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

465+, for an electrical connector comprising a longitudinally divided connector housing for gripping a conductor to provide stress relief for the conductor to terminal joint.

687, for a receptacle for a spaced-prong plug, which receptacle includes an insulating body or casing divided parallel to the longitudinal axis of engagement with mating plug.

696, for a spaced-prong plug having an insulating body or casing divided parallel to the longitudinal axis of engagement with its mating receptacle.

**732 Interfitting or abutting insulating bodies carried by separate mating connectors:**

This subclass is indented under subclass 625. Electrical connectors comprising two metallic connectors which are complementary to one another and adapted to be separably connected or coupled together to form an electrical joint, each of the two metallic connectors carries or is secured to a separate insulating body being so configured as to engage each other in overlapping, interengaging, or touching relationship.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

271+, for an electrical connector combined with a sealing element or material for cooperation with a mating connector (e.g., gasket), and see the search notes appended thereto.

278+, for an electrical connector having a resilient housing for sealing with a mating connector to prevent moisture, dust, or the foreign matter from reaching the interior region of the coupled connectors.

283, for an electrical connector having a housing which sealing fits with the housing of a mating connector for the purpose of the housings when they are joined, and see the search notes appended thereto.

**733.1 Metallic connector or contact secured to insulation:**

This subclass is indented under subclass 625. Electrical connector wherein a metallic terminal, contact, conductor-securing means, or other metallic connector is carried by an insulating body; and the metallic terminal, contact, conductor-securing means, or other metallic connector includes means to attach or fasten it to the insulating body.

SEE OR SEARCH THIS CLASS, SUBCLASS:

586+, for a coupling part including flexing insulation in which the yieldability of the insulation is utilized in the use or assembly of the coupling part.

869+, for a metallic connector or contact, per se, having means enabling it to be secured to an insulating body which carries it.

SEE OR SEARCH CLASS:

29, Metal Working, subclasses 747+ for a means to assemble or disassemble a terminal or connector.

**734 Annular or center contact secured to lamp-type insulating receptacle or base:**

This subclass is indented under subclass 733.1. Electrical connector wherein the insulating body has a contact attached or fastened thereto and is either (a) in the form of a receptacle having a cylindrical blind recess extending partially therein for receiving the cylindrical male portion of a mating plug of the type which carries a light-emitting device, or (b) in the form of a plug of the type which carries a light-emitting device and which carries a cylindrical male portion adapted to be received within the cylindrical recess of a mating receptacle; and wherein the contact is either (1) in the form of a cylindrically-shaped tube, shell, or ring and is symmetrically located within the cylindrical recess of the receptacle or symmetrically located on the exterior surface of the cylindrical male portion of the plug, or (2) in the form of a disc or button and is centrally located at the bottom of the cylindrical recess of the receptacle or centrally located on the end of the cylindrical male portion of the plug.

SEE OR SEARCH THIS CLASS, SUBCLASS:

613+, 641+, 649, 662+, 672, and 675, for a plural-contact plug or receptacle having at least one annular contact disposed concentrically around the longitudinal axis of engagement with its mating counterpart, such plug or receptacle usually also having an axial contact or another annular contact coaxial with the longitudinal axis.

**735 Screw-threaded contact having mutilated, irregular, interrupted, or discontinuous screw thread:**

This subclass is indented under subclass 734. Electrical connector wherein the contact attached or fastened to the insulating body is in the form of a cylindrically-shaped tube or shell, which cylindrically-shaped contact has screw threads disposed on a curved surface thereof for cooperating by means of a relative screw motion therebetween with screw threads or equivalent screw-thread-engaging means on the mating counter-contact of a mating connector, and wherein the screw threading disposed on the contact is broken, deformed, or of a non-continuous helical configuration.

- (1) Note. The discontinuity of the screw-threading on the cylindrically-shaped contact shell or tube may be due to the contact shell or tube being composed of an assembly of two or more separate sections which do not quite touch or align with one another when they are mounted together to form the cylindrical shape.

SEE OR SEARCH THIS CLASS, SUBCLASS:

665, for a plural-contact coupling part in which one of the contacts thereof is a cylindrically-shaped tube or shell which carries screw threads thereon, and in which the screw-threading on the contact is mutilated, irregular, interrupted, or discontinuous.

802, for a screw-threaded lamp-shell type contact having a resilient or spring biased securing part, the screw-threading of which may be interrupted or discontinuous.

**736 Secured by heat-molding or cold-deforming insulation or by casting, welding, or cementing:**

This subclass is indented under subclass 733.1. Electrical connector wherein the metallic terminal, contact, conductor-securing means, or other metallic connector (hereinafter referred to as metallic connector part) is attached or fastened to the insulating body (a) by applying either heat or pressure to previously unformed insulating material or to a portion of a previously formed insulating body to thereby plastically form or plastically deform the insulation about or onto a portion of the metallic connector part, (b) by applying heat to the metallic connector part until it is softened or molten and then pressing, shaping, or pouring it onto or into the insulation body, (c) by applying heat to one or both the previously formed and previously engaged metallic connector part and insulating body so that they are fused to one another, or (d) applying glue or other adhesive cementlike material between the insulating body and the metallic connector part.

- (1) Note. Excluded from this subclass are those devices in which a metallic terminal or contact is secured to the insulating body by the terminal or contact having serrated, pointed, roughened, or toothlike part which bites or penetrates into the insulation. Such devices, even though the insulation might be considered to be plastically deformed at the securing region by the penetration thereto of a serrated or toothlike part of a terminal or contact, are found in subclasses 387+.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

387+, for a metallic terminal or contact secured to an insulating body by the terminal or contact having a roughened, serrated, pointed, or toothlike part which bites into the insulation, and see (1) Note above.

**SEE OR SEARCH CLASS:**

174, Electricity: Conductors and Insulators, subclass 189 and 196 for a molded joint between a line insulator and an insulator terminal element.

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, for a process for molding plastic insulating material and see especially subclasses 272.11+ for a process for securing a contact or connector to insulation by molding.

403, Joints and Connections, subclasses 265+ for a molded joint in general.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, for an apparatus for molding plastic insulating material.

**737 Secured to insulation by screw-threaded means:**

This subclass is indented under subclass 733.1. Electrical connector wherein the metallic terminal, contact, conductor-securing means, or other metallic connector is attached or fastened to the insulating body by means having screw threads formed thereon, the screw-thread-carrying means being a portion of the insulating body, a portion of the terminal, contact conductor-securing means, or other metallic connector, or portion of an additional member cooperating with the insulating body and the metallic part to hold the same together.

**738 Insulating tube, sleeve, or cap concentrically surrounding part of connector:**

This subclass is indented under subclass 737. Electrical connector wherein the insulating body is in the form of either a hollow, generally cylindrical, sleeve-like member or a generally cylindrical, cuplike cover member, which insulating member surrounds or covers at least a portion of the terminal, contact, conductor-securing means, or other metallic connector within the interior thereof.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

750, for metallic connector or contact secured to an insulating body in which the insulating body is in the form of a tube, sleeve, or cap concentrically surrounding a part of the connector or contact.

**739 Including resilient or spring-biased part for securing wire-conductor or mating connector thereto:**

This subclass is indented under subclass 737. Electrical connector wherein the metallic terminal, contact conductor-securing means, or other metallic connector includes a part which is movable to electrically and mechanically connect a wire-type conductor or complementary metallic connector thereto; and wherein the movable connecting part is resiliently urged or moved in one direction either by the action of a resilient portion of the connecting part or by the action of the separate resilient member carried by the connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 729, for a connector having an insulated, spring-operated or resilient securing part.  
759, 786+ and 816+, for an uninsulated connector having a spring-operated or resilient securing part.

**740 Secured to insulation by bayonet engagement:**

This subclass is indented under subclass 733.1. Electrical connector wherein the metallic terminal, contact, or conductor securing means (hereinafter referred to as metallic connector part) is retained in attached or fastened relationship to the insulating body by a pin or projection extending radially of the axis along which the metallic connector part is initially brought into engagement with the insulating body, the pin or projection being received behind a circumferentially extending abutment located in the insulating body, the attaching motion being first along the said axis along which the metallic connector part is first brought into engagement with the insulating body and then a partial turning about the said axis.

**741 Secured by permanently bending, deforming, or crimping metallic part:**

This subclass is indented under subclass 733.1. Electrical connector wherein the metallic terminal, contact, conductor-securing means, or other metallic connector is attached or fastened to the insulating body (a) by permanently bending, crimping, or deforming a malleable por-

tion of the terminal, contact, conductor-securing means, or other metallic connector onto or into a portion of the insulating body or (b) by permanently bending, crimping, or deforming a separate metallic rivet or other separate metallic securing means onto or into a portion of the insulating body or onto a portion of the terminal, contact conductor-securing means, or other metallic connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 720, for an insulating body having plural, mutually insulated, metallic terminals or contacts in which the terminals or contacts are secured to the insulating body by permanently bending or deforming a metallic part onto the insulation.  
870, for a metallic connector or contact, per se, which is adapted to be secured to an insulating body by permanently bending, crimping, or deforming a part thereof or a separate metallic part.

**742 Having separate bendable or deformable securing part (e.g., rivet):**

This subclass is indented under subclass 741. Electrical connector wherein the metallic terminal, contact conductor-securing means, or other metallic connector is attached or fastened to the insulating body by permanently bending, crimping, or deforming a separate metallic rivet or other separate metallic securing means onto or into a portion of the insulating body or onto a portion of the terminal, contact, conductor-securing means, or other metallic connector.

**743 Resilient or spring-biased socket contact or connector:**

This subclass is indented under subclass 741. Electrical connector wherein the connector attached or fastened to the insulating body is in the form of a female member for slidably receiving in electrical engagement therewith a mating metallic male contact or connector in the form of a pronglike or pluglike member; and wherein the female contact or connector either is made at least in part of resilient material or has a movable clamping portion which is resiliently urged or moved in one direction by the action of a separate resilient member coop-

eratively associated with the female contact or connector, so that, whenever the female contact or connector and its mating male contact or connector are in coupled relationship, the resiliency of the female contact or connector or the resiliency of the separate resilient member cooperating with the movable clamping portion maintains or helps to maintain the coupled relationship or enhances the transfer of electrical current from one contact or connector to its mating contact or connector.

**744 Secured by resiliently biased part latching behind shoulder or into recess:**

This subclass is indented under subclass 733.1. Electrical connector wherein the means to attach or fasten the metallic connector or contact to the insulating body comprises a yieldable or yieldably operated retaining tongue, projection, or shoulder carried by the metallic connector or contact (or by the insulating body) for being yieldably urged to latch and remain behind a cooperating retaining shoulder or abutment carried by the insulating body (or by the metallic connector or contact) whenever the metallic connector or contact and the insulating body are interengaged for attachment therebetween.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 595, for a coupling part including flexing insulation in which a hinged or flexed detent on the insulation engages to secure a contact within a coupling part housing.
- 603, for a coupling part including flexing insulation in which the yieldable insulation is urged to retain a contact within a coupling part housing.
- 751, for a metallic connector or contact secured to insulation by a part of the connector or contact resiliently urged to grip the insulation.
- 871+, for a metallic connector or contact, per se, which is adapted to be secured to an insulating body by a resiliently biased retaining part latching behind a retaining shoulder.
- 873, for a metallic connector or contact, per se, adapted to be secured to insulation by a part of the connector or contact resiliently urged to grip the insulation.

**745 Separate latching part secured to contact prior to engagement with insulation:**

This subclass is indented under subclass 744. Electrical connector wherein the latchable tongue, projection, or shoulder is part of a separate member which is attached or fastened to the metallic connector or contact before the metallic connector or contact is interengaged with the insulating body.

**746 Latching part unitary with metallic connector or contact:**

This subclass is indented under subclass 744. Electrical connector wherein the latchable tongue, projection, or shoulder and the metallic connector or contact are of single one-piece construction.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 872, for a metallic connector or contact, per se, adapted to be secured to an insulating body by a resiliently biased retaining part unitary with the connector or contact latching behind a retaining shoulder in the insulating body.

**747 Coupling part type contact inserted into insulation from coupling end:**

This subclass is indented under subclass 746. Electrical connector wherein the metallic contact or terminal attached or fastened to the insulating body is in the form of either a male or female member adapted to be electrically engaged, respectively, with a mating female or male contact or terminal by sliding one within the other along the longitudinal axes thereof; and wherein the resilient latching attachment or fastening of the contact or terminal is accomplished by linearly pushing it into the insulating body from the same direction as the contact or terminal itself is intended to be engaged by its mating contact or terminal.

**748 Resilient socket contact for surrounding or engaging opposed surfaces of mating plug contact:**

This subclass is indented under subclass 746. Electrical connector wherein the contact or terminal attached or fastened to the insulating body is in the form of a female member for slidably receiving in electrical engagement therewith a mating metallic male contact or ter-

minal in the form of a pronglike or pluglike member; the female contact or terminal either being made of resilient metallic material or having a movable metallic part which is urged or moved toward an opposed metallic clamping part by the action of a separate resilient member so that the resiliency of the female contact or terminal imposes a gripping force upon the mating male contact or terminal; the female contact or terminal being either in the form of a resilient or resiliently biased tube for receiving and gripping the mating male contact or terminal or in the form of a bifurcated member having opposed furcations, at least one of which is resilient or resiliently biased toward the other furcation for receiving and gripping the mating male contact or terminal therebetween.

- (1) Note. A resilient socket contact of the type which engages and resiliently biases against only one side of a mating male contact is excluded from these subclasses. Excluded, for example, would be a resilient socket contact located within a male-contact receiving opening of an insulating housing, which contact resiliently gripping an inserted male contact by resiliently pushing against one side of the male contact thereby forcing the opposite side thereof against an interior wall of the opening.

**749 Adapted to have secured wire conductor extending transverse to longitudinal coupling axis:**

This subclass is indented under subclass 748. Electrical connector wherein the resilient socket contact or terminal includes means for mechanically attaching in electrical engagement therewith an elongated wire-type conductor; and wherein the design of the conductor-attaching means is such that the longitudinal axis of the attached portion of the wire-type conductor is disposed at generally a right angle to the longitudinal axis along which the socket contact or terminal is intended to receive its mating male contact or terminal.

**750 Insulating tube, sleeve, or cap concentrically surrounding part of connector:**

This subclass is indented under subclass 733.1. Electrical connector wherein the insulating body is in the form of either a hollow, generally cylindrical, sleeve-like member or a generally

cylindrical, cup cover member, which insulating member surrounds or covers at least a portion of the terminal, contact, conductor-securing means, or other metallic connector within the interior thereof.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

738, for a metallic connector or contact secured to an insulating body by screw-threaded means and in which the insulating body is in the form of a tube, sleeve, or cap concentrically surrounding a part of the connector or contact.

**751 Secured by part resiliently gripping insulation:**

This subclass is indented under subclass 733.1. Electrical connector wherein the metallic connector is attached or fastened to the insulating body by the metallic connector having on the insulation-engaging portion thereof a retaining means which is yieldably urged to grip or clamp onto a portion of the insulating body so as to hold the connector to the insulating body.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

603, for a coupling part including flexing insulation in which the yieldable insulation is urged to retain the contact within a distinct coupling part housing.

744+, for a metallic connector or contact secured to an insulating body by a resiliently biased part latching behind a retaining shoulder, and see the Search Notes appended thereto.

873, for a metallic connector or contact, per se, which is adapted to be secured to an insulating body by a part resiliently gripping the insulation.

**752 Secured by superposition of insulating body parts:**

This subclass is indented under subclass 733.1. Electrical connector wherein the metallic contact, terminal, or other conductor-securing means (hereinafter referred to as metallic connector part) is attached or fastened to the insulating body during the assembly of the insulating body which is initially composed of separate and distinct segments or sections; the

segments or sections of the insulating body, when assembled into a whole body, have at least one retaining shoulder or other retaining formation formed on the metallic connector part to retain the metallic connector part to the insulating body when it has been fully assembled into a whole body.

- (1) Note. Also included herein is a connector in which the various parts of the insulating body have generally parallel matching faces and the metallic connector part is retained in the insulating body by pressure applied by the parallel matching faces of the assembled insulating body parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 731, for an electrical connector having an insulating body divided parallel to the longitudinal axis of engagement with a mating connector, and see the Search Notes appended thereto for the locations of other connectors having a longitudinally divided insulating housing.

**752.5 With guiding means for inserted contact:**

This subclass is indented under subclass 733.1. Electrical connector wherein the insulated body includes a provision to cooperate with a contact to slidingly direct the contact and the insulating body to assume a desired alignment as the contact is mated with the insulating body.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 64, for an electrical connector that is part of a preformed panel arrangement with a guide for directing panel circuit movement.
- 297+, for an electrical connector with a guiding means for receiving a longitudinally moved communications device (e.g., an automobile radio) with coupling movement-actuating means or retaining means in addition to a contact.
- 374+, for an electrical connector with a guiding means that effects mating, generally.

SEE OR SEARCH CLASS:

- 200, Electricity: Circuit Makers and Breakers, for an electrical contact intended to make and break with mating contact under controlled or guided movement, wherein both contacts are considered to be an integral member.

**753 CYLINDRICAL METALLIC CAP AND SHELL TYPE LAMP RECEPTACLE CASING:**

This subclass is indented under the class definition. Device in the form of a housing composed of a hollow metallic cylinder and a removable metallic cover for closing off one end of the cylinder, the metallic housing being adapted to contain a plural-contact receptacle which is accessed through the remaining open end of the cylinder by a mating cylindrical plug of the type having one of its contacts in the form of a cylinder or annulus surrounding the cylindrical plug.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 702+, for an insulating lining or contact support within a cylindrical metallic cap and shell-type lamp receptacle casing.
- 707, for a cylindrical cap and shell-type lamp receptacle casing made of insulating material.

**754 METALLIC CLAMP-TYPE CONNECTOR FOR STORAGE BATTERY TERMINAL:**

This subclass is indented under the class definition. Electrical connector consisting solely of metallic material and specialized or particularly adapted to grasp or be secured to the terminal of a storage battery by compressive or wedging action.

- (1) Note. To be classified in this and the indented subclasses, the connector must be disclosed as being used with a storage battery; the claims need not necessarily recite such use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 202, for a coupling part comprising a tapered post or a mating part therefor (e.g., a battery post) and having a con-

- tact encompassed by a liquid storage chamber.
- 388, for an electrical connector having a cutter-type contact, which connector is adapted to engage a tapered post (e.g., a storage battery terminal).
- 522, for an electrical connector comprising or mating with a tapered post (e.g., a storage battery terminal), which connector includes a contact cover or case for restricting environmental effects.
- 524, for an electrical connector comprising corrosion resistant conducting material other than lead.
- 726, for a clamp-type connector for a storage battery post, the connector having a movable insulated part for securing it to the battery post or a conductor thereto.

## SEE OR SEARCH CLASS:

- 429, Chemistry: Electrical Current Producing Apparatus, Product, and Process, for a battery having connector structure.

**755 For threaded-receptacle type terminal flush with battery wall (e.g., for side terminal type battery):**

This subclass is indented under subclass 754. Electrical connector specialized or particularly adapted to be secured to a storage battery terminal which extends from within the interior of the battery case to approximately the exterior surface of a wall of the battery case, the battery terminal further including an internally screw-threaded recess or bore opening to the exterior surface of the battery wall, so that the connector may be secured to the terminal by a compressive pressure caused by the motion resulting from rotation of a screw, bolt, or other male screw-threaded member.

- (1) Note. To be classified in this subclass, the connector must be disclosed as being used with a storage battery having a threaded-receiver type of terminal which is substantially flush with the outer surface of one of the battery casing walls; the claims need not necessarily recite such battery terminal structure, but may be drawn only to connector structure.

**756 Common securing means for post and conductor:**

This subclass is indented under subclass 754. Electrical connector having a clamp for attachment to a battery terminal post and in addition having a connector portion for securing a conductor with a single actuating device for effecting both connections.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 775+, for an uninsulated connector which is not of the type for clamping to a storage battery post, but which has a common actuating means for securing plural conductors.

**757 With clamp-to-post joint separator:**

This subclass is indented under subclass 754. Electrical connector having some positive means to break the joint between the battery terminal post and clamp connector by causing movement of the connector or a part thereof with respect to the terminal post.

- (1) Note. In these connectors the coupling is not removed completely from the battery post, nor need it be even electrically separated therefrom. The joint separating means in these connectors is intended primarily to break a "frozen" joint to permit further separation of the parts by other means. A connector which has means for separating one coupling part of a coupling from another coupling part may be found in subclasses 152+.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 152+, and see (1) Note above.
- 180, for a connector having means to separate contacts by a snap or quick-break action.
- 258, for a coupling part with a latching means and tether or explosive to unlatch from a mating part.
- 266+, for a coupling part having a handle or means to move a contact laterally to permit uncoupling.



**758 Clamp secured to and separated from post by same screw-threaded member:**

This subclass is indented under subclass 757. Electrical connector wherein the means to break the joint between the battery terminal post and the clamp connector comprises a screw-threaded member, which screw-threaded member is also the means by which the clamp connector is placed into gripping engagement with the battery terminal post; the motion resulting from rotating the screw-threaded member in one direction causes the clamping pressure to be applied to the terminal post, while the motion resulting from rotating the screw-threaded member in the opposite direction causes the joint between the terminal post and the clamp connector to be broken.

**759 Spring-actuated or resilient clamp:**

This subclass is indented under subclass 754. Electrical connector wherein the clamping force is caused by the action of an elastic body tending to return to its normal shape after being distorted.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

816+, for an uninsulated connector which is not of the type for clamping to a storage battery post, but which has a spring-actuated or resilient securing part, and see the Search Notes appended thereto.

**760 With reinforcing insert:**

This subclass is indented under subclass 754. Electrical connector wherein the body of the connector has a body of relatively strong material embedded therein for the purpose of strengthening the clamp structure.

**761 Deformable C- or U-clamp:**

This subclass is indented under subclass 754. Electrical connector having a flexing one-piece loop in the general shape of a C or U and having means for forcing the ends thereof toward one another so as to flex the loop into gripping engagement with a storage battery post enclosed thereby.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

799+, for a connector structure comprising a circumferentially tensioned flexible strap or band, and see the notes appended thereto for other similar connector structures.

SEE OR SEARCH CLASS:

24, Buckles, Buttons, Clasps, etc., subclasses 568+ for a clasp, clip, or support clamp having a gripping member shifted by an operator.

403, Joints and Connections, subclasses 274+ for a joint wherein a member is deformed beyond its elastic limit to effect the joint, and subclasses 289+ for a joint wherein a member is provided with a split end having laterally movable opposed portions to effect the joint.

**762 Screw-thread operated:**

This subclass is indented under subclass 761. Electrical connector wherein the means for forcing the ends of the loop toward one another comprises a screw-threaded member.

**763 With plural conductor terminals:**

This subclass is indented under subclass 762. Electrical connector having at least two separate and distinct means thereon for electrically and mechanically securing a conductor thereto, so that either (a) two or more conductors may be attached simultaneously to the connector, or (b) a single conductor may be attached to the connector at one of the two or more available locations thereon.

**764 With means for removably securing conductor thereto:**

This subclass is indented under subclass 762. Electrical connector having means thereon for electrically and mechanically securing a conductor thereto, which securing means also enables ready disconnection of a secured conductor from the connector.

**765 Screw-thread operated:**

This subclass is indented under subclass 754. Electrical connector wherein the clamping pressure is caused by the motion resulting from

the relative rotation of mated screw-threaded members.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

762+, for a screw-thread operated deformable C- or U-clamp.

801+, for an uninsulated connector which is not of the type for clamping to a storage battery post, but which has a screw-thread operated securing part, and see especially the notes appended thereto for the location of other screw-threaded fastening or securing means.

**766 Screw or nut coaxial with post:**

This subclass is indented under subclass 765. Electrical connector wherein the longitudinal axis of the battery post and the axis about which the screw-threaded member is rotated are in line.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

805, and see the notes attached thereto for other connectors in which a screw-threaded securing member is coaxial with an attached conductor.

**767 Post between and transverse of plural screws:**

This subclass is indented under subclass 765. Electrical connector having at least two spaced-apart, male screw-threaded members, the longitudinal axes of which are disposed parallel; and the battery post is disposed between the screw-threaded members with its longitudinal axis perpendicular to the plane formed by the said parallel axes of the male screw-threaded members.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

804, and see the notes attached thereto for other connectors in which a conductor is located between and transverse of plural screws.

**768 Eye bolt type:**

This subclass is indented under subclass 765. Electrical connector wherein a battery post is encircled by a ringlike member having screw-threaded shank extending radially of the ringlike member and through an abutment member,

motion of the shank and ringlike member relative to the abutment member causes the battery post to be drawn against the abutment member and wedged between the ringlike member and abutment member.

**769 Clamping lever:**

This subclass is indented under subclass 765. Electrical connector wherein the screw-threaded member causes an arm to pivot or swing about an axis and clamp the battery post between the said arm and an abutting surface of the clamp connector.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

806, for another connector having a clamping lever for securing a conductor thereto which is operated by a screw-threaded member.

**770 Clamping cam or wedge:**

This subclass is indented under subclass 765. Electrical connector wherein the screw-threaded member causes (a) turning motion of a clamping member of gradually increasing radius, (b) turning motion of an eccentrically mounted clamping member, (c) straight-line motion of a clamping member having diverging opposed surfaces, or (d) motion of a clamping member relative to a curved or inclined surface; which movable clamping member in turn exerts a clamping pressure on the battery post between the said movable clamping member and an abutting surface of the clamp connector.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

807, for a connector in which a cam or wedge means is actuated by a screw-threaded operating member.

**771 Screw axis intersects post axis (e.g., set screw):**

This subclass is indented under subclass 765. Electrical connector wherein the longitudinal axis of the male member of the screw-threaded clamping means carried by the connector intersects the longitudinal axis of the battery post, whereby the male screw-threaded member either directly or through a follower exerts the clamping pressure on the post.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

810+, and see the notes attached thereto for other connectors in which a screw-threaded member intersects the longitudinal axis of a conductor to be secured and applies a clamping pressure thereto.

**772 Clamping lever, cam, or wedge:**

This subclass is indented under subclass 754. Electrical connector wherein the clamping pressure exerted on the battery post is caused by the action of (a) a clamping arm swinging about an axis, (b) the turning motion of a clamping member of gradually increasing radius, (c) the turning motion of an eccentrically mounted clamping member, (d) the straight-line motion of a clamping member having diverging opposed surfaces, or (e) the motion of a clamping member relative to a curved or inclined surface; which movable clamping arm or member exerts a clamping pressure on the battery post between the said movable clamping member and an abutting surface of the clamp connector.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

863+, for another connector in which the motion of a clamping cam or wedge exerts a clamping pressure on a conductor to be secured thereto.

**773 Rotary or swinging cam:**

This subclass is indented under subclass 772. Electrical connector wherein the clamping pressure is caused by the action of (a) the turning motion of a clamping member of gradually increasing radius, (b) the turning motion of an eccentrically mounted clamping member, or (c) the motion of a clamping member relative to a curved surface.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

864, for another electrical connector in which a rotary or swinging clamping member exerts a clamping pressure on a conductor to be secured thereto.

**774 Sliding wedge:**

This subclass is indented under subclass 772. Electrical connector wherein the clamping pressure is caused by the action of (a) the straight-line motion of a clamping member having diverging opposed surfaces or (b) the motion of a clamping member relative to an inclined surface.

**775 METALLIC CONNECTOR OR CONTACT HAVING MOVABLE OR RESILIENT SECURING PART:**

This subclass is indented under the class definition. Electrical connector or contact consisting solely of metallic material and specialized or particularly adapted to electrically and mechanically secure, by means of the binding action of a forcibly urged displaceable member, either conducting bodies together or a conducting body thereto.

- (1) Note. The displaceable member may be urged, for example, by a force multiplier such as a screw or nut or may be urged by the inherent elasticity of a spring means in returning from a distorted to an undistorted condition.
- (2) Note. The connectors in this and the indented subclasses do not recite in the claims any part which by disclosure is of insulating material. Also, the conductors and connectors claimed herein form but a single electrical path rather than plural paths electrically insulated from one another. For connectors which recite in the claims structure which by disclosure is insulation other than a conductor sheath see subclasses 625+ above, especially subclasses 626+ and 709+ for connectors having multiple insulated electrical paths, contacts or connectors, and subclasses 723+ and those following for connectors combined with insulation which have a single electrical path.
- (3) Note. See section IV of the class definition of this class (439) for the location of other patents relating to joints, per se.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 387+, for an electrical connector having a cutter-type contact.
- 476.1+, for an electrical connector including a handle or distinct manipulating means.
- 625+, for an electrical connector including insulation other than a conductor sheath, and see (2) Note above.
- 626+, and 709+, for an electrical connector including insulation and which has plural, mutually insulated electrical paths, and see (2) Note above.
- 723+, and those following which are indented under subclass 625 for an electrical connector including insulation and which has only one electrical path, and see (2) Note above.
- 725+, for an electrical connector having a movable insulated part for securing a conductor or mating connector thereto.
- 754+, for a metallic clamp-type connector particularly adapted to be secured to a storage battery terminal.

**776 Stirrup type for simultaneously securing two spaced-apart locations along the length of a conductor thereto:**

This subclass is indented under subclass 775. Electrical connector for attaching a first conductor to a second conductor at a point spaced from the ends of the second conductor, the connector being generally U-shaped and having securing means at the base of the U; the first conductor being intended to be secured at the base of the U and the second conductor being intended to be secured by the means at the ends of the arms, whereby the connector secures the second conductor at spaced points along the length thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 477, +, for a similar type of electrical connector which includes a handle or distinct manipulating means for attachment of the connector to an overhead conductor.

**777 Adjustable angular joint between separate connectors or conductor securing means:**

This subclass is indented under subclass 775. Device comprising two separate, interconnected connectors or conductor securing means for electrically joining separate conductors or mating connectors, which device further includes means enabling one connector or securing means to move relative to the other so that the angular relationship between the two connectors or securing means may be fixed as desired.

- (1) Note. Connectors included herein are not adapted to be continuously varied during use, but are only arranged so that they may be intermittently adjusted. Connectors specifically designed to be relatively movable during use may be found in subclasses 1+.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 1+, and see (1) Note above.

**778 Externally threaded, bifurcated bolt for joining conductors having like cross-sectional shape:**

This subclass is indented under subclass 775. Electrical connector comprising a boltlike member having a shank provided with an externally screw-threaded surface and having a slot extending longitudinally through the shank portion thereof; the slot being open at one end of the shank and terminating near its opposite end in a conductor clamping seat so that the slot provides the bolt with an opposed pair of spaced-apart legs between which wire-type conductors are adapted to be transversely received and clamped for electrical interconnection therebetween; and rotatably mounted upon the outer screw-threaded surfaces of the spaced-apart legs is an interiorly screw-thread nut which, when rotated to longitudinally move it toward the closed end of the slot, provides the clamping pressure upon wire conductors located transversely within the slot.

**779 With nut retainer:**

This subclass is indented under subclass 778. Electrical connector wherein the boltlike member and the clamping nut include means cooperating with one another to prevent removal of

the clamping nut from the boltlike member whenever the connector is in its unclamping condition so that the component parts of the connector will remain attached to one another when not in use.

**780 With slidable conductive element between conductors:**

This subclass is indented under subclass 778. Electrical connector further including a substantially planar, conductive pressure bar located transverse to the longitudinal axis of the slot and slidable along the longitudinal length of the slot due to the rotational motion of the clamping nut, the pressure bar being intended to be located between a pair of wire-type conductors which are to be interconnected.

- (1) Note. The planar pressure bar located between interconnected conductors may have a hole (or some similar structure) extending from one face to the other face so as to allow conductors located at each opposing face to come into some degree of direct contact with one another in the region of the hole.

**781 Bolt or screw between and transverse of parallel conductors:**

This subclass is indented under subclass 775. Electrical connector having means for receiving and clamping at least two conductors, the secured portions of which are arranged in spaced-apart, parallel disposition; the clamping pressure of the connector being provided by a male screw-threaded member disposed between the conductors with its longitudinal axis perpendicular to the plane formed by the parallel conductors.

**782 With means to maintain assembly of clamp part and bolt or screw:**

This subclass is indented under subclass 781. Electrical connector wherein the means securing the conductors in parallel disposition and the male screw-threaded member each include means cooperating with one another to prevent removal of one from the other whenever the connector is in its unclamping condition so that the component parts of the connector will remain attached to one another when not in use.

**783 Cam or wedge between conductors:**

This subclass is indented under subclass 775. Electrical connector wherein at least two conductors are to be secured by being received within the body of the connector and then forced against the walls of the connector by a movable member disposed between the conductors, which movable member comprises a tapering or curving body.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 770, metallic clamp-type connector for a storage battery terminal which comprises a screw-thread operated cam or wedge.  
772+, for a metallic clamp-type connector for a storage battery terminal which comprises a clamping cam or wedge.  
807, for a metallic connector having movable securing part comprising a screw-thread operated cam or wedge.  
863+, for a metallic connector having a movable securing part comprising a clamping cam or wedge.

**784 Screw-threaded securing means coaxial with elongated conductors joined in axially aligned relationship:**

This subclass is indented under subclass 775. Electrical connector having means for receiving and clamping in electrical engagement two elongated conductors, the secured portions of which have collinear longitudinal axes; the clamping pressure of the connector being provided by at least one screw-threaded member, the axis about which the screw-threaded member is rotated being also collinear with the line passing through the longitudinal axes of the secured conductors.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 766, for a metallic clamp-type connector for a storage battery post comprising a screw or nut coaxial with the post.  
805, for a metallic connector having a movable securing part, which connector includes a nut, bolt, or screw coaxial with a secured elongated conductor, and see the Search Notes appended thereto.

**785 Parallel elongated conductors between and transverse of plural screws (e.g., U-bolt):**

This subclass is indented under subclass 775. Electrical connector having means for receiving and clamping in electrical engagement at least two elongated conductors, the secured portions, of which are arranged in parallel disposition; the clamping pressure of the connector being provided by at least two spaced-apart, male screw-threaded members, the longitudinal axes of which are disposed parallel; and the parallel conductors are secured between the screw-threaded members such that the plane formed by the parallel conductors is disposed perpendicular to the plane formed by the said parallel axes of the male screw-threaded members.

SEE OR SEARCH THIS CLASS, SUBCLASS:

767, for a metallic clamp-type connector for a storage battery post in which the battery post is disposed between and transverse of plural clamping screws.

804, for a metallic electrical connector which secures a single elongated conductor between and transverse of plural screws.

**786 Resilient or spring-operated securing means joining plural conductors:**

This subclass is indented under subclass 775. Electrical connector particularly adapted to electrically join at least two conductors or comprising a conductive connector body having at least two electrically interconnected means for securing at least two conductors or contacts; and wherein the clamping or securing force joining the two or more conductors is produced by the action of an elastic body tending to return to its normal shape after being distorted.

- (1) Note. To be classified here, a connector must be particularly adapted to accommodate at least two conductors; such adaptation being, for example, space securing means each receiving a single conductor, two or more seats for receiving separate conductors, or some other configuration unique to at least two conductors.

SEE OR SEARCH THIS CLASS, SUBCLASS:

729, for an electrical connector having an insulated spring-operated or resilient part for securing a conductor or mating connector thereto.

759, for a metallic spring-actuated or resilient clamp connector for a storage battery post.

816+, for a metallic electrical connector or contact having a spring actuated or resilient securing part.

**787 Conductors secured in duplicate receiving means:**

This subclass is indented under subclass 786. Electrical connector wherein the conductors to be electrically interconnected are individually secured to or by identical spaced-apart means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

796+, for an electrical connector having duplicate, independently operated securing means, other than resilient or spring-operated, for joining plural conductors, and see the Search Notes appended thereto.

**788 With helical spring:**

This subclass is indented under subclass 787. Electrical connector wherein the elastic body is in the form of a coil made from a wirelike material which has been formed into a series of helically wound loops.

SEE OR SEARCH THIS CLASS, SUBCLASS:

840+, for a metallic electrical connector having a resilient part for securing a single conductor, which securing part is in the form of a helically coiled spring.

**789 Hinged jaw type having alignable conductor receiving bores:**

This subclass is indented under subclass 775. Electrical connector composed of male and female jaw members joined together for relative angular movement between an open, conductor-receiving position and a closed, conductor-clamping position; the jaw members having respective tails which project in a com-

mon direction and which are intended to be forced toward one another to effect the relative angular movement of the jaw members to thus produce the clamping action of the connector upon a conductor to be secured thereto; the male jaw member including a trunnionlike head formed with a cable-receiving aperture; the female jaw member including a yoke defining a socket shaped complementary to the trunnionlike head and also formed with a cable-receiving aperture; and also formed with a cable-receiving aperture; the female jaw member including a yoke defining a socket shaped complementary to the trunnionlike head and also formed with a cable-receiving aperture; whereby the head and yoke are interfitted for the relative angular movement of the jaw members between the open, conductor-receiving position where the respective apertures are aligned to enable the end of the conductor to pass therethrough and the closed, conductor-clamping position where the apertures are misaligned to crimp the inserted conductor.

**790 Single operator for securing and joining plural conductors:**

This subclass is indented under subclass 775. Electrical connector for electrically interconnecting at least two conductors and in which the movable securing parts of the connector have but a single actuating means.

- (1) Note. To be classified here, a connector for securing plural conductors must do more than merely receive plural conductors in a single securing means, but must be particularly adapted to accommodate at least two conductors; such adaptation being, for example, spaced securing means each receiving a single conductor, plural configured seats for receiving separate conductors, or some other configuration unique to at least two conductors.

SEE OR SEARCH THIS CLASS, SUBCLASS:

756, for a metallic clamp-type connector designed specifically for a storage battery terminal post, which connector has a common securing means for both the post and conductor.

778+, 781+, 783, 784, 785, and 786+, for special types of metallic connectors having or which may have common

actuating means for securing plural conductors.

**791 Single screw-threaded operator:**

This subclass is indented under subclass 790. Electrical connector wherein the single actuating means consists of a single screw-threaded member, the clamping pressure of the connector being caused by the motion resulting from the rotation of the lone screw-threaded member.

**792 Conductors secured in direct contact with one another:**

This subclass is indented under subclass 791. Electrical connector specifically adapted to join the plural conductors electrically by physically associating them into touching engagement with one another.

- (1) Note. To be classified here, there must be some structural modification of the connector to specialize it to an electrical connection in which the connected conductors directly contact each other.

**793 Screw axis intersects axes of conductors joined parallel to one another:**

This subclass is indented under subclass 792. Electrical connector wherein at least the portions of the conductors which are secured in direct contact with one another are elongated and have their longitudinal axes disposed parallel to one another; and wherein the screw-threaded actuator carried by the connector is elongated and has its longitudinal axis disposed substantially perpendicular to the longitudinal axes of the secured portions of the conductors, whereby the screw-threaded actuator either directly or through a follower exerts the clamping pressure on the conductors.

**794 Conductors secured in duplicate receiving means:**

This subclass is indented under subclass 791. Electrical connector wherein the conductors to be electrical interconnected are individually secured to or by identical, spaced-apart, clamping means operated by the single screw-threaded actuator.

**795 Screw-threaded operator circumferentially tensions flexible strap or band:**

This subclass is indented under subclass 791. Electrical connector comprising a bendable strip, filament, or strand which is secured to the conductors by contracting it about the conductors; the contraction being effected by applying an endwise or lengthwise pull upon the strip filament, or strand; and the endwise or lengthwise pulling force being produced by operation of the single screw-threaded actuator.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

100, for an electrical connector adapted to be secured to a pipe, rod, or conduit for the purpose of providing a safety ground.

799+, for a metallic electrical connector comprising a circumferentially tensioned flexible strap or band, but which connector does not include a single operator for securing and joining plural conductors.

**796 Duplicate receiving means having independently operated securing means for joining plural conductors:**

This subclass is indented under subclass 775. Electrical connector for electrically interconnecting at least two conductors and wherein the conductors are individually secured to or by identical spaced-apart clamping means.

(1) Note. Generally, the independently operated securing means of the connectors included herein are identical in all respects, including size. However, there may be some slight variation as to the size between the various securing means, but they still must be of the same type.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

723+, for an electrical connector comprising an insulating body having spaced, electrically interconnected, duplicate terminals or connectors.

787+, for a metallic electrical connector having resilient or spring-operated securing means for joining plural conductors, the conductors being secured in duplicate receiving means.

794, for a metallic electrical connector having a single screw-threaded operator for securing and joining plural conductors, the conductors being secured in duplicate receiving means.

**797 Screw-thread-operated securing means for each receiving means:**

This subclass is indented under subclass 796. Electrical connector wherein each of the spaced-apart clamping means includes a screw-threaded member, whereby the clamping pressure of each clamping means is caused by the motion resulting from the rotation of its respective screw-threaded member.

**798 For joining three or more conductors:**

This subclass is indented under subclass 797. Electrical connector having at least three spaced-apart, screw-threaded-operated clamping means for individually securing and thereby electrically interconnecting at least three conductors.

**799 Circumferentially tensioned flexible strap or band:**

This subclass is indented under subclass 775. Electrical connector comprising a bendable strip, filament, or strand which is secured to a conductor; the contraction being effected by applying an endwise or lengthwise pull upon the strip, filament, or strand.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

100, for an electrical connector adapted to be secured to a pipe, rod, or conduit for the purpose of providing a safety ground.

795, for a metallic electrical connector in which a single screw-threaded operator circumferentially tensions a flexible strap or band for securing and joining plural conductors.

SEE OR SEARCH CLASS:

24, Buckles, Buttons, Clasps, etc., subclasses 16+ for binder chains, bands, cords, or wires in combination with an attached binder tightener; subclasses 481+ for a clasp or support clamp having a flaccid gripping member, and subclass 483 for an encircling gripping member including a semi-



- rigid band and an operator for tightening.
- 100, Presses, subclasses 1+ for methods and apparatus there provided, for use in disposing a flexible binder tightly and circumferentially closed around the feeding material, and see the notes appended thereto for the location of other devices in which a flexible binder is disposed tightly around material.
- 800 Tensioning screw intersects longitudinal axis of encircled conductor:**  
This subclass is indented under subclass 799. Electrical connector wherein the means contracting the strip, filament, or strand about the conductor comprises cooperating male and female screw-threaded members; the longitudinal axis of the male screw-threaded member being disposed perpendicular to the longitudinal axis of the secured portion of the conductor; whereby contraction of the strip, filament, or strand about the conductor is caused by the motion resulting from the rotation of one of the cooperating screw-threaded members relative to the other.
- 801 Screw-thread operated securing part:**  
This subclass is indented under subclass 775. Electrical connector wherein the clamping pressure is caused by the motion resulting from the relative rotation between a mating pair of male and female screw-threaded members.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 411+, for an electrical connector having a cutter-type contact for penetrating through a conductor sheath and which comprises a screw, a screw operated cutter, or a screw means to move a conductor against the cutter.
- 428+, for an electrical connector having a cutter-type contact which axially penetrates an elongated conductor and which comprises a screw or screw operated means.
- 431+, for an electrical connector having a cutter-type contact which comprises a screw, a screw operated cutter, or a screw means to move a conductor against the cutter.
- 479, for an electrical connector attachable to an overhead conductor, which connector includes a handle operated screw to effect gripping of the overhead conductor.
- 727+, for an electrical connector having screw-thread operated, insulated part for securing a conductor or mating connector thereto.
- 758, for a metallic clamp-type connector for a storage battery terminal in which the clamp is secured to and separated from the battery post by a single screw-threaded member.
- 762+, for a metallic clamp-type connector for a storage battery terminal which comprises a screw-thread operated, deformable C- U-clamp.
- 765+, for a metallic clamp-type connector having screw-thread operated securing means and which is particularly adapted to be clamped to a storage battery terminal.
- 802 Screw-threaded lamp-shell type contact having resilient or spring biased securing part:**  
This subclass is indented under subclass 801. Electrical connector comprising a contact in the form of a screw-threaded metal sleeve for receiving and retaining, by means of the screw threads, a mating contact having complementary screw-threads thereon; the contact, in use, is intended to be contained in a plural-contact coupling part of the type known as a screw plug or receptacle which is coupled to its respective mating receptacle or plug by screw-threaded engagement; the contact further is either made of resilient material or is provided with a resilient or resiliently biased gripping means, so that the contact is provided with an additional means for retaining the mating contact screw-thread coupled thereto.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 665, and 735, for a screw-threaded sleeve contact secured to insulation, the sleeve contact having mutilated, irregular, interrupted, or discontinuous screw thread.

**803 C-clamp type:**

This subclass is indented under subclass 801. Electrical connector comprising a body which approximates the shape of a C, the end of one arm of the C constituting an anvil against which a screw carried by the other arm applies the clamping pressure.

- (1) Note. The bodies of the connectors included herein are rigid as distinguished from the deformable C-clamps found in subclasses 761+.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

761+, for a battery post clamp-type connector in which the body of the connector is a deformable or distortable C and the clamping pressure occurs by forcing the arms of the C together.

**804 Single conductor between and transverse of plural screws (e.g., U-bolt):**

This subclass is indented under subclass 801. Electrical connector comprising at least two spaced-apart, male screw-threaded members, the longitudinal axes of which are disposed parallel; and wherein the conductor to be secured is elongated and disposed between and perpendicular to the plane formed by the said parallel axes of the male screw-threaded members.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

767, for a battery post clamp-type connector in which the battery post is disposed between and transverse of plural clamping screws.

785, for a connector which clamps two or more parallel conductors between and transverse of plural screws.

**805 Nut, bolt, or screw coaxial with elongated conductor:**

This subclass is indented under subclass 801. Electrical connector wherein the conductor to be received and clamped is elongated, and wherein the axis about which the screw-threaded clamping member is rotated and the longitudinal axes of the secured conductor are collinear.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

428+, for an electrical connector having a cutter-type contact comprising a screw which axially penetrates an elongated conductor.

766, for a battery post clamp-type connector having a screw or nut coaxial with the battery post.

784, for a connector having screw-threaded securing means coaxial with plural elongated conductors joined in axially aligned relationship.

**806 Clamping lever:**

This subclass is indented under subclass 801. Electrical connector wherein the screw-threaded member causes an arm to pivot or swing about a fulcrum to apply clamping pressure to the conductor to be secured between the said arm and an abutting surface of the clamp connector.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

769, for a battery post clamp-type connector having a clamping lever which is operated by a screw-threaded member.

**807 With screw-thread operated cam or wedge:**

This subclass is indented under subclass 801. Electrical connector wherein the screw-threaded member causes (a) turning motion of a clamping member of gradually increasing radius, (b) turning motion of an eccentrically mounted clamping member, (c) straight-line motion of a clamping member having diverging opposed surfaces, or (d) motion of a clamping member relative to a curved or inclined surface; which movable clamping member in turn exerts a clamping pressure on the conductor to be secured between the said clamping member and an abutting surface or the connector.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

770, for a battery post clamp-type connector having a clamping cam or wedge means operated by a screw-threaded member.

- 772+, 783 and 863+, for other connectors having a movable clamping cam or wedge means which is operated by means other than a screw-threaded member.
- 808 With strand coiling or loop forming means:**  
This subclass is indented under subclass 801. Electrical connector wherein the turning of the screw-threaded member causes a flexible conductor to be bent into a coil or loop about the axis about which the screw-threaded member turns.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
809, for a connector having merely a means to confine a conductor about a screw but which does not coil or loop the conductor.
- SEE OR SEARCH CLASS:  
72, Metal Deforming, subclasses 135+ and 146+ for a method of or a means for bending a metal workpiece into a helical coil or a spiral coil, respectively.  
140, Wireworking, subclasses 102+ and 104+ for miscellaneous apparatus and processes for forming loops or eyes in wires.
- 809 With means confining strand or wire loop about screw:**  
This subclass is indented under subclass 801. Electrical connector including means for holding or keeping the portion of the conductor to be secured adjacent the screw-threaded securing member during application of the clamping pressure; the secured portion of the conductor being initially in looped form or wrapped at least 180 degrees around the longitudinal axis of the male part of the screw-threaded securing means prior to the application of the clamping pressure.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
808, for a connector in which a coil or loop is actually formed in a flexible conductor by the screw-threaded securing means.
- 810 Screw axis intersects conductor axis (e.g., set screw):**  
This subclass is indented under subclass 801. Electrical connector wherein the longitudinal axis of the male member of the mating male and female screw-threaded securing means carried by the connector intersects the longitudinal axis of the conductor secured by the connector, whereby the male screw-threaded member either directly or through a follower exerts the clamping pressure on the conductor.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
771, for a battery post clamp-type connector in which the axis of a male screw-threaded securing member intersects the battery post axis.  
793, for a connector in which a single operator of the screw type joins plural conductors parallel to one another and wherein the longitudinal axis of the screw operator intersects the longitudinal axes of the joined conductors.  
800, for a connector comprising a circumferentially tensioned flexible strap or band for securing an enclosed conductor thereto and in which a tensioning screw intersects the longitudinal axis of the encircled conductor.
- 811 With movable clamp jaw between conductor and screw or nut (e.g., slidable follower):**  
This subclass is indented under subclass 810. Electrical connector including a movable clamping member located between the screw-threaded member to be rotated and an abutting surface of the connector, whereby rotation of the screw-threaded member causes linear motion of the clamping member toward the abutting surface so as to exert a clamping pressure on the conductor to be secured between the clamping member and the abutting surface of the connector.
- 812 Clamp jaw movably secured to screw or nut:**  
This subclass is indented under subclass 811. Electrical connector wherein the movable clamping member and the screw-threaded member to be rotated are attached to one another; the nature of the attachment being such that, whenever the screw-threaded mem-

ber is rotated the screw-threaded member rotates relative to the clamping member while at the same time both the threaded member and the clamping member move as a unit linearly along the axis about which the threaded member rotates.

**813 Captive screw or nut:**

This subclass is indented under subclass 810. Electrical connector wherein the screw-threaded member and the body of the connector each include means (other than the screw threads) cooperating with one another to prevent removal of one from the other whenever the connector is in its unclamping condition so that the component parts of the connector will remain attached to one another when not in use.

**814 Set screw type:**

This subclass is indented under subclass 810. Electrical connector wherein it is the male member of the mating male and female screw-threaded securing members carried by the connector which is rotated by the user to apply the clamping pressure on the conductor.

**815 Screw or nut moves resilient or resiliently biased securing part:**

This subclass is indented under subclass 801. Electrical connector including an elastic body which tends to return to its normal shape after being distorted and wherein the screw-threaded member to be rotated distorts the elastic body whenever it is rotated to clamp a conductor.

- (1) Note. If the screw or nut is to be rotated with the bias of the resilient body to clamp a conductor, the resilient body usually provides part of or the initial clamping pressure while the screw or nut serves to lock the connector in its clamping condition or to increase the clamping pressure. If, on the other hand, the screw or nut is to be rotated against the bias of the resilient body to clamp a conductor, the screw or nut provides the clamping pressure while the resilient body usually serves to facilitate release of a previously clamped conductor or to hinder the screw or nut from becoming inadvertently unscrewed from its clamping condition.

**816 Spring actuated or resilient securing part:**

This subclass is indented under subclass 775. Electrical connector wherein the clamping or securing force is caused by the action of an elastic body tending to return to its normal shape after being distorted.

SEE OR SEARCH THIS CLASS, SUBCLASS:

729, for an electrical connector having a movable insulated part for securing a conductor or mating connector thereto, the securing part being spring operated or resilient.

759, for a battery post clamp-type connector having a spring actuated or resilient securing part.

786+, for a connector having resilient or spring-operated securing means for electrically interconnecting plural conductors.

**817 Compression spring axis transverse of and intersecting conductor axis:**

This subclass is indented under subclass 816. Electrical connector wherein the conductor is secured by an elongated compressible resilient member, the longitudinal axis of which is at right angles to the longitudinal axis of the conductor.

- (1) Note. Included herein, for example are connectors in which a coil spring causes the clamping force.

**818 Spring biases detent member to form snap-latch type securing part:**

This subclass is indented under subclass 817. Electrical connector having a bore for receiving the end of a conductor or mating male connector inserted along the longitudinal axis of the bore; and wherein the resilient member yieldingly urges a rigid securing part into the bore, the movement of the securing part being along a straight line disposed at right angles to the longitudinal axes of both the bore and the conductor or mating male connector inserted therein; and the securing part includes a conductor-engaging surface for being received within a detent recess disposed in a lateral surface of the conductor or mating male connector so that, whenever the conductor or male connector is inserted along its longitudinal axis

into the bore, the securing part is yieldingly moved laterally of the bore into the detent recess to retain the conductor or male connector within the bore.

**819 Separate spring means moves rigid nonresilient clamping part into securing condition:**

This subclass is indented under subclass 816. Electrical connector having a hard, nonflexible, nonelastic movable securing part urged into clamping engagement by a distinct spring member.

- (1) Note. Connectors having a spring which merely has a rigid portion to move therewith are not considered to be separate spring means and may be found in other appropriate structural subclasses.

**820 Spring biases slidable wedge-shaped or wedge-operated jaw:**

This subclass is indented under subclass 819. Electrical connector wherein the spring member (a) resiliently urges a rigid clamping part having diverging opposed surfaces to move in a straight line, or (b) resiliently urges a rigid clamping part to move in a straight line along or toward an inclined surface of the connector; which rigid clamping part in turn exerts a clamping pressure on the conductor to be secured between the said clamping part and an abutting surface of the connector.

**821 Socket connector having three or more annularly arranged duplicate grip elements:**

This subclass is indented under subclass 819. Electrical connector having at least three identical, rigid clamping parts so disposed that they will fall on the circumference of a circle; and wherein the spring member urges the clamping parts radially inward toward the center of the circle so that they exert a radial clamping pressure on a conductor located at the center of the circle.

- (1) Note. Also included herein are connectors in which a separate spring is provided for each duplicate grip element.

**822 Hinged clamping part (i.e., clamping lever):**

This subclass is indented under subclass 819. Electrical connector wherein the spring member resiliently urges a rigid arm to pivot or swing about a fulcrum to apply clamping pres-

sure to a conductor to be secured between the said arm and an abutting surface of the clamping connector.

**823 Socket or pin connector having small radially biased clamping or detenting element:**

This subclass is indented under subclass 819. Electrical connector either comprising a male connector adapted to be pushed linearly along its longitudinal axis into the elongated hollow interior of a mating female connector, or comprising the said female connector; and wherein the spring member carried by the male or female connector resiliently urges a rigid clamping or retaining part radially of the longitudinal axis of the connector, so as to either exert a radial clamping pressure on the lateral surface of the mating connector or to resiliently snap-latch into a shouldered recess located in the lateral surface of the mating connector.

**824 Spring-biased butt contact:**

This subclass is indented under subclass 819. Electrical connector wherein the spring member is a compression spring which resiliently urges a contact plunger or head to slidably move along the compression-extension axis of the spring in the direction away from the spring into abutting engagement with a mating contact; and wherein the structure of the contact plunger or head is such that there is no telescopic engagement of the contacts within one another whenever the contact plunger or head is held in abutting engagement with the mating contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

700, for a plural-contact coupling part in which one of the contacts is a spring biased, plunger-type contact.

**825 Plug having means for resiliently engaging opposed interior surfaces of mating socket connector (e.g., banana plug):**

This subclass is indented under subclass 816. Electrical connector comprising a male connector particularly adapted to be inserted linearly along its longitudinal axis into an elongated hollow or slotted interior of a mating female connector; the male connector further carries an elastic clamping or retaining part which is resiliently urged radially outward from the longitudinal axis of the male connec-

tor, so that the lateral interior surfaces of the female connector are resiliently engaged to retain the male connector within its mating female connector.

**826 Also having means for resiliently engaging exterior surfaces of the socket connector:**

This subclass is indented under subclass 825. Male connector further carrying an elastic clamping or retaining part which is resiliently urged radially inward toward the longitudinal axis of the connector so that the lateral exterior surfaces of the mating female connector are resiliently engaged to further aid in retaining the male connector within its mating female connector.

**827 Having separate resilient means extending externally around or outwardly through rigid plug body:**

This subclass is indented under subclass 825. Male connector comprising a nonflexible male member carrying a distinct elastic clamping or retaining part which either (a) extends circumferentially about a portion of the outer surface of the male member or (b) is located within the male member with a portion thereof extending laterally outwardly through the body of the male member to engage the interior surface of the mating female connector.

**828 Having resilient clamping finger crossing plane of opposed clamping member while in clamping condition:**

This subclass is indented under subclass 816. Electrical connector wherein the resilient portion exerting the clamping force is attached to the body of the connector along one end only (i.e., cantilevered); and wherein the said cantilevered portion, in its distorted clamping position, passes through the plane of the clamping portion that opposes it at a point between the attached end and free end of the cantilevered portion.

(1) Note. In this subclass may be found, for example, connectors known in the art as "Fahnestock" clips.

**829 Hand-grip type:**

This subclass is indented under subclass 828. Electrical connector specifically adapted and indented to be unmounted or otherwise unattached to a supporting structure; and wherein

both crossed members must be simultaneously squeezed by the hand of the user to be distorted into position to receive the body to be resiliently clamped.

(1) Note. A body to be clamped by the connector does not constitute a "supporting structure".

**830 For receiving end contact of elongated fuse-like component inserted transverse to longitudinal axis of component (e.g., fuse clip):**

This subclass is indented under subclass 816. Electrical connector comprising a resilient clip having opposed clamping jaws, at least one of which is urged toward the other for receiving therebetween and resiliently gripping one of the end contacts of a narrow, tube-shaped electrical component of the type having a contact located at each of the spaced-apart ends thereof; the component being intended to be placed into electrical and mechanical engagement with the resilient clip by pushing the component toward the clip along a line perpendicular to the longitudinal axis of the component until one of the said end contacts is received within and resiliently gripped by the jaws of the resilient clip.

(1) Note. Usually, the electrical component adapted to have one of its end contacts gripped by the connector provided herein is known in the art as a "cartridge-type fuse."

SEE OR SEARCH THIS CLASS, SUBCLASS:

249+, especially subclass 250 for a receptacle having two directly opposed contact arms for receiving a connector therebetween, one of the contact arms being self-aligning.

698, for a plural-contact receptacle for transversely receiving an elongated fuselike component having a contact at each end thereof.

**831 With contact rejection feature or adaptor:**

This subclass is indented under subclass 830. Electrical connector either (a) including interference means for preventing insertion of an end contact of an improper electrical component into the resilient clip, or (b) including means for converting the resilient clip into one

which is capable of receiving an electrical component having an end contact of a distinctly different shape, type, or size from the one of the resilient clip previously received.

**832 With movably attached user manipulated locking, contact retaining, or spring spreading means:**

This subclass is indented under subclass 830. Electrical connector including means movably secured to the body of the resilient clip to be operated by the user for the purpose of (a) preventing accidental dislodgement or removal of the end contact of the electrical component from the resilient clip until desired by the user or (b) facilitating insertion or removal of the end contact of the electrical component into or from the resilient clip by separating opposed clamping jaws.

SEE OR SEARCH THIS CLASS, SUBCLASS:

835+, for metallic connector having a spring actuated or resilient securing part, which connector includes a movably attached user manipulated means.

**833 With separate means to increase clamping pressure of spring clip:**

This subclass is indented under subclass 830. Electrical connector including means operatively associated with the clamping jaws of the resilient clip but distinct therefrom for applying a clamping pressure upon the end contact of an electrical component in addition to the resilient clamping pressure provided by the clamping jaws of the resilient clip itself.

SEE OR SEARCH THIS CLASS, SUBCLASS:

839, for a metallic connector having a spring actuated or resilient securing part combined with an additional reinforcing spring means.

**834 Clamping pressure provided by cantilevered finger resiliently urged away from opposed clamping member:**

This subclass is indented under subclass 816. Electrical connector having opposed clamping parts, at least one of which is attached to the body of the connector along one end only thereby forming a fingerlike clamping part; and wherein the free end of the fingerlike part is

resiliently urged away from the opposed clamping part so that a conductor to be secured is gripped by surfaces or edges of the connector which are resiliently urged away from one another.

**835 With movably attached user manipulated means or having user grippable means for manually distorting resilient part:**

This subclass is indented under subclass 816. Electrical connector either (a) including means movably secured to the body of the connector to be operated by the user for the purpose of operating the clamping part, locking the conductor to be secured to the connector, or facilitating insertion or removal of the conductor to be secured into or from the connector; or (b) having means located on the body of the connector specifically intended to be engaged by the hand of the user for the purpose of distorting the elastic body to enable insertion or removal of the conductor to be secured into or from the connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

832, for an electrical connector for receiving the end contact of an elongated fuselike component inserted transverse to the longitudinal axis of the component, which connector includes a movably attached user manipulated locking, contact retaining, or spring spreading means.

**836 Slidably mounted cam or wedge locks or places resilient securing part into securing condition:**

This subclass is indented under subclass 835. Electrical connector wherein the movably secured means operated by the user includes either (a) a member having diverging opposed surfaces which is slid relative to the body of the connector by the user; or (b) a member which is slid relative to a curved, inclined, or tapered surface on the body of the connector by the user; which slidable member either distorts the connector or maintains the elastic body in distorted condition to prevent removal of a conductor clamped to the connector.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
863+, for a metallic connector having a movable securing part which is neither spring operated or resilient nor screw-thread operated and in which the clamping force is caused by a cam or wedge.
- 837 With additional spring means to operate slidable cam or wedge:**  
This subclass is indented under subclass 836. Electrical connector including an additional elastic body operatively associated with the slidable cam or wedge member to facilitate the act of clamping a conductor to the connector, to maintain the connector in clamped condition, or to facilitate insertion or removal of a conductor into or from the connector.
- 838 Pivotally or rotatably mounted member locks or places securing part into securing condition:**  
This subclass is indented under subclass 835. Electrical connector wherein the movably secured means operated by the user includes an arm secured to the body of the connector so as to pivot or swing about a fulcrum; which arm either distorts the elastic body to clamp a conductor to the connector or maintains the elastic body in distorted condition to prevent removal of a conductor clamped to the connector.
- 839 With additional reinforcing spring means:**  
This subclass is indented under subclass 816. Electrical connector wherein the resiliently urged securing member has an additional elastic member coating therewith for increasing the clamping pressure of the said securing member.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
819+, for a connector in which a separate spring means urges a rigid nonresilient clamping part into clamping condition.  
833, for a spring clip connector of the type which transversely receives an end contact of an elongated fuselike component, which spring clip has separate means to increase the clamping pressure thereof.
- 840 Helically coiled spring forms securing part:**  
This subclass is indented under subclass 816. Electrical connector wherein the elastic body is in the form of a coil made from a resilient wire-like material which has been formed into a series of loops or turns wound helically about an axis; and wherein the said elastic coil also constitutes the displaceable securing member, whereby the elastic coil is in direct touching engagement with the conductor to be secured whenever it is secured by the connector.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
788, for a metallic connector having a resilient or spring-operated securing means for joining plural conductors in duplicate receiving means, the resilient or spring-operated means being a helical spring.
- 841 Adapted to receive elongated contact or conductor by insertion along axis passing through spring coils:**  
This subclass is indented under subclass 840. Electrical connector wherein the hollow interior region formed by series of helically wound loops making up the elastic coil constitutes a resilient female socket which is particularly adapted to receive and resiliently grip an elongated male contact or the end of an elongated conductor; the longitudinal axis of the elongated male contact or conductor end and the axis about which the loops are helically wound are aligned just prior to reception of the male contact or conductor end within the female socket and are coincident whenever the male contact or conductor end and the female socket are finally joined.
- 842 Socket adapted to receive push-pull-engaging elongated contact by insertion along longitudinal axis of contact:**  
This subclass is indented under subclass 816. Electrical connector comprising a female connector having surfaces or edges between which an elongated male contact or the end of an elongated conductor is adapted to be telescopically received and resiliently gripped, at least one of the surfaces or edges is resiliently urged or moved toward another surface or edge so that the male contact or conductor end is resiliently grasped, gripped, or clamped between



the surfaces or edges; and wherein the electrical joint between the female connector and the male contact or conductor end to be secured is made either (a) by telescoping the elongated male contact or conductor end along its longitudinal axis into the female connector or (b) by telescoping the female connector along the longitudinal axis of the male contact or conductor end onto the said male contact or conductor end.

**843 Having separate gripping spring means located within or extending into a rigid socket body:**

This subclass is indented under subclass 842. Electrical connector wherein the female connector comprises a solid nonflexible body having an interior open region for telescopically receiving the elongated male contact or conductor end, and further comprises a separate and distinct resilient member for engaging and exerting the resilient securing force upon the male contact or conductor end located within the interior region of the nonflexible body; the resilient member being either carried entirely within the interior region of the nonflexible body or carried on the exterior surface of the nonflexible body with a portion thereof extending into the said interior region for resiliently engaging the male contact or conductor end.

**844 Adapted to be mounted to flat panel with longitudinal axis of socket perpendicular to plane of panel:**

This subclass is indented under subclass 843. Electrical connector wherein the female connector includes means for securing it to a relatively thin support base having a relatively large planar surface, the female connector being defined as having a longitudinal axis which is identical to the axis along which the elongated male contact or conductor end is telescoped into the female connector; and when the female connector is secured to the support base, the said longitudinal axis thereof is disposed at a right angle to the planar surface of the support base.

**845 Adapted to receive thin blade contact (e.g., spade receiving):**

This subclass is indented under subclass 843. Electrical connector wherein the female connector is particularly adapted to telescopically receive and resiliently grip a male contact hav-

ing a generally flattened rectangular cross section.

**846 Separate spring means forms snap-latching detent:**

This subclass is indented under subclass 843. Electrical connector wherein the separate and distinct resilient member carried by the nonflexible body has a retaining part yieldingly urged to move transverse to the longitudinal axis of an elongated male contact telescopically inserted into the nonflexible body; so that, whenever the male contact is telescoped into the female connector, the retaining part resiliently latches behind a shoulder or into a shouldered recess located in a lateral surface of the male contact, whereby the retaining part tends to prevent an inserted male contact from being withdrawn from the female connector.

**847 Spring means mounted on exterior of and extends into rigid socket body:**

This subclass is indented under subclass 843. Electrical connector wherein is carried on the exterior surface of the solid nonflexible body with a portion thereof extending into the open interior region for resiliently engaging a male contact or conductor end telescoped within the female connector.

**848 Having latching detent or means operated by mating contact to lock or manipulate resilient part:**

This subclass is indented under subclass 842. Electrical connector either (a) wherein the resilient securing member has a retaining part yieldingly urged to move transverse to the longitudinal axis of an elongated male contact telescopically inserted into the female connector so that, during the act of telescopically inserting a male contact into the female connector, the retaining part resiliently latches behind a shoulder or into a shouldered recess located in a lateral surface of the male contact, whereby the retaining part tends to prevent an inserted male contact from being withdrawn from the female connector; or (b) wherein the resilient securing member has means engageable by cooperating means on a male contact whenever it is telescoped into the female connector for maintaining the resilient securing member in its secured condition or for placing the resilient securing member into securing condition.

- 849 Adapted to receive thin blade contact (e.g., spade receiving):**  
This subclass is indented under subclass 848. Electrical connector wherein the female connector is particularly adapted to telescopically receive and resiliently grip a male contact having a generally flattened rectangular cross section.
- 850 Resilient channel-like socket for receiving thin blade contact (e.g., spade receiving):**  
This subclass is indented under subclass 842. Electrical connector wherein the female connector is particularly adapted to telescopically receive and resiliently grip a male contact having a generally flattened rectangular cross section; and wherein the female connector comprises a generally planar base having an opposed pair of side flanges, each of which has a portion thereof extending inwardly toward one another to form male contact gripping surfaces or edges, whereby a flat male contact telescopically inserted into the female connector is resiliently gripped between the base and the inwardly extending surfaces or edges.
- 851 Socket comprises tubular body having resilient means for gripping inserted elongated contact (includes split or slotted tube):**  
This subclass is indented under subclass 842. Electrical connector wherein the female connector comprises an elongated hollow tubelike housing or shell having a substantially closed transverse cross section and having at least one open end for axially receiving and resilient gripping within the interior thereof an elongated contact or conductor end.
- 852 Having resilient cantilevered clamping finger located within tubular body:**  
This subclass is indented under subclass 851. Electrical connector wherein the means exerting the resilient clamping force upon an elongated male contact or conductor end axially located within the hollow tubelike housing or shell comprises a fingerlike clamping part defined by having only one of its ends or edges attached to the housing or shell; and wherein at least the clamping portion of the fingerlike part is disposed within the hollow interior of the housing or shell, so that it may resiliently engage a male contact or conductor end disposed within the tubelike housing or shell.
- 853 With means for mounting to flat panel:**  
This subclass is indented under subclass 852. Electrical connector wherein the female connector includes means for securing it to a relatively thin support base having a relatively large planar surface.
- 854 Tubular socket perpendicular to wire-securing barrel (e.g., right-angle connector):**  
This subclass is indented under subclass 851. Electrical connector wherein the hollow tube-like housing or shell comprising the female connector also includes a sleeve or ferrule means for receiving therein and mechanically attaching in electrical engagement therewith the end of an elongated wire-type conductor; and wherein the disposition of the conductor-attaching sleeve or ferrule means is such that the longitudinal axis of the attached portion of the wire-type conductor extends at generally a right angle to the longitudinal axis of the elongated hollow tubelike housing or shell comprising the female connector.
- 855 Socket perpendicular to wire-securing barrel (e.g., right-angle connector):**  
This subclass is indented under subclass 842. Electrical connector wherein the female connector also includes a sleeve or ferrule means for receiving therein and mechanically attaching in electrical engagement therewith the end of an elongated wire-type conductor; and wherein the disposition of the conductor-attaching sleeve or ferrule means is such that the longitudinal axis of the attached portion of the wire-type conductor extends at generally a right angle to the longitudinal axis along which the female connector is intended to telescopically receive its mating male contact or conductor end.
- 856 Having opposed cantilevered clamping fingers resiliently urged toward one another:**  
This subclass is indented under subclass 842. Electrical connector wherein the means exerting the resilient clamping force upon an elongated male contact or conductor end telescopically received within the female connector comprises at least two fingerlike clamping parts, each defined as having only one of its ends or edges attached to the body of the female connector; and wherein the two fingerlike parts are disposed on opposite sides of and

- resiliently urged toward the longitudinal axis along which the female connector telescopically receives the elongated male contact or conductor end, so that opposed lateral portions of the contact or conductor end are resiliently engaged.
- 857 Allochiral cantilevered clamping fingers:**  
This subclass is indented under subclass 856. Electrical connector wherein the at least two opposed fingerlike clamping parts are mirror images of one another about the longitudinal axis along which the female connector telescopically receives the male contact or conductor end.
- 858 Having cantilevered clamping finger resiliently urged toward rigid clamping jaw:**  
This subclass is indented under subclass 842. Electrical connector wherein the means exerting the resilient clamping force upon an elongated male contact or conductor end telescopically received within the female connector comprises a fingerlike clamping part defined by having only one of its ends or edges attached to the body of the female connector; and wherein the gripping portion of the fingerlike part is resiliently urged toward a solid non-flexible clamping part of the female connector in a direction transverse to the longitudinal axis along which the female connector telescopically receives the male contact or conductor end, so that opposed lateral portions of the elongated male contact or conductor end are resiliently gripped between the clamping parts.
- 859 Adapted to resiliently engage end face and inner annular shoulder of headed terminal:**  
This subclass is indented under subclass 816. Electrical connector particularly adapted to be resiliently secured to the headed end of a cylindrical conducting body, the headed end being either the flanged or enlarged annular end of a cylindrical conducting body or the annular end of a cylindrical conducting body having a circumferential groove or reduced portion spaced slightly from the said end thereof; and wherein the connector has surfaces or edges resiliently urged toward one another so as to resiliently grip the top or end surface of the headed end and the inner circumferential ledge or shoulder therebetween.
- 860 Comprising conductor-encircling resilient wire loop or comprising slotted or apertured resilient plate:**  
This subclass is indented under subclass 816. Electrical connector either (a) comprising a conducting body formed from a length of resilient wirelike material which has been bent upon itself to form a generally unbroken loop, there being interior surfaces or edges of the loop resiliently urged toward one another to grip or grasp a contact or conductor received within the interior of the loop; or (b) comprising a generally flat sheetlike conducting body having surfaces or edges resiliently urged toward one another to grip or grasp a contact or conductor therebetween, the body having either a hole therethrough or an opening extending inwardly from an edge thereof for receiving the contact or conductor to be resiliently secured thereby.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 868, for metallic conductor terminal having conductor sheath engaging means, the terminal comprising a slotted or apertured disc or plate which does not have a resilient securing part.
- 883, for a metallic connector or contact comprising a slotted or apertured disc or plate which does not have a resilient securing part.
- 861 Having cantilevered clamping finger resiliently urged toward opposed clamping jaw:**  
This subclass is indented under subclass 816. Electrical connector wherein the means exerting the resilient clamping force upon a contact or conductor to be secured comprises a fingerlike clamping part defined by having only one of its ends or edges attached to the body of the connector; and wherein the clamping portion of the fingerlike part is resiliently urged toward another clamping part of the connector to grip or grasp a contact or conductor received therebetween
- 862 Having cantilevered spring contact finger:**  
This subclass is indented under subclass 816. Electrical connector wherein the means exerting the resilient clamping force upon a contact or conductor to be secured comprises a finger-

like part defined by having only one of its ends or edges attached to the body of the connector.

**863 Clamping cam or wedge:**

This subclass is indented under subclass 775. Electrical connector wherein the clamping pressure exerted on a contact or conductor to be secured is caused by the action of (a) the turning motion of a clamping member of gradually increasing radius, (b) the turning motion of an eccentrically mounted clamping member, (c) the straight-line motion of a clamping member having diverging opposed surfaces, or (d) the motion of a clamping member relative to a curved, inclined, or tapered surface; which movable clamping member exerts a clamping pressure on the contact or conductor to be secured between the said movable clamping member and an abutting surface of the clamp connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 770, for a metallic clamp-type connector for a storage battery terminal having a screw-thread operated clamping cam or wedge.
- 772+, for a metallic clamp-type connector for a storage battery terminal having a clamping lever, cam or wedge.
- 807, for a metallic connector having a screw-thread operated cam or wedge.
- 836+, for a metallic connector having a user manipulated slidable cam or wedge for locking or placing a resilient securing part into securing condition.

**864 Rotary or swinging:**

This subclass is indented under subclass 863. Electrical connector wherein the clamping pressure is caused by the action of (a) the turning motion of a clamping member of gradually increasing radius, (b) the turning motion of an eccentrically mounted clamping member, or (c) the turning motion of a clamping member relative to a curved surface.

**865 METALLIC CONDUCTOR TERMINAL HAVING CONDUCTOR SHEATH ENGAGING MEANS:**

This subclass is indented under the class definition. Electrical connector or contact consisting solely of metallic material and having means thereon for receiving or engaging the insulating

coating or covering of a conductor\*, there being no insulation claimed other than the conductor covering.

- (1) Note. This and the indented subclasses include, for example, uninsulated terminal devices to be attached to the end of a conductor wire so as to facilitate connection thereof to a binding post, etc.; and which include ferrules, sleeves, thimbles, or other means for receiving the insulating covering of the wire.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 274, 275 and 279, for a connector combined with a distinct conductor sheath sealing element or material, the connector being also combined with means for sealing with a mating connector.
- 391+, for a connector having a cutter-type contact for penetrating the insulating covering of a conductor to engage the conductive portion therebeneath to establish electrical connection therewith.
- 445+, for a connector combined with or having a flexible guard or support for a cable or conductor
- 449+, for a connector combined with stress relieving means for the conductor to terminal joint.
- 578+, for a connector including or for use with a coaxial cable.
- 604+, for a connector with an external conductor or cable embedded in insulative sealing material.
- 730, for a terminal connector having an insulating tube or sleeve surrounding a wire-receiving ferrule or sleeve and which insulating tube or sleeve is adapted to be crimped or heat-shrunk onto a wire conductor or onto its insulating covering.
- 874+, 877+ and 883, for various joints between a conductor wire and a metallic connector or contact in which no conductor sheath engaging means is claimed.

**866 Pin or plug type terminal:**

This subclass is indented under subclass 865. Electrical connector or contact in the form of an elongated, conductive male member which is adapted to be slidingly received along the longitudinal axis thereof within a complementary socket or recess of a mating female connector or contact so that a readily separable electrical joint may be formed.

**867 Resilient or spring-biased socket or clip type terminal:**

This subclass is indented under subclass 865. Electrical connector or connector having surfaces or edges between which another metallic connector or contact is adapted to be disposed and releasably secured in order to form a readily separable electrical joint, at least one of the surfaces or edges is forcibly urged or forcibly moved toward another surface or edge so that the said another connector or contact is grasped, gripped, or clamped between the surfaces or edges, the clamping of securing force being caused by the action of an elastic body tending to return to its normal shape after being distorted.

- (1) Note. The documents in this subclass disclose but do not claim a resilient or spring-biased socket or clip type terminal; such terminals when claimed, may be found, for example, in subclasses 842+ above.

SEE OR SEARCH THIS CLASS, SUBCLASS:

816+, particularly subclasses 842+ for a similar type of uninsulated connector or contact in which no conductor sheath engaging means is claimed.

**868 Slotted or apertured disc or plate type terminal (e.g., ring terminal):**

This subclass is indented under subclass 865. Electrical connector or contact in the form of a generally flat, conductive body having a hole extending therethrough or having an opening extending inwardly from an edge of the body whereby the connector or contact may be readily secured to another metallic connector or contact to form a readily separable electrical joint.

SEE OR SEARCH THIS CLASS, SUBCLASS:

883, for an uninsulated connector or contact in the form of a slotted or apertured disc or plate, and in which no conductor sheath engaging means is claimed.

**869 METALLIC CONNECTOR OR CONTACT HAVING MEANS FOR SECURING TO INSULATION OTHER THAN CONDUCTOR SHEATH:**

This subclass is indented under the class definition. Electrical connector or contact consisting solely of metallic material and including means to attach or fasten it to a body of electrically insulating material exclusive of that forming an insulating covering of a wire-type conductor or cable secured thereto.

SEE OR SEARCH THIS CLASS, SUBCLASS:

625+, for a connector combined with insulation other than a conductor sheath, and see the notes appended thereto for a further discussion of the type of "insulating material" to which the connector or contact is to be secured.

733.1+, for a metallic connector or contact combined with and secured to a body of insulation other than a conductor sheath.

**870 Adapted to be secured by permanently bending or deforming metallic part:**

This subclass is indented under subclass 869. Electrical connector or contact wherein the metallic connector or contact is adapted to be attached or fastened to an insulating body (a) by permanently bending, crimping, or deforming, a malleable portion of the connector or contact onto or into a portion of the insulating body or (b) by permanently bending, crimping, or deforming a separate metallic rivet or other separate metallic securing means onto or into a portion of the insulating body or onto a portion of the connector or contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

741+, for a metallic connector or contact combined with and secured to an insulating body by permanently bending,

deforming, or crimping a metallic part.

**871 Adapted to be secured by resiliently biased part latching behind shoulder:**

This subclass is indented under subclass 869. Electrical connector or contact wherein the means to attach or fasten the metallic connector or contact to the insulating body comprises a yieldable or yieldably operated retaining tongue, projection, or shoulder carried by the metallic connector or contact (or by the insulating body) for being yieldably urged to latch and remain behind a cooperating retaining a shoulder or abutment carried by the insulating body (or by the metallic connector contact) whenever the metallic connector or contact and the insulating body are interengaged for attachment therebetween.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 595, for a coupling part including flexing insulation in which a hinged or flexed detent on the insulation engages the contact to secure it within a coupling part housing.
- 603, for a coupling part including flexing insulation in which the yieldable insulation is urged to retain a contact within a coupling part housing.
- 744+, for the combination of insulation and a metallic connector or contact in which the connector or contact is secured to the insulation by a resiliently biased retaining shoulder.
- 751, for a metallic connector or contact secured to insulation by a part of the connector contact resiliently urged to grip the insulation.
- 873, for a metallic connector or contact, per se, adapted to be secured to insulation by a part of the connector or contact resiliently urged to grip the insulation.

**872 Latching part unitary with metallic connector or contact:**

This subclass is indented under subclass 871. Electrical connector or contact wherein the latchable tongue, projection, or shoulder and the metallic connector or contact are of single one-piece construction.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 746+, for a metallic connector or contact combined with and secured to a body of insulation by a latching part which is unitary with the connector or contact.

**873 Adapted to be secured by part resiliently gripping insulation:**

This subclass is indented under subclass 869. Electrical connector or contact wherein the metallic connector or contact is adapted to be attached or fastened to an insulating body by the connector or contact having on the insulation-engaging portion thereof a retaining means which is yieldably urged to grip or clamp onto a portion of the insulating body so as to hold the connector or contact to the insulating body.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 751, for a metallic connector or contact combined with and secured to an insulating body by a part resiliently gripping the insulation, and see the Search notes appended thereto.

**874 METALLIC CONNECTOR OR CONTACT HAVING PART PERMANENTLY SECURED TO CONDUCTOR USING FUSED OR MOLDED MATERIAL:**

This subclass is indented under the class definition. Electrical connector or contact consisting solely of metallic material and having means to which an electrical conductor is intended to be permanently attached or fastened in conductive relationship therewith, whereby a permanent conductive joint may be formed therebetween; the conductive joint being formed by an operation involving fluid or molten bonding material, by applying heat to the metallic material of one or both parts until it is softened or molten and then pressing, shaping, or pouring it onto or into the metallic material of the other part, or by applying glue or other adhesive cementlike material between the two metallic parts.

- (1) Note. This class does not provide for a molded or soldered joint between two conductors. Such subject matter is not considered to be a connector for this

class (439) but is provided for in Class 174. See the class definition of this class (439) for the line between Classes 174 and 439.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 430, for a connector having a cutter-type contact which axially penetrates an elongated conductor and which is also permanently secured to a conductor by for example, solder.
- 736, for a metallic connector or contact which is secured to insulation by a molded, cast, welded, or cemented joint.

**SEE OR SEARCH CLASS:**

- 29, Metal Working, subclass 860 for a process of assembling a terminal to an elongated conductor by metal fusion bonding.
- 228, Metal Fusion Bonding, for uniting work parts by forming a metallurgical bond.

**875 Having duplicate locations for permanently securing individual conductors thereto:**

This subclass is indented under subclass 874. Electrical connector or contact having at least two identical means to which individual electrical conductors are to be permanently attached or fastened in conductive relationship therewith.

**876 Adapted to be secured to conductor formed on printed circuit board:**

This subclass is indented under subclass 874. Electrical connector or contact wherein the electrical conductor to which the metallic connector or contact is to be permanently and conductively attached or fastened is the conductive material which has been preplaced and fixed on a prefabricated sheetlike insulating member.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 83, for a contact soldered to a panel circuit of a preformed panel circuit arrangement.

**877 METALLIC CONNECTOR OR CONTACT ALSO HAVING SECURING PART ADAPTED TO BE CRIMPED,**

**DEFORMED, OR BENT ONTO CONDUCTOR:**

This subclass is indented under the class definition. Electrical connector or contact consisting solely of metallic material and having a malleable part (i.e., a plastically deformable part) to which an electrical conductor is intended to be permanently attached or fastened in conductive relationship therewith, whereby a permanent conductive joint may be formed therebetween; the conductive joint being formed by permanently bending, crimping, or deforming the malleable part of the connector or contact onto a portion of the electrical conductor.

- (1) Note. Included herein, for example, are connectors in which novelty resides in the joint between a so-called "solderless lug" and its associated conductor.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

- 84, for a contact secured by deformation to a panel circuit of a preformed panel circuit arrangement.
- 430, for a connector having a cutter-type contact which axially penetrates an elongated conductor and which is also permanently secured to a conductor by, for example, crimping.
- 442, for a connector having a cutter-type contact which is crimped to make an electrical connection.
- 585, for a connector including or for use with a coaxial cable which has a crimpable metallic conductor grip.
- 730, for a terminal connector having an insulating tube or sleeve adapted to be crimped onto a wire-type conductor.
- 865+, for a metallic conductor terminal having conductor sheath engaging means which often is of the type adapted to be crimped onto both the insulating sheath portion and the conductive portion of a wire-type conductor.

**SEE OR SEARCH CLASS:**

- 29, Metal Working, subclasses 861+ for processes for attaching an elongated conductor to a connector element wherein the joint is formed by a crimping or deforming operation.

**878 Securing part crimped or bent onto looped end of wire conductor:**

This subclass is indented under subclass 877. Electrical connector or contact wherein the electrical conductor to which the metallic connector or contact is to be permanently and conductively attached or fastened is an elongated wire-type conductor, the end of which is first coiled or looped either upon itself or about a portion of the securing part of the connector or contact, and then the malleable portion of the securing part is bent or deformed onto or about the coiled or looped end to form the conductive electrical joint therebetween.

- (1) Note. Included herein are wire-type conductor end terminals having the general configuration of an annular eyelet.

**879 Multipart assembly:**

This subclass is indented under subclass 877. Electrical connector or contact comprising at least two nonunitary metallic parts.

**880 Having duplicate receiving means for permanently securing individual conductors thereto:**

This subclass is indented under subclass 877. Electrical connector or contact having at least two identical malleable securing parts to which individual electrical conductors are to be permanently attached or fastened in conductive relationship therewith.

**881 Wire conductor secured transverse to contact portion (e.g., right-angle connector):**

This subclass is indented under subclass 877. Electrical connector or contact wherein the electrical conductor to which the metallic connector or contact is to be permanently and conductively attached or fastened is an elongated wire-type conductor; and wherein the disposition of the malleable conductor-attaching part of the connector or contact relative to the readily separable contact part thereof is such that the separable contact part of the connector or contact extends laterally and to one side of the longitudinal axis of the attached portion of the wire-type conductor.

**882 Wire conductor secured within ferrule having series of preformed wire-gripping means therein:**

This subclass is indented under subclass 877. Electrical connector or contact wherein the malleable attaching or fastening part is in the form of ferrule-forming means for receiving therein and being crimped or otherwise pressure forged onto the end of a wire-type conductor; and wherein the interior conductor-gripping surface of the ferrule-forming means has a plurality of longitudinally spaced teeth, ridges, grooves, ribs, serrations, or other corrugated means formed therein during manufacture of the connector or contact so as to provide increased axial friction upon the end of a crimped conductor, thereby tending to prevent axial separation of the conductor from the ferrule forming means.

**883 METALLIC CONDUCTOR OR CONTACT COMPRISING A SLOTTED OR APERTURED DISC OR PLATE:**

This subclass is indented under the class definition. Electrical connector or contact comprising a generally flat sheetlike conducting body having either a hole therethrough or an opening extending inwardly from an edge thereof whereby the connector or contact may be readily secured to a corresponding connector.

**884 CONTACT TERMINAL:**

This subclass is indented under the class definition. Device comprising structure to physically engage and become electrically conductive with a corresponding portion of a mating part for making and breaking an electrical circuit.

- (1) Note. The device of this and the subclasses indented hereunder may comprise a contact member that in reality is a complete electrical connector or is only part of an assembly that is an electrical connector, if not provided for above.

**885 Strip of detachable contacts:**

This subclass is indented under subclass 884. Device comprising a structure including a plurality of members for making electrical engagement with corresponding mating members, each of which is intended to be detached from the instant assembly when used.



- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
590, for a storage strip for a plurality of coupling parts including flexing insulation.
- 886 Having treated (e.g., coated) surface or distinct contact surface layer:**  
This subclass is indented under subclass 884. Device including a filmlike outer covering intended to make physical engagement with a mating contact, which is distinct from the body of the device and may have been applied thereto by a coating process or by a laminating process.
- 887 Of particular metal or alloy:**  
This subclass is indented under subclass 884. Device as claimed, made of a named metal of mixture of metals.
- (1) Note. An electrical connector including portions of different, specific metals is included in this collection.
- 888 Having provision for retaining to mating wire (e.g., wire wrap):**  
This subclass is indented under subclass 884. Device having a particular shape intended to implement attachment of a flexible strandlike conductor thereto.
- 889 Having provision for retaining to mating contact:**  
This subclass is indented under subclass 884. Device having a particular shape intended to implement attachment of a corresponding mating part.
- (1) Note. Included herein is a contact having plural surfaces intended to be gripped by a mating device, as by friction, bayonet-type engagement or by a helically-arranged threaded engagement.
- 890 For functioning electrical component (e.g., tube, lamp, fuse, spark plug, etc.):**  
This subclass is indented under subclass 884. Device intended to be a part of a current utilizing structure.
- 891 Multipart contact prong:**  
This subclass is indented under subclass 884. Device including a male contact\* of plural components.
- 892 DISTINCT COVERING MEANS:**  
This subclass is indented under the class definition. Device comprising covering that is distinguishable from the connector.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
76.1+, for a preformed panel circuit arrangement within a distinct housing spaced therefrom.  
135+, for an electrical connector with a contact preventer or retractable cover part.  
207, for an electrical connector with a conduit or duct.
- 893 Covering functioning electrical component (e.g., tube, lamp, fuse, spark plug, etc.):**  
This subclass is indented under subclass 892. Device intended to cover a current utilizing structure.
- 894 MISCELLANEOUS:**  
This subclass is indented under the class definition. Device not provided for elsewhere.

#### CROSS-REFERENCE ART COLLECTIONS

The following subclasses are collections of published disclosures pertaining to various specified aspects of the electrical connector art, which aspects do not form appropriate bases for subclasses in the forgoing classification (i.e., subclasses superior hereto in the schedule), wherein the original copy of a patent is placed on the basis of proximate function of the apparatus. These subclasses assist a search based on remote function of the apparatus and may be of further assistance to the searcher, either as a starting point in searching this class or as an indication of further related fields of search inside or outside the class. Thus, there is here provided a second access for retrieval of a limited number of types of disclosures.

- (1) Note. A disclosure is placed in these subclasses for its value as reference and may lead to appropriate main or secondary fields of search, without regard to its

original classification or its claimed subject matter.

- (2) Note. The disclosures found in the following subclasses are examples, only, of the indicated subject matter, and in no instance do they represent the entire extent of the prior art.

**901 CONNECTOR HOOD OR SHELL:**

This subclass is indented under the class definition. Art collection directed to structure to either partially or totally encase an electrical connector.

**902 Angularly disposed contact and conductor:**

This subclass is indented under subclass 901. Art collection wherein the contact is encased in a member such that the contact extends in a direction different from that of the conductor attached thereto.

**903 Special latch for insert:**

This subclass is indented under subclass 901. Art collection provided with a detent for engagement with a portion of the electrical connector to effectively complete encasement thereof.

**904 Multipart shell:**

This subclass is indented under subclass 901. Art collection intended to totally enclose an electrical connector and comprised of a plurality of components.

**905 Axially joined sections:**

This subclass is indented under subclass 904. Art collection comprising an assembly having a generally axial extent and wherein the assembly is made of a plurality of components aligned and attached together therealong.

**906 Longitudinally divided:**

This subclass is indented under subclass 904. Art collection comprising an assembly having a general axial extent and wherein the assembly is made of a plurality of components laterally disposed thereabout.

**907 CONTACT HAVING THREE CONTACT SURFACES, INCLUDING DIVERSE SURFACE:**

This subclass is indented under the class definition. Art collection comprising a contact\* having a first portion of a first physical configuration for electricity transmitting engagement with a mating contact; including a second portion of a different physical configuration for electricity transmitting engagement with distinct mating contact; and including a third portion for electricity transmitting engagement with a mating contact.

**908 CONTACT HAVING TWO CONTACT SURFACES FOR ELECTRICAL CONNECTION ON OPPOSITE SIDES OF INSULATIVE BODY:**

This subclass is indented under the class definition. Art collection comprising a contact\* for use with a supporting nonconductive member such that the contact has a surface on one surface of the nonconductive member for making electricity transmitting engagement with another mating contact.

**909 MEDICAL USE OR ATTACHED TO HUMAN BODY:**

This subclass is indented under the class definition. Art collection to be used in treating or testing a living person or to be secured for support to a portion of a living person.

**910 OBSERVATION AIDE, E.G., TRANSPARENT MATERIAL, WINDOW IN HOUSING:**

This subclass is indented under the class definition. Art collection intended to assist in optical viewing.

**911 SAFETY, E.G., ELECTRICAL DISCONNECTION REQUIRED BEFORE OPENING HOUSING:**

This subclass is indented under the class definition. Art collection intended to make use of the device less dangerous.

- (1) Note. Included herein is a device for disconnection of the electrical circuitry before disconnection of the housing structure to avoid exposure of a surface of electrical potential.

- 912 WITH TESTING MEANS:**  
This subclass is indented under the class definition. Art collection to be combined with structure for making some sort of study.
- 913 CONDITION DETERMINING DEVICE, E.G., OXYGEN SENSOR, ACCELEROMETER, IONIZER CHAMBER, THERMOCOUPLE:**  
This subclass is indented under the class definition. Art collection including provision for attachment to a member for detection of the environment.
- 914 FOR FLASHBULB OR CAMERA (INCLUDING FLASH CUBE):**  
This subclass is indented under the class definition. Art collection especially adapted for use with an instantly consumed lamp or of other use relating to a camera.
- 915 AUXILIARY DEVICE FOR EXISTING PLUG:**  
This subclass is indented under the class definition. Art collection for use with a particular male coupling part\*
- 916 ANTENNA:**  
This subclass is indented under the class definition. Art collection of particular use to a member for receiving or transmitting electromagnetic waves.
- 917 ALARM CIRCUIT, E.G., WINDOW AFFIXED FOIL:**  
This subclass is indented under the class definition. Art collection intended to be used to trigger a device for notification of an emergency situation.
- 918 MULTILAMP VEHICLE PANEL:**  
This subclass is indented under the class definition. Art collection including a generally planar body for supporting plural luminaries on a surface of a transportation device.
- 919 FOR TREATMENT BY ELECTRICAL CURRENT, E.G., MAGNET, BATTERY CHARGER, HEATER, WELDER, ETC.:**  
This subclass is indented under the class definition. Art collection including provision to modify other structure by passing electricity through the provided member.
- 920 FOR INTERCONNECTING RIGID PIPE-LIKE BODIES, E.G., WAVE GUIDES:**  
This subclass is indented under the class definition. Art collection particularly adapted to the joining of self-sustaining tubular members.
- 921 TRANSFORMER BUSHING TYPE OR HIGH VOLTAGE UNDERGROUND CONNECTOR:**  
This subclass is indented under the class definition. Art collection of particular utility in electrically sealing the connector of a member for changing voltage in an alternating current supply or of connecting "high voltage" (i.e., measured in thousands of volts) electrical conductors intended to be buried beneath the surface of the earth.
- 922 TELEPHONE SWITCHBOARD PROTECTOR:**  
This subclass is indented under the class definition. Art collection of particular utility in the housing of a telephone switchboard housing.
- 923 SEPARATION OR DISCONNECTION AID:**  
This subclass is indented under the class definition. Art collection comprising structure to assist in forcing one electrical connector out of coupling condition with a mating connector.
- 924.1 CONTACTS ARRANGED FOR SEQUENTIAL CONNECTION:**  
This subclass is indented under the class definition. Art collection including a plurality of contacts\* arranged so that upon bringing the connector into engagement with a mating connector the contacts will make electrical engagement one after the other in a predicted order.
- 924.2 With contact preventer to require joining in a given sequence:**  
Art collection under art collection 924.1 wherein a contact of a first connector engages the corresponding contact of a mating connector, then a contact of a second connector engages the corresponding contact of the mating connector, and thus continuing in this sequence until all mating contacts of all the connectors are engaged.
- (1) Note. The mating connector engaged by the first connector may be the same

- assembly as the mating connector engaged by the second connector.
- 925 FLOOR MOUNTED, E.G., UNDER CARPET:**  
This subclass is indented under the class definition. Art collection of particular utility to be used on the floor of a room to be occupied by a person.
- 926 WITHIN MACHINE CASING OR MOTOR HOUSING (CONNECTOR WITHIN CASING WALL):**  
This subclass is indented under the class definition. Art collection intended to be used inside structure encasing a distinguishable appliance, especially a prime mover.
- 927 CONDUCTIVE GASKET:**  
This subclass is indented under the class definition. Art collection comprising a member intended to seal or cushion two members, which member is capable of transmitting electrical current.
- SEE OR SEARCH CLASS:  
277, Seal for a Joint or Juncture, for a generic sealing means or process, cross-reference art collection 919 for a seal including an electrical feature.
- 928 MODULAR ELECTRICALLY INTERENGAGING PARTS, E.G., STOVE WITH REPLACEABLE HEATING ELEMENTS FORMED ON COUPLING PARTS:**  
This subclass is indented under the class definition. Art collection of physical shape to mesh with specially provided adjacent structure.
- 928.1 Plug-in carrier or adapter for removable component (e.g., "hard drive" for computer):**  
Art collection under art collection 928 including an easily removed member for holding a substantial portion of electrical "hardware" to be used as a portion of an electronic device.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
55+, for a printed circuit board with detachable electric contacts, generally.
- 929 CONNECTING BASE PLATE OR SHELF TYPE HOLDER:**  
This subclass is indented under the class definition. Art collection of particular utility in making electrical engagement with a supporting structure comprising the lower portion of a device or an underlying planar member intended to support.
- 930 COUPLING PART WHEREIN CONTACT IS COMPRISED OF A WIRE OR BRUSH:**  
This subclass is indented under the class definition. Art collection including a contact\* comprised of a single or a grouping of filaments.
- 931 CONDUCTIVE COATING:**  
This subclass is indented under the class definition. Art collection comprising an electrical connector including a layer of electricity transmitting material, applied thereto in liquid or vapor form.
- 932 HEAT SHRINK MATERIAL:**  
This subclass is indented under the class definition. Art collection including a component made of material having a memory such that upon the application of heat the component will contract to a prior size.
- 933 SPECIAL INSULATION:**  
This subclass is indented under the class definition. Art collection including nonconductive material of some recognizable feature that is unique.
- 934 High voltage barrier (e.g., surface arcing or corona preventing insulator):**  
This subclass is indented under subclass 933. Art collection comprising a nonconducting member intended to physically block the flow of an arc through space or across the surface thereof.
- 935 Glass or ceramic contact pin holder:**  
This subclass is indented under subclass 933. Art collection made of solid quartz-type material intended to isolate and physically support a male electrical contact\*.

**936 Potting material or coating (e.g., grease, insulative coating, sealant, or adhesive):**

This subclass is indented under subclass 933. Art collection comprising material intended to flow into an electrical connector and electrically isolate the components thereof.

**937 Plural insulators in strip form:**

This subclass is indented under subclass 933. Art collection comprising a plurality of non-conducting members connected together, one after the other, which may be used in this format or may be served for independent use.

**938.1 CATHODIC PROTECTION OF STRUCTURE (E.G., SHIP HULL):**

This subclass is indented under the class definition. Art collection of particular utility in the application of a member for oxidation so that a more valued structure will not be oxidized by electrical potential generated by the presence of different metals.

**939 WITH GROUNDING TO METAL MOUNTING PANEL:**

This subclass is indented under the class definition. Art collection including means to mount and electrically connect a connector to a sheet of metallic material.

**940 INCLUDING PROVISION FOR MECHANICAL LIFTING OR MANIPULATION (E.G., FOR VACUUM LIFTING):**

This subclass is indented under the class definition. Art collection including an electrical connector combined with or having (a) particular means to be engaged by an device or (b) a particular implement that is separate from the connector for maneuvering the connector randomly into assembly and connection with another connector.

SEE OR SEARCH THIS CLASS, SUBCLASS:

476.1+, for a handle or distinct manipulating means intended for manual utilization.

**941 CROSSTALK SUPPRESSION:**

This subclass is indented under the class definition. Art collection including a connector having contacts or conductors specifically

arranged with respect to one another to reduce generation of induced current therebetween.

**942 COMBLIKE RETAINER FOR CONDUCTOR:**

This subclass is indented under the class definition. Art collection comprising a barlike device having plural slots, each of which is intended to grip an electricity-conducting strand so that force on the strand is not transmitted to the electrical connection to which the strand is attached.

**943 INCLUDING PROVISION FOR PRESSING CONTACT INTO PCB HOLE:**

This subclass is indented under the class definition. Art collection including a structure particularly adapted to force the contact portion of an electrical connector into an opening in a printed circuit board.

**944 COAXIAL CONNECTOR HAVING CIRCUIT-INTERRUPTING PROVISION EFFECTED BY MATING OR HAVING "DEAD" CONTACT ACTIVATED AFTER MATING:**

This subclass is indented under the class definition. Art collection particularly adapted to use with a coaxial cable comprising an electrical connector (a) including a characteristic intended to modify the flow of electrical current upon the making of the connection, other than that effected by the connection, or (b) including an electricity-transmitting member intended not to be connected to a source of electrical current before mating with corresponding electricity-transmitting member of a cooperating connector, but to be so connected to a source of electrical current after mating.

(1) Note. Under clause (b) of this definition the "dead" contact may be actuated by sliding within the connector to make engagement with another contact that is "live" (i.e., charged with electrical current).

SEE OR SEARCH THIS CLASS, SUBCLASS:

188, for an official subclass directed to the same structure, but not necessarily for use with a coaxial cable.

## SEE OR SEARCH CLASS:

200, Electricity: Circuit Makers and Breakers, for an electrical connector assembly combined with a switch, generally; especially subclasses 51+ for an electrical connector combined with a switch that is actuated upon application of the connector with a mating connector, wherein the switch is remote from the connector assembly or is functional to actuate a distinct electrical circuit. See the line expressed under section III of the Class 439 definition.

**945 ADAPTER FOR PCB OR CARTRIDGE:**

This subclass is indented under the class definition. Art collection comprising a member including a male electrical connector adapted to be received by a cooperating connector (e.g., by a computer module) and including a connector particularly adapted to receive electrical contacts at the edge of a printed circuit board.

- (1) Note. The device of this subclass may serve to extend the point of electrical connection of a PCB to a somewhat remote location.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

55+, for a printed circuit board with detachable electric contacts, generally.

**946 MEMORY CARD CARTRIDGE:**

This subclass is indented under the class definition. Art collection comprising the electrical connector of an integrated circuit module.

**947 PCB MOUNTED CONNECTOR WITH GROUND TERMINAL:**

This subclass is indented under the class definition. Art collection comprising a printed circuit board having a specific contact for engaging a member of zero electrical potential.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

55+, for a printed circuit board with detachable electric contacts, generally.

**948 CONTACT OR CONNECTOR WITH INSERTION DEPTH LIMITER:**

This subclass is indented under the class definition. Art collection comprising an electrical connector having particular means to prevent excessive penetration of the connector with a mating connector or having particular means to prevent excessive penetration of a conductor intended to be permanently united with the connector.

**949 JUNCTION BOX WITH BUSBAR FOR PLUG-SOCKET-TYPE INTERCONNECTION WITH RECEPTACLE:**

This subclass is indented under the class definition. Art collection comprising a container for an electrical "outlet" in which there is an additional female connector intended to receive an interfitting connector from the outlet.

**950 ELECTRICAL CONNECTOR ADAPTED TO TRANSMIT ELECTRICITY TO MATING CONNECTOR WITHOUT PHYSICAL CONTACT (E.G., BY INDUCTION, MAGNETISM, OR ELECTROSTATIC FIELD):**

This subclass is indented under the class definition. Art collection comprising an electrical connector intended to cause electrical current to pass to a mating connector by magnetic field effects or by emission of electrons across a space between the connectors.

## SEE OR SEARCH CLASS:

235, Registers, subclasses 375+ for a system controlled by a data-bearing record in which electrical energy is induced to flow between two members that are in the proximity of each other, but are not actually touching each other. Also, search subclasses 435+ for a sensor for detecting, without making physical contact with, another member that is in the proximity.

**951 PCB HAVING DETAILED LEADING EDGE:**

This subclass is indented under the class definition. Art collection comprising a printed circuit board having electrical contacts intended to be connected with a cooperating member, including structural limitations of the portion

of the board advanced toward the cooperating member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

55+, for a printed circuit board with detachable electric contacts, generally.

**952 JUMPER FOR USE WITH SPECIFIC APPARATUS:**

This subclass is indented under the class definition. Art collection comprising an electrical connector with a conductor intended for use with a particularly described, other structure.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

189, for an electrical connector with or comprising a removable circuit modifying arrangement. Such devices may be removed to prevent use of the apparatus from which it was attached, thus functioning as an electrical key.

507+, for an electrical "jumper," generally.

**953 WITH LATCH ROD TO BE RETAININGLY RECEIVED BY OPENING OF MATING CONNECTOR:**

This subclass is indented under the class definition. Art collection having an elongated retaining means intended to be inserted in a receptacle in a cooperating electrical connector, then (a) moved to secure the connector to the cooperating connector or (b) effected by moving means in the receptacle to secure the connector to the cooperating connector.

(1) Note. Included in this collection is a "bayonet rod."

SEE OR SEARCH THIS CLASS, SUB-CLASS:

296+, for an electrical connector having a distinct retaining means to hold it to another electrical connector.

**954 SPECIAL ORIENTATION OF ELECTRICAL CONNECTOR:**

This subclass is indented under the class definition. Art collection of a particular shape for a particular utilization.

(1) Note. The particular shape of the electrical connector of this art collection may lessen interference of pliable conductors extending away from the connector or permit closer spacing of plural, independent connectors.

(2) Note. The particular shape of the electrical connector of this art collection may aid in drainage of fluid.

**955 INCLUDING ELECTRONIC IDENTIFIER OR CODING MEANS:**

This subclass is indented under the class definition. Art collection including provision to digitally read information on a mating connector, or a connector carrying such digital information to be read by the mating connector, so that mating can be effected only if preselected information is received.

(1) Note. Included herein is a connector having provision to read a bar code on the mating conductor or a conductor having a bar code to be read by the mating conductor.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

135+, for an electrical connector having a contact preventer, generally.

489+, for an electrical connector having an indicator to show that connection has been made, generally.

**956 WITH MEANS TO ALLOW SELECTION OF DIVERSE VOLTAGE OR POLARITY:**

This subclass is indented under the class definition. Art collection comprising an electrical connector having a particular means enabling it to supply different voltages outputs or to change the direction of power flowing into a circuit.

**957 AUXILIARY CONTACT PART FOR CIRCUIT ADAPTATION:**

This subclass is indented under the class definition. Art collection including an electrical connector that is not a "coupling part" (usually a single contact), but that is to be attached to another connector for affecting its manner of use or for providing a circuit tap or for providing repair of the connector.

## FOREIGN ART COLLECTIONS

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

**FOR 100 WITH CIRCUIT COMPONENT OR COMPRISING CONNECTOR WHICH FULLY ENCLOSES CIRCUIT COMPONENT (439/620):**

Foreign art collection including an electrical connector either (a) combined with a functioning electrical circuit device; or (b) comprising a holder, casing, or housing adapted to substantially completely surround an unclaimed functioning electrical circuit device, which holder, casing, or housing further carrying at least one contact\* for electrically engaging a contact of the circuit device.

- (1) Note. The following “functioning electrical circuit devices” are specifically excluded from this and the indented subclasses since, for the most part, they are provided for elsewhere within this class (439): energy cells or batteries (both the dry cell and storage types), spark plugs of the type designed for internal combustion engines, lamps, vacuum tubes, interference filters of the type combined or used with contacts of inductively or capacitively shielded connectors, and a power measuring meter coupling part.
- (2) Note. Some examples of “functioning electrical circuit devices” which may be included herein are: fuses, resistors (including resistive heating elements), capacitors, inductors or coils, transformers, relays, switches, transistors, solid-state diodes or rectifiers, transducers (such as earphones, microphones, piezoelectric devices, photocells, etc.), and measuring or detection devices (such as meters, strain gauges, and seismometers).

**FOR 101 With or for fuse (439/621):**

Foreign art collection under FOR 100 for subject matter including an electrical connector wherein the functioning electrical circuit device is an electrical safety device comprising a wire or strip of fusible metal that melts and interrupts the circuit when the current exceeds a specified amperage.

**FOR 102 Comprising coupling part housing for enclosing fuse (439/622):**

Foreign art collection including an electrical connector comprising a holder, casing, or housing for supporting and surrounding the fuse component; which holder, casing, or housing also comprises a coupling part\* carrying at least two mutually insulated contacts\*, the coupling part being specially adapted to mate with a complementary coupling part\*.

**FOR 103 HAVING OR PROVIDING INDUCTIVE OR CAPACITIVE SHIELD:**

Foreign art collection for electrical connector comprising a conductive screen means for (a) preventing or reducing the detrimental effect induced within a connector or contact\* due to capacitive or inductive coupling with electric or magnetic fields generated from a source outside of the connector or contact, or (b) preventing or reducing induced electrical interference or signal loss due to capacitive or inductive coupling between mutually insulated contacts within a plural-contact connector (i.e., reducing crosstalk), or (c) preventing or reducing undesirable loss of electrical information or signal due to electrical radiation of signal from the connector or contact.

- (1) Note. Since there are included herein connectors of the type adapted to be electrically connected to a cable\* having an outer conductive shield concentrically surrounding the longitudinal axis of the cable, there is a similarity between the connectors for coaxial cables found in subclasses 578+ and some of the connectors included in this and the indented subclasses. The similarity relates, however, only to the tubular outer contact, because the shielded-cable connectors included in these subclasses (607+) are adapted to be secured to cables having at least one inner conductor whose longitu-



dinal axis does not extend along the longitudinal axis of the cable, whereas the connectors in subclasses 578+ are adapted to be secured only to cables in which the longitudinal axes of all of the conductors coincide with the longitudinal axis of the cable.

- (2) Note. Since electric fields induce noise voltages capacitively, it is common to surround a connector or contact with a grounded conducting shield in order to reduce stray pickup from external sources or crosstalk between mutually insulated contacts. Since external magnetic fields induce noise currents inductively, it is common to surround a connector or contact with a high-permeability ferromagnetic enclosure which reduces the intensity of magnetic fields.

**FOR 104 Conductive shielding material individually surrounding or interposed between mutually insulated contacts:**

Foreign art collection for electrical connector comprising at least two mutually insulated contacts carried in a relatively fixed spaced relation one from another by an insulating body to form a coupling part\* specially adapted to mate or interengage with a complementary plural-contact-carrying counterpart\* so as to form an electrical joint having at least two mutually insulated electrical paths, and wherein the conductive screen means comprises conductive material either (a) formed around but spaced apart from at least a portion of at least one contact, so that the contact is inductively screened from the one or more other contacts, or (b) interposed between two or more contacts, so that the contacts are inductively screened from one another.

**FOR 105 Resilient conductive means providing additional electrical path between mating outer shield members:**

Foreign art collection for electrical connector wherein the conductive screen means comprises a conductive member for surrounding one or more mutually-insulated contacts, which conductive member forms an outer screen contact of a coupling part\*, which coupling part is specifically adapted to mate or interengage with a complemen-

tary counterpart\* also having a surrounding outer screen counter-contact\*, so that, when the screen contact is electrically engaged with the screen counter-contact, the conductive path of the screen means extends over both the coupling part and its counterpart, and wherein the conductive screen member of the coupling part further includes an additional conductive element having a portion thereof either engaged or adapted to be engaged with the screen contact of the coupling part and having a resilient portion thereof engageable with the screen counter-contact or the counterpart, so that, when the coupling part and its counterpart are joined together, an additional conductive path is formed between the conductive screen member of the coupling part and the conductive screen member of the counterpart.

**FOR 106 Having means for electrically connecting shield of shielded cable to connector shield member:**

Foreign art collection for electrical connector wherein the conductive screen means comprises a conductive member for surrounding one or more contacts, which conductive member forms an outer screen contact of a coupling part\*, which coupling part is specially adapted to mate or interengage with a complementary counterpart\* having a screen counter-contact\*, so that, when the screen contact is electrically engaged with the complementary screen counter-contact of the counterpart, the conductive path of the screen means extends over both the coupling part and its counterpart, and wherein the conductive screen member of the coupling part further includes means specially adapted to electrically connect the conductive shielding sheath of a shielded cable\* to the conductive screen member.

END