

CLASS 118, COATING APPARATUS

SECTION I - CLASS DEFINITION

This is the generic class for apparatus for applying or obtaining a surface coating on a base and/or apparatus for impregnating base materials and takes all such apparatus not provided for in other classes.

The coating obtained may be permanent or transitory. The coating may be supplied solely by extraneous materials, as in a painting or waxing operation, or may be supplied wholly or in part by the base materials as in the formation of an oxide coating on a metal base. The coating may consist of an emulsion, dispersion, solution, admixture or oil which is clearly disclosed as leaving a residual film, layer or continuous deposit on the base. However, mere application of water to a base is excluded and classified elsewhere in generic liquid contact class or other appropriate related liquid contact classes even where the stated function is to lubricate, coat or protect the base. See Lines With Other Classes and Within This Class, below, for additional discussion concerning exclusions.

The class also provides for apparatus for preparing the base for the coating operation, subsequent treatment of the coated base and ancillary noncoating apparatus, per se, when there is no class which specifically provides therefor. The treatment of the surface coating may be by application of water or other solvent alone, e.g., where a sponge supported on a fixed base is disclosed as applying water to a stamp to moisten the coating thereon. On the other hand, application of water or a solvent to a coated surface to remove the coating or to clean it without otherwise modifying it, would be excluded from Class 118 and classified in the appropriate surface treating class.

To be classified in this class the work treated must not be a part of the coating machine itself but must be an article separate and distinct therefrom. Machines having as a part thereof means to condition or prepare the machine are generally classified with the art that provides for the particular machine, but see MOLD OR DIE COATING, for an exception to the line.

For other coating apparatus, per se, see Lines With Other Classes, below.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

EXCLUSIONS

Mere application of water to a base is excluded and classified in generic liquid contact Class 134 or other appropriate related liquid contact classes even where the stated function is to lubricate, coat or protect the base. However, see the class definition of Class 134, (2) Note, "Coating and Impregnating", paragraph (b).

COATING COMBINED WITH OTHER OPERATIONS

Many classes provide for coating or impregnating combined with apparatus for other operations. In general, the assignment of patents has been on the basis of the noncoating operation where apparatus for performing such operation is claimed. However, this class does provide for certain combinations, as set forth in the various subclass titles above and including subclass 75 in the class schedule. By way of example, this class provides for the combination of coating apparatus and cutting or punching apparatus (subclass 35); this class also provides for coating apparatus combined with means to prepare the work to receive the coating (subclass 72). For combinations of coating and noncoating devices excluded from this class, see References to Other Classes below referencing Coating Combined with Other Operations.

B. COATING APPARATUS, PER SE, FOUND ELSEWHERE

Certain classes provide for coating apparatus, per se. Classification of patents is in these classes when coating subclasses occur in such art class and are defined to receive such patents. These locations are detailed in References to Other Classes, below.

C. TREATMENT OF TEXTILES OR LEATHER

Class 118 provides the generic place for coating textile or leather work, including the working of the textile or leather, except (1) where a chemical reaction takes place between the coating and the work, or (2) where the means to work the textile or leather before, during or after the coating treatment is other than to modify the coating. For example, this class provides for textile or leather coating apparatus having working means to insure proper coating or impregnation (subclass 427 by way of example) or having means to modify the coating on the work (subclasses 100+), but does not provide for combination of coating devices and means to work the base for other purposes.

For coating of textiles or leather excluded from Class 118, see References to Other Classes, below.

D. MOLD OR DIE COATING

Class 118 provides in appropriate subclasses for apparatus for coating molds or casting dies where no more of the molding or casting apparatus is claimed than is necessary to present the mold or die to the coating device or station. The coating which is applied must act to promote or perfect the molding operation and must not be a constituent part of the molded product such as a chocolate shell for a filled chocolate candy. Excluded from this class also are mold coating arrangements where application of the coating is dependent at least in part on the use of the apparatus in a molding operation as where heat from the molten material vaporizes a coating material for deposit on the mold surfaces.

Also see References to Other Classes, below, referencing this section.

E. MOLDED, SHAPED OR CONFIGURED COATINGS

This class (118) provides for apparatus for the application of coating material to restricted areas of the work such as in stripes, bands or spots (subclasses 211+, 301 and 406). In subclasses 321 and 323 may be found apparatus in which a spray gun is manipulated to apply the coating in a particular pattern. This class also provides for devices for modifying the coating by removing certain portions of it from the work (subclass 102). This class also provides for apparatus for producing configured coatings applied to base under the control and/or direction of electrical, magnetic or radiant energy applied to the coating material in a predetermined pattern (subclasses 620+).

For molded, shaped or configured coating excluded from this class, see References to Other Classes, below.

F. COATING EDIBLE MATERIALS, ANIMAL BODIES AND VEGETATION

This class provides for apparatus for applying fluent coating material to foodstuffs. By fluent material is meant any material which flows or may be handled like a liquid or fluid substance. By way of example, flour, salt or sugar are considered to be fluent materials.

This class does not provide for the application of material handled as discrete units to the work, such as nut

meats, which are positioned individually on the work. This class does not provide for the treatment of living animals and does not provide for the treatment of growing plants. For subject matter for coating edible materials, etc., excluded from this class, see References to Other Classes, below

G. THE LINE BETWEEN CLASS 118 AND CLASS 239

The line between Class 118 and Class 239 is as follows: Class 118 provides for spray type coating devices having means to handle or manipulate the work relative to the spray device (subclasses 300+). Class 118 also provides for spray system wherein the coating apparatus control means is responsive to the presence or absence of work (subclasses 2+). Class 118 also provides for spray type coating devices which are supported by or traverse the surface of the work and in which the direction of motion of the spray type device is controlled by the law of the machine, rather than by direct manipulation of the operator.

Class 239 takes spraying or scattering systems, per se, where no work handling structure is recited in the claims. Class 239 also takes work surface supported and traversing spray type coating devices in which the direction of motion of the carriage is determined at the will of the operator. The presence of guide structure which merely aids in the determination of the direction of motion by the operator does not exclude the subject matter from Class 239. By way of example, devices for spray painting a stripe on the surface of a road having a guide for aiding the operator in maintaining the direction of the painting device can be found in Class 239; devices for spray painting a stripe on a roadway having means engaging the edge of the road, which means positively limits the direction of motion of the device once the device is put into operation, can be found in Class 118 (subclass 305). In Class 239 the device may have a shield, guard or deflector to confine the distributed material; however, if the material is discharged through a stencil or applied in a particular predetermined pattern, the device is excluded from Class 239 and is found in Class 118 (subclass 301).

In the matter of a railway car traveling and being guided on rails, if the discharge is directed at the rails, the device may be found in Class 118 (subclass 307); if, however, the discharge is directed at the ground on either side or between the rails, the device can be found in Class 239. Lawn Sprinklers which traverse a hose, supported on the ground are found in Class 239 (subclass 748) since the ground on both sides of the hose

(equivalent to the rail in the example cited above) is being sprayed.

In regard to the mixing with fluid and spraying of particulate solids, the line between Class 118 and Class 239 is as follows: In the absence of a work surface or support claimed in relation to the spray apparatus, (which indicates classification in Class 118), devices which add the particulate solids to fluid and discharge the mixture through a claimed terminal element recognized for Class 239, or devices which add particulate solids downstream of a recited terminal element of the Class 239 type in an unobstructed or unconfined space are classified in Class 239; devices which add particulate solids to fluid discharging from an opening or nozzle (nominal of specific) in a confining and guiding chamber or pipe with or without flow guides therein and discharging the mixture from the chamber or pipe through a mere opening or unmodified outlet, are classified in Class 118.

Apparatus comprising a container for nonfluid material and a scattering or strewing means for the material will be found in Class 239, subclasses 650+.

SECTION III - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

- 12, Boot and Shoe Making, subclass 41.3 for apparatus for flexing or otherwise making pliable a shoe sole, in which the sole is treated with a moistening fluid, generally a liquid while being flexed. (Coating Combined with Other Operations)
- 12, Boot and Shoe Making, subclass 79.5 for machines for applying wax to parts of boots and shoes, generally the edge of the sole or heel, and polishing such parts, and subclass 18.2 for machines for inserting filling material into shoe bottoms and for smoothing and packing the same. (for coating of textiles or leather excluded from Class 118)
- 12, Boot and Shoe Making, subclass 18.2, 41.3 and 79.5
- 15, Brushing, Scrubbing, and General Cleaning, appropriate subclasses for apparatus for the removal of foreign matter by a draft or current of air, steam, or equivalent gaseous fluid; dry brushing alone; brushing with an applied liquid; or any combination including one or more of these agencies. Also see subclasses 30+ for machines especially adapted for cleaning,

blackening and polishing boots and shoes in which the cleaning or polishing instruments are of the brush or broom type, except those provided for in the class for Coating Implements with Material Supply, as defined in the Lines With Other Classes of the definition of that class In addition, Class 15 provides for the following type of applicators:

- (a) Solid member applicators that are implements, i.e., devices adapted to be held in the hand and directly actuated by the hand of the user as defined in the Glossary of the main class definition of Class 15.
 - (b) (2) Work traversing solid member applicators the direction of motion of which is determined by the operator rather than by the inherent law of operation of the machine itself. In this respect guides which aid in the determination of the direction do not exclude the device from Class 15 (see subclass 560 of Class 15 by way of example).
 - (c) (3) Subcombinations of coating devices provided for in Class 15 such as impregnated wipers, brush structure, scraper structure, or pad structure where the base or supporting element is not claimed; except that a patent shall be placed in Class 118 when by disclosure it is restricted to a coating doctor blade function (i.e., operating to distribute or determine the thickness of coating material applied to work or to an applicator).
 - (d) Class 118 takes all coating apparatus not set forth above and not provided for in any other class. See also Coating Edible Materials, Animal Bodes, and Vegetation, above.
- 15, Brushing, Scrubbing, and General Cleaning, subclasses 30+. (for coating of textiles or leather excluded from Class 118)
 - 15, Brushing, Scrubbing, and General Cleaning, subclasses 235.1+ for implements used in applying mortar or plaster to a surface, and subclass 210.5 for graining implement, i.e., devices having a working face especially adapted for imitating the grain of wood by drawing the implement over pigment; and see the reference to Class 401, Coating Implements With Material Supply, hereinbelow. (Class for molded, shaped or configured coating excluded from Class 118)

- 15, Brushing, Scrubbing, and General Cleaning, subclasses 3.12+ for devices there provided, disclosed for treating (usually cleaning) fruit, vegetables, meat, eggs, nuts, or other discrete edible particles by instrumentalities provided for in that class, usually by brushes or wipers, in which either (1) a fluid is applied to the work, or (2) the work is heated, usually to dry it. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 17, Butchering, subclass 11.2 and 15.
- 19, Textiles: Fiber Preparation, subclasses 66+ for apparatus in which fibers are treated with fluids for some other purpose than to make them straight, clean, and parallel. The fluid treatment is usually to place the fibers in condition for the purpose for which they are to be utilized. (for coating of textiles or leather excluded from Class 118)
- 19, Textiles: Fiber Preparation, subclasses 66+ for apparatus for liquid treatment of textile fibers combined with working of the fibers. (Coating Combined with Other Operations)
- 26, Textiles: Cloth Finishing, subclass 19 for apparatus for working a fabric in wet condition to increase its compactness. (Coating Combined with Other Operations)
- 26, Textiles: Cloth Finishing, subclasses 19+ for fluid treatment of cloth for the purpose of fulling the same. (for coating of textiles or leather excluded from Class 118)
- 28, Textiles: Manufacturing, subclasses 178+ for devices for manipulating warps in the form of sheets in connection with sizing and drying operations. A complete machine is called a slasher. Also see subclasses 217+. (Class for coating of textiles or leather excluded from Class 118)
- 28, Textiles: Manufacturing, subclasses 217+ and especially 246, 261, 265+, and 285+ for mechanical operations and finishing thread, combined with fluid treatment. (Coating Combined with Other Operations)
- 33, Geometrical Instruments, subclasses 41+ for marking means when designed for drawing a plurality of parallel lines or for drawing a line at a definite distance from a guide. (Class for molded, shaped or configured coating excluded from Class 118)
- 34, Drying and Gas or Vapor Contact With Solids, appropriate subclass for dryer structure, per se, even if the drying entails a chemical reaction between the coated base and the drying medium. Class 34 also provides for steam application to or impregnation of the work, per se. Apparatus for treating a coating with a solvent vapor to smooth, polish or coalesce the coating, per se, is in Class 34.
- 38, Textiles: Ironing or Smoothing, subclass 3 for smoothing machines for that class, combined with a fabric moistener. (Coating Combined with Other Operations)
- 43, Fishing, Trapping, and Vermin Destroying subclasses 125+ for apparatus for creating or involving fumes or smoke when such fumes are used for destroying vermin. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 53, Package Making, subclasses 111+ for apparatus for coating an article and then packing or packaging the article, and subclass 131.1 for packaging apparatus combined with means to coat the package cover. (Coating Combined with Other Operations)
- 57, Textiles: Spinning, Twisting, and Twining, subclass 7, 8, 32, 286, 292, and 295+ for the various operations provided for in that class, combined with coating apparatus. (Coating Combined with Other Operations)
- 65, Glass Manufacturing, subclass 169 for a glass working or treating apparatus combined with means providing a parting material to either the work or to the apparatus; and subclass 170 for glass-working or treating apparatus having apparatus lubricating means. (see Mold or Die Coating, above)
- 65, Glass Manufacturing, subclass 156 for fusion bonding means combined with article molding means. (Class for molded, shaped or configured coating excluded from Class 118)
- 68, Textiles: Fluid Treating Apparatus, appropriate subclasses for machines, implements and accessories for fluid treatment of textile fabrics, textile fibers, and pulp as for the purpose of carbonizing, bleaching, dyeing, moistening, mercerizing, or mordanting the same or for the removal of dirt, grease, soil, and other like substances from them by the use of solvents, saponifiers or emulsifiers, unless specifically provided for elsewhere. This class (Class 68) provides for all of the above mentioned operations and patents, even though claimed generically, are placed in Class 68 if any of the above described operations are disclosed. (Class for coating of textiles or leather excluded from Class 118)

- 69, Leather Manufactures, subclass 28 for the treatment of fur with a fluid, and subclass 29 for apparatus for the treatment of hides, skins, and leather, with a fluid for the production of leather. (Class for coating of textiles or leather excluded from Class 118)
- 72, Metal Deforming, subclasses 41+ and 46+ for a plastic-metal shaping apparatus having means for applying a coating or lubricant to the work or to the work-engaging surface of a tool, e.g., lubricating a wire-drawing die, prior to forming the work. (see Mold or Die Coating, above)
- 86, Ammunition and Explosive-Charge Making, subclass 17 and 19 for machines for varnishing the interior of cartridge shells or for lubricating bullets, wads, and cartridges.
- 87, Textiles: Braiding, Netting, and Lace Making, subclass 23 for apparatus for forming strands or fabrics from yarns, filaments, or strands by braiding, knotting and/or intertwisting the strands, having means for applying a coating or an impregnating material to the strands and/or to the fabric at any time relative to the production of the fabric. (Class for Coating Combined with Other Operations)
- 99, Foods and Beverages: Apparatus, appropriate subclass for miscellaneous treatment of food-stuffs. In that class (99) may be found apparatus subjecting food to direct application of steam or gas (subclass 467), applying a solid or particulate material (subclass 494), and subjecting foodstuff to the action of a chemical curing agent or other fluid such as brine (subclass 516). (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 101, Printing, appropriate subclasses for apparatus for printing on textile materials. (Class for coating of textiles or leather excluded from Class 118)
- 101, Printing, appropriate subclasses for apparatus adapted to produce characters or designs on surfaces by impression of types or dies, by applying coating material through openings or previous portions of a pattern sheet as in stenciling or by impressions in planographic or intaglio surfaces. (Class for molded, shaped or configured coating excluded from Class 118)
- 114, Ships, subclass 224 for devices for calking or making the seams water tight and painting, pitching or puttying the same.
- 117, Single-Crystal, Oriented-Crystal, and Epitaxy Growth Processes; Non-Coating Apparatus Therefor, for processes and non-coating apparatus for growing therein-defined single-crystal of all types of materials, including inorganic or organic. See Class 117 definitions for guidance in the placement of single-crystal related art.
- 112, Sewing, subclass 17 for sewing machines having means to color the seams, and subclass 42 for shoe sewing machines including means to wax the thread. (Class for Coating Combined with Other Operations)
- 119, Animal Husbandry, subclasses 156+ for inventions for washing, applying medicaments to, or otherwise treating animals for the purpose of freeing them from filth and parasites, or for repelling insects, healing sores, etc. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 126, Stoves and Furnaces, subclass 343.5, for devices for melting material in a receptacle, vat, tank, or conduit.
- 128, Surgery, subclasses 200.14+ and 203.12+ for medicating atomizers, vaporizers and powdered depositors. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 131, Tobacco, subclasses 300+ for apparatus for subjecting tobacco to the action of fluids or fluent materials or for adding fluent material to tobacco or tobacco compositions and see note (3) of that subclass for the line between Class 131 and Class 118. And see also the reference to subclasses 35, 69, 90, 284 in this class (118).
- 131, Tobacco, subclass 35, 69, 90, and 284 for cigar and cigarette making apparatus combined with means to coat the work. (Class for Coating Combined with Other Operations)
- 132, Toilet, subclass 73, 216 for template type devices which aid in defining the area of application of cosmetics and subclasses 319, 320 for devices there provided, peculiarly shaped so as to aid in applying cosmetics in a definite form or pattern. (Class for molded, shaped or configured coating excluded from Class 118)
- 134, Cleaning and Liquid Contact With Solids, appropriate subclasses, for apparatus for contacting of solids with liquids for any purpose not provided for in other classes.
- 134, Cleaning and Liquid Contact With Solids, appropriate subclasses for apparatus for cleaning by application of liquid only. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)

- 137, Fluid Handling, as the generic class for the handling of fluids, which class has miscellaneous fluid distributing systems, valve actuation, fluid handling tanks, etc. Class 118 does not provide for the fluid handling systems, per se, even though the disclosure is of the fluid as a coating material.
- 139, Textiles: Weaving, subclass 36 for means for applying a fluid to the warp threads while in the loom. (Coating Combined with Other Operations)
- 139, Textiles: Weaving, subclass 36.
- 144, Woodworking, subclass 58 for apparatus for inserting severed match splints into a dipping frame or conveyor and dipping the splints into a bath necessary to form the match heads. Class 144 is the generic home for apparatus which takes match splints and passes them through one or more of the operations involved in the conversion of the splints into matches including coating.
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses and especially subclass 500 for laminating devices having in addition means to cast, mold or extrude a lamina. Also see subclasses 441.5+. (Class for molded, shaped or configured coating excluded from Class 118)
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for processes and devices for laminating combined with means applying a fluent material such as adhesive to the materials to be bonded. That class (156) also provides for the combination of laminating followed by coating and machines and implements including means for moistening (to activate an adhesive coating) and adhering the flap of an envelope to the body in subclasses 441.5+. (Class for coating Combined with Other Operations)
- 162, Paper Making and Fiber Liberation, subclasses 265+ for paper making apparatus combined with means to coat the formed web. This class (118) takes coating devices, per se, even though disclosed as applying a coating to a fibrous product before completion. (Class for coating Combined with Other Operations)
- 162, Paper Making and Fiber Liberation, subclass 265, subclasses 192 and 411.
- 164, Metal Founding, subclasses 267+ for coating means associated with a metal casting means. (see Mold or Die Coating, above)
- 164, Metal Founding, appropriate subclasses for an apparatus for casting metals. (Class for molded, shaped or configured coating excluded from Class 118)
- 166, Wells, appropriate subclasses for apparatus for cementing wells.
- 178, Telegraphy, subclasses 4+ and 23+ for printing telegraph systems. (Class for molded, shaped or configured coating excluded from Class 118)
- 184, Lubrication, for apparatus for applying lubricants to the bearing surfaces of machines parts, and see especially subclasses 15.1+ for apparatus for applying lubricant to rope, chain, belt or cables.
- 204, Chemistry: Electrical and Wave Energy, appropriate subclasses for apparatus directed to electrolytic treatment of textiles. (for coating of textiles or leather excluded from Class 118)
- 204, Chemistry: Electrical and Wave Energy, subclasses 471+ for electrophoretic or electro-osmotic coating or forming of an object (e.g., coating mold, etc.), subclasses 192.12+ for glow discharge sputter deposition (e.g., cathode sputtering to coat a coating mold, etc.), subclasses 194+ for electrolytic apparatus (e.g., means used to electroform or electroplate a coating mold, etc.), subclasses 622+ for electrophoretic or electro-osmotic coating or forming apparatus, and subclasses 298.02+ for sputter coating apparatus. (see Mold or Die Coating, above)
- 204, Chemistry: Electrical and Wave Energy, subclasses 471+ for electrophoretic or electro-osmotic coating or forming of an object (e.g., coating mold, etc.), subclasses 192.12+ for glow discharge sputter deposition (e.g., cathode sputtering to coat a coating mold, etc.), subclasses 194+ for electrolytic apparatus (e.g., means used to electroform or electroplate a coating mold, etc.), subclasses 622+ for electrophoretic or electro-osmotic coating or forming apparatus, and subclasses 298.02+ for sputter coating apparatus. (Class for molded, shaped or configured coating excluded from Class 118)
- 204, Chemistry: Electrical and Wave Energy, appropriate subclasses for electrolytic apparatus for the preparation, treatment, and preservation of foods and beverages. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 205, Electrolysis: Processes, Compositions Used Therein, and Methods of Preparing the Compositions, subclasses 67+ for electroforming or a composition used therefor (especially subclass

- 70 for electroforming of a mold, mask, or masterform) and subclasses 80+ for electrolytic coating (e.g., electroplating of a coating mold, etc.). (Class for molded, shaped or configured coating excluded from Class 118)
- 205, Electrolysis: Processes, Compositions Used Therein, and Methods of Preparing the Compositions, subclasses 67+ for electroforming or a composition used therefor (especially subclass 70 for electroforming a mold, mask, or masterform) and subclasses 80+ for electrolytic coating (e.g., electroplating of a coating mold, etc.). (see Mold or Die Coating, above)
- 206, Special Receptacle or Package, subclass .5 for bluing and infusion packages. (Class for coating of textiles or leather excluded from Class 118)
- 209, Classifying, Separating, and Assorting Solids, subclasses 47+ for apparatus for separating some components of a mixture of solids by causing them to adhere to a surface or body, in which some of the components of the mixture of solids to be separated are coated with some substance which enables such components to adhere to the selecting body or surface. (Coating Combined with Other Operations)
- 210, Liquid Purification or Separation, for patents for separating liquids from textiles by decantation, filtration, or centrifugal action. (for coating of textiles or leather excluded from Class 118)
- 210, Liquid Purification or Separation, subclass 193 for filter means with means to precoat the filter. (Coating Combined with Other Operations)
- 219, Electric Heating, subclass 438 for electrically heated vessels including subcombinations of a coating device which claim only an electrically heated vessel for holding material.
- 221, Article Dispensing, appropriate subclasses for article dispensing (feeding) not otherwise provided for. Such feeding may be the feeding of articles to a coating machine of the type provided for in this class where the details of the coating machine are not significant and where the feeding is not so specialized to the performance of the coating function as to preclude classification in a general feeding art.
- 222, Dispensing, subclass 113 and 146.1+ for a dispenser including either a burner or other heating means, respectively, which subclasses include patents to sealing wax heating and dispensing devices. (Coating Combined with Other Operations)
- 222, Dispensing, appropriate subclasses, as the generic place for dispensers, per se. Class 222 provides for the dispensing of a coating material where all that is being claimed is the dispensing, per se, that is, no work handling structure is recited in the claims nor is any relationship implied between the coating material dispenser and the work.
- 223, Apparel Apparatus, subclass 3 for apparatus for applying paste to collars in combination with means to fold the material of the collar. (Coating Combined with Other Operations)
- 223, Apparel Apparatus, subclass 10 for apparatus for wetting or sizing hat bodies by dipping, brushing, or in other ways, subclass 23 for miscellaneous devices for cleaning hats during manufacture or to renovate them, and subclass 51 for devices for heating and/or steaming hats and other articles of that class in making or remodeling the same. Also see subclass 3. (Class for coating of textiles or leather excluded from Class 118)
- 228, Metal Fusion Bonding, appropriate subclasses for uniting plural metallic work portions by a fusion bonding operation; as well as uniting a metal to a nonmetal or a nonmetal to another nonmetal if a metallic filler is used to effect a metallurgical bond.
- 235, Registers, appropriate subclass for printing registers, calculators and voting machines. (Class for molded, shaped or configured coating excluded from Class 118)
- 239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses, for apparatus pertaining to the projection, spraying, diffusing or scattering of liquids, gases or other materials. See Lines with Other Classes, above, for the line between Class 239 and Class 118.
- 242, Winding, Tensioning, or Guiding, for winding and unwinding to or from storage and selected articles of defined length. (Coating Combined with Other Operations)
- 291, Track Sanders, for means for applying sand or like material to vehicle wheel treads or to vehicle tracks for the purpose of increasing the tractive effect between such wheels and roads or rails.
- 312, Supports: Cabinet Structure, subclasses 31+ for containers under the class definition combined with means to treat contained material or articles with a gas or vapor usually by the operation of a slow diffuser or absorber.
- 352, Optics: Motion Pictures, subclass 56 and 130 for methods and apparatus for film treating or

- working including coating combined with motion picture methods or apparatus. (Coating Combined with Other Operations)
- 366, Agitating, appropriate subclasses for agitating apparatus which may be disclosed as involving a coating function but comprising merely means to agitate particulate base material with particulate or liquid coating material. Class 366 does not provide for additional operations such as separation of the coated base from the coating material or vice versa, such combinations being classified in this class (118) or other classes appropriate thereto. Class 366 provides for apparatus for the preparation and dispensing of mortar where the preparation includes an agitation step in subclasses 1+, and in subclass 10 may be found mixing nozzles having means to commingle liquid and dry materials.
- 396, Photography, appropriate subclasses for apparatus producing pictures on a light sensitive medium by the action of light thereon. (Class for molded, shaped or configured coating excluded from Class 118)
- 396, Photography, subclasses 564+ for means to accomplish an operation of that class which may include coating means. (Coating Combined with Other Operations)
- 399, Electrophotography, appropriate subclasses for means to accomplish an electrophotography having coating means. (Coating Combined with Other Operations)
- 400, Typewriting Machines, subclasses 202+ for typewriters having means to ink the ribbon. (Coating Combined with Other Operations)
- 401, Coating Implements With Material Supply, appropriate subclass for a hand manipulable implement with material supply, which contacts the work for applying or spreading coating material. (Coating Combined with Other Operations)
- 404, Road Structure, Process, or Apparatus, appropriate subclasses under subclass 83 for the combination of means to coat or impregnate with other means for road building. (Coating Combined with Other Operations)
- 412, Bookbinding: Process and Apparatus, appropriate subclass for apparatus for manufacturing books, including means to apply adhesive to various parts of the book. (Coating Combined with Other Operations)
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, appropriate subclasses for the combination of coating apparatus and machines for working up previously made paper or other sheet or web material into an article of commerce. Working of wood veneer, cloth and similar flexible materials is to be found in class (493) unless provided for elsewhere. Class (493) is the generic home for such apparatus as is defined in its main class definition, combined with coating apparatus. See especially subclasses 220+ for a machine which applies gum or glue to a previously cut envelope blank and folds the same. (Coating Combined with Other Operations)
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 90+ for shaping or reshaping apparatus combined with coating means for a work contact means or for the work; see the class definition of this class for the line between Classes 118 and 425. (also see Mold or Die Coating, above)
- 400, Typewriting Machines, appropriate subclass for printing mechanism in which each type is impressed separately, with means to feed the work to position for the next impression. (Class for molded, shaped or configured coating excluded from Class 118)
- 401, Coating Implements With Material Supply, appropriate subclasses for a writing, or other hand-manipulated coating implement; including subclass 35 for an implement having plural, side-by-side, simultaneously operative striping tools; and subclass 193 for a striping implement including a work-engaging guide for the tool; and see the class definition of Class 401, Lines With Other Classes and Within This Class, Other Loci of Patents to Coating Implements with Material Supply, for the line between Class 401 and the class of Geometrical Instruments. (Class for molded, shaped or configured coating excluded from Class 118)
- 401, Coating Implements With Material Supply, appropriate subclasses for coating implements (i.e., solid member applicators) with material supply. Original placement of patents to implements conforming to the definition of that class may be found in Class 118, in subclasses 100+ and 200+, only because these subclasses have not been screened. Subclasses 76+, however, have been screened and the hand manipulated implements for coating a surface by rubbing transfer of solid coating material have been placed in Class 401, subclasses 49+.

- 406, Conveyors: Fluid Current, appropriate subclasses for apparatus for conveying solid material in a fluid current, particularly subclasses 108+ for intakes to fluid current conveyors where a dry particulate coating material is entrained in a gaseous stream and where no relationship to the work being coated is claimed.
- 412, Bookbinding: Process and Apparatus.
- 414, Material or Article Handling, subclasses 222.01+ for apparatus for charging a load holding or supporting element from a source, and means for transporting the element to a working treating, or inspecting station.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 104+ for apparatus for making a composite article by shaping or reshaping a base combined with means molding a coating on the base and subclasses 110+ for composite article making apparatus comprising means to mold fluent or bulk stock to a preform within a shaping cavity. (Class for molded, shaped or configured coating excluded from Class 118)
- 434, Education and Demonstration, subclasses 81+ for apparatus relating to the artistic sense, free-hand and mechanical drawing, painting and sculpturing. (Class for molded, shaped or configured coating excluded from Class 118)
- 462, Books, Strips, and Leaves for Manifolding, appropriate subclass for manifolding articles comprising superposed bodies on which indicia is to be simultaneously produced and which may include transfer means (e.g., carbon paper interposed between the bodies or comprising a coating on one of the bodies). (Class for molded, shaped or configured coating excluded from Class 118)
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 90+ for apparatus to coat edible materials combined with means to shape or reshape a fluent or plastic edible into a base for the coating. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 452, Butchering, subclass 72 for an apparatus for coating a carcass with wax for hair removal and subclasses 74+ for apparatus particularly adapted for the scalding of animal carcasses. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 90+, 104+, and 110+.
- 427, Coating Processes, appropriate subclasses for processes of coating or impregnating a work-piece, and see the notes in the class definition of that class for other classes that provide for coating processes.
- 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, appropriate subclasses for post imaging processes.
- 434, Education and Demonstration, subclasses 81+.
- 462, Books, Strips, and Leaves for Manifolding.
- 492, Roll or Roller, for a roll, per se, not elsewhere provided for, and see References to Other Classes of the class definition for the loci of roll pairs with working surface.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, in general and particularly subclasses 220+.
- 604, Surgery, subclasses 19+ and 58 for medicating, irrigating and aspirating devices which introduce or remove materials from the body. (Class for subject matter for coating edible materials, animal bodies, etc., excluded from Class 118)

SECTION IV - GLOSSARY

COATING

The term "coating" is used throughout the definitions in a generic sense to mean either (1) an initially fluent film or layer of material lying on or bonded to the surface of a base, or (2) an impregnating material which penetrates the base either partially or completely and all or part of which is retained therein, either in its original form or physically or chemically combined therewith.

DOCTOR, WIPER, OR SCRAPER

Any instrument acting on the coating or on the work for the purpose of spreading or removing surplus coating material. The instrument may be, for example, a solid scraper blade, a roller squeegee or as in the case of an "air doctor" a gaseous blast. For definitions of terms appearing in subclass titles and not mentioned in the above definitions, see the definitions to the particular subclass in which the term appears.

WORK

The base or material to which the coating is applied, either before or after coating.

SUBCLASSES

13 This subclass is indented under the class definition. Coating apparatus specialized or adapted to apply a coating to work and wherein the coating and/or work constitutes food for human consumption.

(1) Note. Patents are placed in this and the indented subclasses on the basis of disclosure, i.e., if the device, as disclosed, is for use in coating edible materials classification is here and in the indented subclasses.

(2) Note. This and indented subclasses also take apparatus, except molding apparatus for shaping or reshaping an edible base, to prepare the base material, apparatus to subsequently treat the coated base and other ancillary noncoating apparatus, per se, when there is no other class which specifically provides therefore.

SEE OR SEARCH CLASS:

99, Foods and Beverages: Apparatus, and see the notes of the main class definition of that class for apparatus for the preparation, treatment and preservation of foods and beverages.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 90+ for coating apparatus combined with molding means for shaping or reshaping an edible base or edible composite and subclasses 110+ for apparatus to make a composite product including an edible by uniting a preform and fluent or bulk material within a shaping cavity.

14 This subclass is indented under subclass 13. Coating apparatus having means to modify the coating on the work, which modification is in the nature of an ornamentation or design.

(1) Note. Here may be found, for example, devices which have solid means contacting the coating to draw out a string of coating for the purpose of imitating the appearance of hand dip chocolate, and devices for applying a second layer of

coating material to the coated base, which second layer is applied in a limited area or in a particular pattern or configuration.

SEE OR SEARCH THIS CLASS, SUBCLASS:

18, and see the notes thereto, for coating devices having a solid means for contacting the surface of the coating after application to the base for purposes other than those provided for in this subclass.

211, and see the notes thereto, for other coating devices wherein the coating is applied in a particular pattern or definite circumscribed area of application.

15 This subclass is indented under subclass 13. Coating apparatus combined with means to sever the base.

SEE OR SEARCH THIS CLASS, SUBCLASS:

35+, for other work cutting and punching combinations wherein the base is an inedible material.

SEE OR SEARCH CLASS:

83, Cutting, appropriate subclasses for cutting and punching apparatus, per se.

16 This subclass is indented under subclass 13. Coating apparatus having two or more distinct coating instrumentalities.

(1) Note. The patents in this subclass and indented subclass are cross-referenced to the appropriate subclasses for the single coating devices.

SEE OR SEARCH THIS CLASS, SUBCLASS:

216+, and see the notes thereto, for other coating apparatus having plural instrumentalities for applying the coating to the base.

17 This subclass is indented under subclass 13. Coating apparatus having means for removing excess coating material from the coating apparatus and/or for placing the apparatus in condition for use.

- (1) Note. Here, for example, may be found devices for cleaning the article conveyor or for applying a lubricating means to the conveyor to prevent the coated article from adhering thereto.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
70, for cleaning and/or conditioning apparatus for use in coating inedible base material.
- 18** This subclass is indented under subclass 13. Coating apparatus having a solid member contacting the coating on the coated base to modify the coating.
- (1) Note. The solid work treating means may have one or more of a number of functions, for example, it may remove surplus coating material from the coated article and thus determine the thickness of the coating left on the article, it may finish the coated article without removing the surplus coating material or it may remove tailings from the coated article.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
100+, for coating devices having solid means acting on an edible coated base.
- 19** This subclass is indented under subclass 13. Coating apparatus wherein discrete work pieces to be coated are tumbled or agitated in contact with the coating material to thereby receive a coating.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
417+, for rumble type coating devices wherein the base to be coated is an inedible material and see the notes thereto for other rumble type devices.
- 20** This subclass is indented under subclass 13. Coating apparatus provided with means for heating, drying, cooling and/or contacting a noncoating gas or a vapor with the work before, during and/or after the coating operation.
- (1) Note. The gas or vapor may heat, cool, dry, or remove surplus coating material from the coated work.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
13, for coating an edible base with a coating gas or vapor.
58+, for heating, cooling, drying, and/or contacting a noncoating gas or vapor with an inedible base.
715+, for coating an inedible base with a coating gas or vapor.
- 21** This subclass is indented under subclass 20. Coating apparatus wherein the gas or vapor is directed forcibly against the coated work to redistribute and/or remove excess coating material therefrom.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
63, for apparatus for redistributing and/or removing excess coating material from an inedible coated base by a gas blast.
- 22** This subclass is indented under subclass 13. Coating apparatus having means for striking or shaking the work to distribute the coating material on the base or to remove excess coating material from the coated base.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
57, for apparatus for vibrating coated inedible work.
- 23** This subclass is indented under subclass 13. Coating apparatus combined with noncoating devices not provided for specifically above.
- (1) Note. The basic subject matter of this class (118) is detailed in the definition and notes for the homologous subclass for inedible coating devices, viz., subclass 75, which definition and notes are here included by reference.
- (2) Note. See (5) Note to subclass 75 for examples of combined apparatus found in this subclass (23) or in subclass 75, and see section III of the class definition

of this class for other combined apparatus.

SEE OR SEARCH THIS CLASS, SUBCLASS:

75, for coating devices combined with noncoating devices wherein the work is inedible, and see (1) and (2) Notes, above.

24 This subclass is indented under subclass 13. Coating apparatus wherein coating material, unsupported at the moment of contact with the base to be coated, is sprayed, poured, dripped, flung or impelled against the base to be coated.

(1) Note. If the coating material is supported at the instant of contact with the base to be coated, it is considered to be applied by an applicator or by immersion. Edible bases coated by applicators are classified in subclass 13, above, and those coated by immersion are classified in subclass 26, below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13, and see (1) Note, above.
26+, and see (1) Note, above.
300+, and see the notes thereto, for coating devices of the projection or spray type wherein the coating is applied to an inedible base material.

25 This subclass is indented under subclass 24. Coating apparatus having means to sequentially interrupt and initiate the operation of the projector to apply coatings to successive workpieces.

(1) Note. The projector may be so controlled as to apply a definite measured quantity of coating material each time it is operated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

676+, for coating apparatus in which the projected application is controlled by the presence of successive workpieces.

26 This subclass is indented under subclass 13. Coating apparatus wherein the article to be coated is (1) introduced or dipped, wholly or partially into a pool or bath of coating material or (2) where a supported pool stream or column of coating material is brought into contact with the article to be coated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

400+, for devices for applying coating to inedible articles by immersion and see the notes thereto for other places wherein apparatus for immersing work in fluids can be found.

27 This subclass is indented under subclass 26. Coating apparatus where pool or head of coating material is positioned above the work and is confined, retained, or supported, at least in part, by a surface of the work being coated, the motion of the article away from the confined coating material separating a film of material which adheres to the work.

SEE OR SEARCH THIS CLASS, SUBCLASS:

407+, for other coating apparatus wherein the work confines or supports the coating material pool.

28 This subclass is indented under subclass 26. Coating apparatus wherein a container for the pool or bath is mounted for movement.

(1) Note. By way of example, immersion tank may move to surround a fixed work piece with coating material, or both the workpiece to be coated and the immersion tank may move into coating position, or the tank may be movable mounted to facilitate cleaning.

SEE OR SEARCH THIS CLASS, SUBCLASS:

421, for other coating apparatus having movably mounted receptacles for the coating material.

29 This subclass is indented under subclass 26. Coating apparatus having means to manipulate, conduct and regulate the flow of the coating material to and/or from the pool or bath, and/or

- to maintain circulation of the coating material therein.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 429, for liquid supply and/or control means for immersion type apparatus which applies coating material to an inedible base.
- 688+, for automatic control means for maintaining a desired level of coating material in an immersion tank.
- 30** This subclass is indented under subclass 26. Coating apparatus having means for conveying or manipulating the work into, through, and/or out of the pool or bath.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 423+, for conveying or manipulating an inedible base into, through, and out of a pool or bath.
- 31** This subclass is indented under subclass 13. Coating apparatus having (1) means, per se, for holding or handling the work and/or (2) means to receive surplus coating material draining from the work after the coating operation.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 500+, for devices for handling and/or holding inedible work.
- 31.5** This subclass is indented under the class definition. Apparatus particularly adapted to taking prints, impressions or patterns of animal surfaces wherein the animal body member, per se, is the printing device.
- (1) Note. This subclass takes, for example the making of finger prints, foot prints, etc., for identification purposes.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 264+, for inking pads, per se.
- 500+, for finger print card or sheet holders which retain the record during the printing operation.
- SEE OR SEARCH CLASS:
- 427, Coating Processes, subclass 1 for body member printing processes.
- 32** This subclass is indented under the class definition. Coating apparatus combined with means to (1) bend or double the work back upon or alongside itself to form folds or pleats, and/or (2) open or unbend work previously folded or pleated.
- (1) Note. Here may be found, for example, means for opening a folded envelope and applying sealing material to the flap, or means for hanging a coated web in pleated form to facilitate drying.
- SEE OR SEARCH CLASS:
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 90+ for molding apparatus for shaping or reshaping plastic or earthy materials combined with means for applying a coating to the material or the apparatus.
- 493, Manufacturing Container or Tube From Paper, or Other Manufacturing From a Sheet or Web, subclasses 405+ for a device for folding sheet or web material.
- 33** This subclass is indented under the class definition. Coating apparatus combined with means to apply a stress tending to cause elongation of the work.
- (1) Note. Here may be found, for example, patents for tentering cloth during the coating operation, and also means for maintaining a web under tension as it passes through the coating device.
- (2) Note. Mere means for pulling a web through a coating device against the normal resistance of the device are not considered tensioning devices unless some specific means are present to place a drag on the web, and such devices will be found in appropriate subclasses below, for handling web or strand form work.

- SEE OR SEARCH CLASS:
- 26, Textiles: Cloth Finishing, subclasses 71+ for means for applying tension to cloth or expanding it to remove wrinkles, creases and folds or to increase its dimensions.
- 28, Textiles: Manufacturing, subclasses 240+ for thread stretching apparatus, per se, or combined with coating means, where the thread is stretched beyond its elastic limit.
- 242, Winding, Tensioning, or Guiding, subclasses 410+ and 147+ for a device to control longitudinal stress in a running material; e.g., during unwinding.
- 427, Coating Processes, subclasses 171+ for processes of coating including stretching or tensioning.
- 34** This subclass is indented under subclass 33. Coating apparatus in which the stress is applied in the direction at right angles to the length or direction of motion of the work.
- SEE OR SEARCH CLASS:
- 26, Textiles: Cloth Finishing, subclasses 87+ for the structure of a spreader for the transverse stretching of a running web of cloth.
- 35** This subclass is indented under the class definition. Coating apparatus combined with means for cutting, severing, scoring, pricking, and/or punching the base.
- (1) Note. Provision of a cutting edge or strip against which the article may be severed by tearing is considered a cutting means for purposes of this classification.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 15+, for cutting edible base material.
- 18, and 100+, for cutting or scoring of the coating material only.
- SEE OR SEARCH CLASS:
- 83, Cutting, appropriate subclasses for devices for cutting, scoring, pricking and/or punching a solid material, in general.
- 36** This subclass is indented under subclass 35. Coating apparatus wherein the work is in the nature of a flexible strand or cord.
- 37** This subclass is indented under subclass 35. Coating apparatus wherein the work is in the nature of a web or sheet.
- 38** This subclass is indented under subclass 37. Coating apparatus wherein the cutting operation is performed longitudinally of the work.
- 39** This subclass is indented under subclass 38. Coating apparatus wherein the base is also cut transversely of the length of the work.
- 40** This subclass is indented under subclass 37. Coating apparatus wherein the work is cut transversely of its length.
- 41** This subclass is indented under subclass 40. Coating apparatus in which the cutter has a reversible motion about a pivot point.
- 42** This subclass is indented under subclass 40. Coating apparatus in which the cutter has a reversible motion in a plane normal to the surface of the work.
- 43** This subclass is indented under subclass 40. Coating apparatus provided with a rigid edge against which the work may be torn.
- 44** This subclass is indented under the class definition. Coating apparatus combined with means to alter the shape of the base either before, during or after the coating operation.
- (1) Note. Distortion of work incident to the handling thereof is excluded from this subclass, as is the mere flexing between opposed members of textile work in the presence of coating material to facilitate penetration of the coating material. To be placed in this subclass the work must be deformed from its normal state, for example, as by embossing of sheet-form work or untwisting of the strands of rope-form work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 32, for coating apparatus combined with folding, unfolding or festooning.
- 72+, for coating apparatus combined with means to place the base in suitable condition to receive the coating, which means may modify the surface of the work.
- 427, for immersion coating apparatus having opposed relatively movable solid means acting on the work during the coating operation to bring about a more intimate contact between the work and the coating material, and see the notes thereto for the location of other art in which the base material is subjected to a combined coating and working operation.

SEE OR SEARCH CLASS:

- 57, Textiles: Spinning, Twisting, and Twining, subclass 32 and see the notes thereto, for operations there provided combined with means for applying fluid or plastic material to the work.
- 72, Metal Deforming, subclasses 41+ and 46+ for plastic-metal shaping apparatus having means for applying a lubricant or a coating to work or to the work-engaging surface of a tool prior to forming the work, e.g., lubricating a wire-drawing die.
- 87, Textiles: Braiding, Netting, and Lace Making, subclass 23 for apparatus there provided, combined with means for applying a coating or impregnating material to the strands or to the fabric at any time relative to the production of the fabric.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 90+ for molding apparatus for shaping or reshaping plastic or earthy materials combined with means for applying a coating to the material or the apparatus.

- 45** This subclass is indented under the class definition. Coating apparatus combined with means to place a solid member adjacent the coated surface to shield the freshly coated surface

from damage or to prevent transfer of coating material therefrom.

SEE OR SEARCH CLASS:

- 12, Boot and Shoe Making, subclass 59 for machines for covering boot straps with paper or other material to prevent soiling of the strap in the manufacture of the boot or shoe.
- 101, Printing, subclasses 416.1+ for means there provided for, to prevent the improper deposition of ink or the rubbing of the ink on the work.

- 46** This subclass is indented under the class definition. Coating apparatus combined with means to print upon the base, which printing means if claimed, per se, would fall within the purview of Class 101, Printing.

SEE OR SEARCH CLASS:

- 427, Coating Processes, subclasses 256+ for processes of forming a nonuniform coating.

- 47** This subclass is indented under the class definition. Coating apparatus including means to (1) subject either the coated surface or the surface to be coated to a flame of fire, or (2) subject the work to a carbonizing treatment.

(1) Note. This subclass includes, for example, apparatus employing a flame to burn off undesired matter or to ignite or decompose solvent or other ingredient of the coating, to oxidize the base or coating, to generate carbon for deposit on the base or to fuse the coating material adjacent the base.

(2) Note. This subclass also includes apparatus for depositing carbon on a base by cracking hydrocarbons in the presence of the base.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 58+, and see the notes thereto for devices for bringing a noncoating gas or vapor into contact with the base material.

SEE OR SEARCH CLASS:

- 28, Textiles: Manufacturing, subclass 174 for devices for assembling yarns or

threads into warps, and manipulations leading up to and including placing the warps in the loom, including means for subjecting the warp to the action of an open flame or an oxidizing temperature.

- 126, Stoves and Furnaces, subclass 271.2 for a surface heater burning fluid fuel.
- 239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 79+ for hand manipulated coating devices which fuse coating material and spray it against a base.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 150+ for carbon black making apparatus wherein the collector or deposit receiving surface is a part of the apparatus as distinguished from a transitory workpiece.
- 427, Coating Processes, for processes of coating and note especially subclasses 299+ for pretreatment of a base and subclasses 331+ for post-treatment of a coating.

- 50** This subclass is indented under the class definition. Coating apparatus combined with a chamber or housing in contact with at least a portion of the work, which chamber or housing has means for inducing a pressure therein other than atmospheric.

SEE OR SEARCH CLASS:

- 159, Concentrating Evaporators, appropriate subclasses for evaporating apparatus.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclass 226, 241, and 242 for apparatus for carrying out reactions of relatively high temperature and pressure; and subclasses 295+ for apparatus having a closed chamber adapted to receive the material to be treated.

- 50.1** This subclass is indented under subclass 50. Apparatus combined with means to treat the work and/or coating material with electrical and/or radiant energy.

- (1) Note. The energy may be applied, for example, in the form of an electrostatic or electromagnetic field or as infrared waves.

SEE OR SEARCH CLASS:

- 427, Coating Processes, subclasses 457+ for processes of coating utilizing electrical, magnetic, or wave energy.

- 52** This subclass is indented under the class definition. Coating apparatus combined with means to rotate the base at such speed that centrifugal force affects the coating.

- (1) Note. The patents are placed in this and the indented subclasses on the bases of disclosure, i.e., if the rotating device functions as a centrifuge the patents are here classified. For work rotating devices combined with a coating apparatus which do not have a centrifuging function, see subclass 416 and the notes thereto.

- (2) Note. The centrifuging may be for the purpose of distributing the coating on the article or for removing excess coating material from the article.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 416, and see (1) Note, above.

SEE OR SEARCH CLASS:

- 164, Metal Founding, subclasses 286+ for centrifugal metal casting apparatus, and particularly subclass 288 for such apparatus including means to hold or position a preformed body.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 425 for centrifugal nonmetal casting apparatus.
- 427, Coating Processes, subclasses 240+ for processes of coating wherein centrifugal force is utilized.
- 494, Imperforate Bowl: Centrifugal Separators, primarily in regard to section V of the definition of that class (494), which includes a listing of certain classes, other than the separating classes, which contain subclasses

relating to centrifugal devices or centrifugal force.

53 This subclass is indented under subclass 52. Coating apparatus wherein the base is rotated around more than one axis of rotation.

54 This subclass is indented under subclass 52. Coating apparatus wherein the centrifuge is so mounted as to have a reversible translating or pivotal motion in addition to the motion of rotation.

(1) Note. In this subclass may be found, for example, devices in which the centrifuge first immerses the article to be coated in an immersion bath and then removes and centrifuges the article.

55 This subclass is indented under subclass 52. Coating apparatus particularly adapted to coat the inner surface of a cavity or hole within the confines of the work.

(1) Note. The work is usually rotated about an axis which passes through its center.

56 This subclass is indented under the class definition. Coating apparatus provided with means to impart motion to the work for the purpose of altering the characteristics of the coating.

(1) Note. In this and the indented subclass may be found, for example, devices for immersing the work and then slowly rotating or positionally moving it to insure that the coating flows evenly over the entire surface of the article.

(2) Note. Normal advancement of the work is not considered manipulation within the definition of this subclass even though the work is operated on by a device such as a doctor blade during said normal advancement.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52+, for coating apparatus combined with means to rotate the base at such speed that centrifugal force affects the coating.

100+, for coating apparatus having a solid member acting on a coating after its application.

639, for coating apparatus combined with means to deter excess accumulations of coating material by the action of an electrostatic field.

57 This subclass is indented under subclass 56. Coating apparatus having means for striking or shaking the work to distribute the coating material on the base or to remove excess coating material from the coated base.

SEE OR SEARCH THIS CLASS, SUBCLASS:

22, for apparatus for vibrating edible work.

58 This subclass is indented under the class definition. Coating apparatus combined with means to heat, cool, dry and/or contact a noncoating gas or vapor with the work, before, during and/or after the coating operation.

(1) Note. Devices for merely holding the base in the ambient air for the purpose of cooling the same are excluded from this subclass. For such subject matter search the appropriate work handling subclasses set forth below.

(2) Note. Means for merely applying heated coating material to the base or mere heating systems for the coating material are not considered subject matter for this subclass. Separate means must be provided to apply heat directed to the base to be classified here. Mere heated receptacles for coating material, or systems for conveying heated coated material, or systems for heating the coating while on the base must be searched in the various classes noted below, which classes provide for such apparatus.

SEE OR SEARCH THIS CLASS, SUBCLASS:

20, for similar apparatus for treating edible work.

47, for coating apparatus in which a flame directly contacts the work piece or having means to cause ignition of the coating material on the base.

- 620, for coating apparatus having means to apply electrical energy directly to the work to generate heat.
- 641+, for coating apparatus having means to apply radiant energy directly to the work to generate heat.
- 715+, for coating apparatus having means to contact the base with a gaseous or vaporized coating material.
- SEE OR SEARCH CLASS:
- 34, Drying and Gas or Vapor Contact With Solids, appropriate subclasses and see the notes of the class definition of that class for drying means, per se. Class 118 provides for the combination of coating and drying. Means to treat a coating with a solvent vapor to smooth, polish or coalesce the coating, per se, is in Class 34.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclass 341 for solvent polishing processes within the class definition.
- 432, Heating, appropriate subclass for a residual apparatus for the application of heat to material. See the references to other classes having heating apparatus collected under the search notes to the definition of Class 432.
- 59** This subclass is indented under subclass 58. Coating apparatus having a solid member contacting a surface of the work, which member is either heated or cooled, which functions only to heat the work.
- (1) Note. Heated or cooled solid scrapers or applicators which modify the coating other than by changing the temperature thereof are excluded from this subclass. See the Search This Class, Subclass notes below.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 101, and 202, for heated or cooled solid scrapers or applicators which modify the coating other than by changing the temperature thereof.
- 60** This subclass is indented under subclass 59. Coating apparatus in which the solid member is a rotary treating drum the external surface of which is in contact with the work.
- SEE OR SEARCH CLASS:
- 34, Drying and Gas or Vapor Contact With Solids, subclasses 110+ for drying apparatus in which material is carried on the outside surface of a rotary treating drum.
- 38, Textiles: Ironing or Smoothing, appropriate subclasses for external rotary drum textile ironers or smoothers.
- 61** This subclass is indented under subclass 58. Coating apparatus having means to modify the gas or vapor which either contacts or is evolved from the material undergoing treatment.
- (1) Note. In this subclass may be found, for example, apparatus for recovering solvents or vehicles from the coating material which are evolved in the drying action.
- SEE OR SEARCH CLASS:
- 34, Drying and Gas or Vapor Contact With Solids, subclasses 72+ for apparatus there provided for having means to treat the gases or vapors.
- 62** This subclass is indented under subclass 58. Coating apparatus wherein a blast of gas alters the position of the work.
- (1) Note. Here may be found, for example, devices for removing a coated article from a work support by means of a fluid blast, or means to separate sheets of paper by directing a fluid blast against the edges thereof.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 21, for removing surplus coating from an edible base by a blast of gas.
- 63, for removing surplus coating from an inedible base by a blast of gas.

SEE OR SEARCH CLASS:

- 83, Cutting, appropriate subclasses for cutting or punching methods or apparatus, including means to move the work or the product, and particularly subclass 22, 24, 98+, and 402 which relate to the application of fluid to work or to product, usually for the purpose of moving it.
- 271, Sheet Feeding or Delivering, subclasses 90+ for means for removing an individual sheet from its position in a pack wherein the sheet is engaged by suction or an air blast.
- 406, Conveyors: Fluid Current, appropriate subclasses for conveyors in which material is carried by air or some other gas.

- 63** This subclass is indented under subclass 58. Coating apparatus having means to direct a gas blast against the coating material on the work to redistribute or remove coating material therefrom.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 21, for removing surplus coating from an edible base by a blast of gas.
- 100+, for coating apparatus having a solid member for redistributing or removing coating material from the work.
- 639, for coating apparatus combined with means to deter excess accumulations of coating material by the action of an electrostatic field.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclasses 300.1+ for the devices there provided for having structure functioning to contact the work piece or work surface with a draft of air, steam, or equivalent gaseous fluid, for the purpose of dislodging and/or removing unwanted foreign material therefrom, and see the search notes thereto for other apparatus having blast or suction means.

- 64** This subclass is indented under subclass 58. Coating apparatus having a casing or housing enveloping or positioned in intimate contact with coating means whereby a particular atmosphere may be maintained around the work piece.

- (1) Note. In this subclass may be found, for example, apparatus having means for maintaining a nonoxidizing atmosphere around the work piece to facilitate the coating operation.

SEE OR SEARCH CLASS:

- 34, Drying and Gas or Vapor Contact With Solids, subclasses 201+ for apparatus there provided for, having an enclosure which may be opened on one side, and see especially the notes thereto for other apparatus having houses, kilns, and containers surrounding a work station.

- 65** This subclass is indented under subclass 64. Coating apparatus specialized or peculiarly adapted to coat work traveling longitudinally of itself, the length of which work may be continuous and uninterrupted as distinguished from apparatus which handles the work as discrete units.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 419, and see the notes thereto for other devices for treating running length work.

- 66** This subclass is indented under subclass 58. Coating apparatus having means for performing two or more of the treatments recited in the definition of subclass 58, before, during and/or after the coating operation.

- (1) Note. In this subclass may be found, for example, apparatus having means to subject the work to a heating device and then a cooling device.

- 67** This subclass is indented under subclass 66. Coating apparatus specialized or peculiarly adapted to coat work traveling longitudinally of itself, the length of which may be continuous and uninterrupted as distinguished from

- apparatus which handles the work as discrete units.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
419, and see the notes thereto for other devices for treating running length work.
- 68** This subclass is indented under subclass 58. Coating apparatus specialized or peculiarly adapted to coat work traveling longitudinally of itself, the length of which may be continuous and uninterrupted as distinguished from the apparatus which handles the work as discrete units.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
419, and see the notes thereto for other devices for treating running length work.
- 69** This subclass is indented under subclass 58. Coating apparatus having means to lower the temperature of the work or the coating on the work.
- 70** This subclass is indented under the class definition. Coating apparatus having a work carrier or manipulator and means to place the work carrier or manipulator in condition for use.
- (1) Note. In this subclass may be found, for example, devices for scraping stray coating material from the work carrier so that a succeeding base to be coated will not be contaminated by this surplus coating material, and devices for lubricating the work carrier so that the article handled thereby can be readily removed therefrom.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
17, for means for cleaning or conditioning apparatus for use in coating edible work.
203, and see the notes thereto, for other coating apparatus having means to clean or condition a portion of the coating apparatus.
- 71** This subclass is indented under the class definition. Coating apparatus combined with ancillary means to mount and/or hold other objects or articles than the applicator and/or the work.
- (1) Note. In this subclass may be found, for example, envelope flap moistening devices having drawers or compartments for stamps.
- 72** This subclass is indented under the class definition. Coating apparatus combined with means acting on the surface of the work to be coated, which means affects the surface of the work so that it may better receive the coating.
- (1) Note. Means which merely heats or cools the base to prepare it to receive the coating is excluded from this subclass and is found in subclasses 58+.
- (2) Note. This subclass includes, for example, apparatus to wash, flux, clean, abrade and/or smooth the work surface of the base, preparatory to and combined with a coating operation. Where the apparatus applies a preliminary coating, permanent in nature, and then applies a second coating to this same base, such apparatus has been classified in the plural coating subclasses, for which see the notes to subclass 216.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
58+, for heating and cooling the work and see (1) Note, above.
63, for devices for removing previously applied coating material by means of a fluid blast in order to prepare the base for further coating operations.
216+, and see the notes thereto for plural applicators, and see (2) Note, above.
- SEE OR SEARCH CLASS:
15, Brushing, Scrubbing, and General Cleaning, appropriate subclasses, and see especially the notes of the class definition of that class for devices, per se, for cleaning and for other related art.

- 427, Coating Processes, subclasses 299+ for processes of coating including a pre-treatment of the base.
- 73** This subclass is indented under subclass 72. Coating apparatus wherein the means to prepare the work surface applies a fluid to the base.
- (1) Note. In this subclass may be found, for example, a combination of a coating device and means to wash the base to remove foreign matter therefrom. Where the fluid is applied to the coated base, see subclass 75.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
75, for means to apply a fluid to the coated base, and see (1) Note, above.
- SEE OR SEARCH CLASS:
134, Cleaning and Liquid Contact With Solids, appropriate subclasses, and see the notes thereto, for preparatory fluid treatments, per se, including washing and pickling.
- 74** This subclass is indented under subclass 73. Coating apparatus having means to contact metal work with material which chemically removes impurities from the work.
- (1) Note. Where the application of flux to a base is by means of a coating device, the fluxing instrumentality, per se, is cross-referenced to the appropriate subclass below which provides for the particular type of applying device.
- SEE OR SEARCH CLASS:
228, Metal Fusion Bonding, subclasses 33+ for apparatus for and subclasses 223+ for method of applying flux to metallic work parts that are to be united in a fusion bonding operation.
- 75** This subclass is indented under the class definition. Coating apparatus claimed in combination with features other than and in addition to work handling structure, applicator structure and/or means to modify the coating in some way, and not provided for in any of the preceding subclasses.
- (1) Note. By work handling structure is meant any device for manipulating, restraining, retaining, supporting, guiding, feeding, and/or discharging the work.
- (2) Note. By applicator structure is meant any instrument for contacting the work with a quantity of coating material, means to supply coating material to the coating instrument, means to heat, condition, clean, or manipulate the coating instrument.
- (3) Note. By means to modify the coating is meant any solid member contacting the coating on the base after application to the base, which member modifies the coating in some way, or any masking members which restrict the application of the coating to a particular area of the work.
- (4) Note. See section III of the class definition for combinations of coating apparatus with other devices located in other classes.
- (5) Note. In this subclass or in subclass 23 may be found, for example, the combination of bat forming and impregnating apparatus, the combination of coating plus a subsequent work handling feature which is more than mere removal of the work from the coating zone, the combination of washing machines and starching pans, coating apparatus combined with washing or liquid treating means for treating the coating after application to the base, (compare subclasses 73+), and coating apparatus combined with means to package the work after the coating operation.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
23, for apparatus for coating edible work combined with noncoating devices, and see (3) Note, above.
73+, for apparatus for washing the base before coating, and see (5) Note, above.

76 This subclass is indented under the class definition. Coating apparatus in which the coating material is in a nonfluid, self-sustaining state and is transferred to the base or work to be coated by relative frictional moving contact between the coating material and the work.

SEE OR SEARCH CLASS:

451, Abrading, subclasses 446+ for apparatus for applying an abrasive to a buffing wheel in which a block of abrasive is fed against a wheel to charge the wheel with abrasives by rubbing contact with the block.

77 This subclass is indented under subclass 76. Coating apparatus specialized or peculiarly adapted to coat work traveling longitudinally of itself, the length of which may be continuous and uninterrupted as distinguished from apparatus which handles the work as discrete units.

SEE OR SEARCH THIS CLASS, SUBCLASS:

419, and see the notes thereto for other coating apparatus for coating running length work.

78 This subclass is indented under subclass 77. Coating apparatus for coating running length work wherein the work is in the form of flexible strands or cords.

79 This subclass is indented under the class definition. Apparatus comprising a frame-like holder carrying a transparent sheet particularly adapted for the application of ink or other fluid to a base member to be made into a printing plate.

- (1) Note. These devices generally comprise a holder for a transparent plate onto which is applied the ink in the form of dots, etc., and such dots are subsequently transferred from the plate to the work. The holder is usually provided with some kind of micrometer lateral adjustment to provide for movement of the plate to and from the work in a special relationship to a previously applied design by the same or different plate.

100 This subclass is indented under the class definition. Coating apparatus having a nonfluid, self-sustaining member, spaced from the coating applicator and physically in contact with the previously applied coating, which member works or otherwise modifies the coating.

- (1) Note. The member may be rigid or flexible and it may be porous. It may squeeze surplus coating material from the work, or finish the coating, or remove complete portions of the coating from the work.
- (2) Note. Among the art terms used to describe these members are the terms: wipers, scrapers, doctors and burnishers.
- (3) Note. Wiping or doctoring members which are actually part of the coating material supply device, for example, strand coating devices having an exit die below the upper surface of the coating material reservoir, are excluded from this subclass, and will be found in subclasses 400+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 63, for apparatus utilizing a gas blast to modify the coating on the base.
- 200+, for coating apparatus having solid applicators for transferring a film of coating material from a source of supply to the work.
- 400+, for coating devices wherein the base contacts a pool of coating material and a retaining wall for the pool serves to meter the quantity of coating material applied to the base, and see (3) Note above.

SEE OR SEARCH CLASS:

- 12, Boot and Shoe Making, subclasses 70+ for machines which polish and condense the surface of boots and shoes, particularly the sole and heel surfaces, through the rubbing action of a rigid metallic tool which is usually heated.

- 15, Brushing, Scrubbing, and General Cleaning, appropriate subclasses for solid members, per se, (e.g., brush elements, scraper blades) especially subclass 236.01 and 256.5 and see section IX of the class definition of this class (118) for the line between Class 15 and Class 118.
- 29, Metal Working, subclasses 90.01+ as the generic place for machines or processes for burnishing the surface of metallic or nonmetallic articles and see the notes thereto for burnishing elsewhere provided for.
- 68, Textiles: Fluid Treating Apparatus, subclasses 241+ for wringers there provided for, comprising mechanical means for pressing or otherwise removing liquids from treated material.
- 223, Apparel Apparatus, subclass 11 for devices for removing excess water or size from hat bodies after felting or sizing, usually by roll pressing or brushing.
- 101** This subclass is indented under subclass 100. Coating apparatus in which the solid member has associated therewith heat exchange means for modifying the temperature of the member.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 59+, for solid members which heat the work.
- 202, for coating apparatus having a solid coating applicator having heat exchange means associated therewith.
- 102** This subclass is indented under subclass 100. Coating apparatus wherein the solid work treating means (1) treats a portion only of the coated surface and/or (2) treats the entire coated surface in a nonuniform manner.
- (1) Note. In this subclass may be found, for example, devices for forming parallel stripes on the coated base by removing the coating material from portions of the base only, devices for burnishing restricted areas only of the coated base, or devices for removing beads of coating material which form along the edges of the coated article.
- (2) Note. In this subclass may be found certain hand implements for modifying a wet coating by applying a design carrying face thereto. This is an exception to the general rule that Class 118 does not provide for hand implements.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 14, for coating apparatus for applying a coating to edible work having means to alter the coating on the work in a manner to decorate or adorn the surface thereof.
- 204, for devices having means to remove coating material from the surface of a solid applicator in a discontinuous and nonuniform manner before contact of the applicator with the work.
- 103** This subclass is indented under subclass 100. Coating apparatus having at least two solid members, each acting on the coating to modify it in a different manner.
- (1) Note. Patents in this subclass are cross-referenced to the proper single treating means subclasses provided for below.
- (2) Note. In this subclass may be found, for example, devices including a scraper blade and a rotary brush.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 217, for coating apparatus having at least two solid applicators each transferring coating material to the work in a different manner.
- 104** This subclass is indented under subclass 100. Coating apparatus having means to prepare the solid work treating means for the work treating operation.
- (1) Note. In this subclass may be found for example coating devices having work treating means provided with scrapers for removing excess coating material from the work treating means.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 101, for coating apparatus having heated or cooled work treating means.
 203, and see the note thereto for other coating devices having means to clean or condition the device.
- 105** This subclass is indented under subclass 100. Coating apparatus specialized or peculiarly adapted to enter and contact the inner surface of a cavity or hole within the confines of the work and modify the coating thereon.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 254, and see the notes thereto for other coating apparatus for coating the inside of a hollow work piece.
- 106** This subclass is indented under subclass 100. Coating apparatus wherein the solid member is a strip, loop or belt of flexible material.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 257, for apparatus having an applicator in the form of a strip, loop or belt of flexible material.
- 107** This subclass is indented under subclass 100. Coating apparatus having means to rotate the coated base about an axis passing through the article during the work treating operation.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 416, and see the notes thereto for other coating apparatus having work rotating means.
- 108** This subclass is indented under subclass 100. Coating apparatus in which the solid member is supported by, attached to, or suspended from the work and travels along the surface to be treated.
- (1) Note. In this subclass may be found, for example, cable painters having additional brushing means and in which the entire device is supported on and traverses the cable.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 305, and see the notes thereto for other coating apparatus supported by the work.
- 109** This subclass is indented under subclass 100. Coating apparatus in which the solid member comprises a saturable or fluid permeable, loose or felted mass of material, or fabric.
- (1) Note. Solid work treating means in this subclass may be, for example, a batch of fabric waste material, a textile surfaced pad, or a mass of asbestos fibers.
- 110** This subclass is indented under subclass 100. Coating apparatus in which the solid member turns about an axis while in contact with the coated surface.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 258, and see the notes thereto for other coating apparatus having rotary members.
- 111** This subclass is indented under subclass 110. Coating apparatus in which the axis of rotation of the solid working member is in a plane normal to the coated surface of the work being treated.
- SEE OR SEARCH CLASS:
 15, Brushing, Scrubbing, and General Cleaning, subclasses 28+ for brushing devices having a rotary disc brush or broom.
- 112** This subclass is indented under subclass 110. Coating apparatus in which the work has motion relative to the axis of rotation of the rotary working member and the motion parallels or coincides with the axis.
- 113** This subclass is indented under subclass 110. Coating apparatus in which the rotary member has an additional reversible or vibratory motion along the axis of rotation.
- 114** This subclass is indented under subclass 110. Coating apparatus having at least one pair of rotary working members which are in direct

- apposition one to the other and between which the work is contacted.
- (1) Note. In this and the indented subclasses may be found, for example, coating devices combined with devices of the wringer type for removing surplus coating material.
- SEE OR SEARCH CLASS:
492, Roll or Roller, for a roll, per se, not elsewhere provided for, and see section References to Other Classes of the class definition for the loci of roll pairs with working surface.
- 115** This subclass is indented under subclass 114. Coating apparatus wherein the opposed rotary members are arranged with their axes of revolution disposed in the same horizontal plane whereby the work is vertically disposed between the rolls.
- SEE OR SEARCH CLASS:
68, Textiles: Fluid Treating Apparatus, subclass 248 for wringers of the roller type wherein the rolls are arranged in a horizontal plane.
- 116** This subclass is indented under subclass 114. Coating apparatus restricted or peculiar to the treatment of pliable, nonrigid work.
- (1) Note. In this and the indented subclasses may be found, for example, devices for treating coated textiles or textile articles, paper, cords or filaments.
- 117** This subclass is indented under subclass 116. Coating apparatus, peculiar or specialized to the treatment or handling of work traveling longitudinally of itself, the length of which is continuous and uninterrupted as distinguished from apparatus which handles the work as discrete units.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
419, and see the notes thereto for other devices for coating running length work.
- 118** This subclass is indented under subclass 110. Coating apparatus, specialized or peculiarly adapted to coat work traveling longitudinally of itself, the length of which may be continuous or uninterrupted as distinguished from apparatus which handles the work as discrete units.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
419, and see the notes thereto for other apparatus for coating running length work.
- 119** This subclass is indented under subclass 118. Coating apparatus in which the rotary member acts on the work treated in direct apposition to a support member for the work.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
248+, for coating apparatus having rotary applicators and opposed back-ups.
- 120** This subclass is indented under subclass 100. Coating apparatus in which the solid working member has a reversible or vibratory motion over the surface of the work.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
241+, for coating apparatus in which the solid applicator has a reciprocating motion.
- 121** This subclass is indented under subclass 100. Coating apparatus having at least one pair of working members in direct apposition one to the other and between which the work is contacted.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
114, for coating apparatus having at least one pair of cooperating rotary members wherein at least one of the opposed members is a rotary wiper.
227+, for coating devices having opposed applicators.
- 122** This subclass is indented under subclass 121. Coating apparatus specialized or peculiarly adapted to coat work traveling longitudinally

of itself, the length of which work may be continuous and uninterrupted as distinguished from apparatus which handles the work as discrete units.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

117, for apparatus for coating running length work in which both of the opposed members are rotary.

419, and see the notes thereto for other apparatus for applying a coating to running length work.

123 This subclass is indented under subclass 100. Coating apparatus specialized or peculiarly adapted to coat work traveling longitudinally of itself, the length of which may be continuous and uninterrupted as distinguished by the apparatus which handles the work as discrete units.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

117, 118 and 122, for other coating apparatus having solid work treating means which are peculiarly adapted to treat running or indefinite length work.

419, and see the notes thereto for other apparatus for applying a coating to running length work.

124 This subclass is indented under subclass 123. Coating apparatus in which the solid member is positioned out of the normal straight line path of the running length work and means are provided for guiding the work into contact with the member whereby the work must assume a tortuous or angled path.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

33, and see the notes thereto for devices for placing running length work under tension, which devices may cause the work to assume a zig zagged or jogged path.

125 This subclass is indented under subclass 123. Coating apparatus in which the solid member has a working surface which completely surrounds and closely embraces the work being treated.

(1) Note. The member may be of unitary construction or it may be in several segments or Sections, however, it must substantially completely encircle the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

404, for other coating devices having die members.

126 This subclass is indented under subclass 123. Coating apparatus in which the solid member acts on the work in direct apposition to a support member for the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

119, for apparatus wherein at least one of the working members is a rotary wiper.

248, and see the notes thereto for other coating apparatus having coating applying means and opposed work back-ups.

200 This subclass is indented under the class definition. Coating apparatus having a nonfluid, self-sustaining body impregnated with or wetted by fluent coating material, the body physically touching the work and transferring a film of coating material thereto from a bulk supply.

(1) Note. An impregnated applicator may be, for example, a brush, a porous pad or other body which retains or contains the bulk supply of coating material.

(2) Note. Solid applicators for transferring coating material having side walls to enable the transfer means to retain a layer of coating material of thickness greater than a surface film are considered to be immersion coating devices and such subject matter is classified in subclass 400.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

76+, for coating apparatus in which the coating material is in a solid or self-sustaining form.

100+, for solid work treating means which contact the base after application of

- the coating material thereto and modify the coating in some way.
- 400+, for coating apparatus in which a supported pool, column, or stream of coating material is brought into contact with the base to be coated, and see (2) Note, above.
- 201** This subclass is indented under subclass 200. Coating apparatus having means to attach or support the solid applicator on the person of the user or upon his apparel.
- SEE OR SEARCH CLASS:
- 224, Package and Article Carriers, appropriate subclasses, particularly subclass 261, 265, and 600+ for package and article carriers formed as articles of clothing or directly or indirectly attached to or supported from the body.
- 202** This subclass is indented under subclass 200. Coating apparatus wherein either (1) the solid applicator or (2) means acting as an applicator in transferring a film of coating material to the solid work coating applicator, has heat exchange means associated therewith.
- (1) Note. To be included in this subclass the heat exchange means must be in direct association with the solid applicator, rather than indirectly, as by immersion of the applicator in a supply of heated coating material, for which see the pertinent applicator subclasses.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 58+, for apparatus for applying heat to the coated or uncoated base through means other than the applicator.
- 101, for heated or cooled solid means acting on the coating after application to perform some function, as there defined, in addition to heating.
- SEE OR SEARCH CLASS:
- 101, Printing, subclass 8, 9, 21, 25, 27, and 31, (and see the search notes to subclass 31) for heated dies.
- 165, Heat Exchange, subclasses 89+ for a heated or cooled roll of general application.
- 401, Coating Implements With Material Supply, subclasses 1+ for a coating implement with material supply and having means to heat the material prior to its application to a work surface.
- 203** This subclass is indented under subclass 200. Coating apparatus having means to prepare the applicator for the coating operation.
- (1) Note. Here may be found, for example, coating apparatus having means to scrape excess coating material from the applicator after the applicator has contacted the base, means to remove coating material from noncoating areas of the applicator (such as bearing surfaces of roll type applicators), means for pointing brush type applicators, etc.
- (2) Note. Mere heating or cooling of the applicator is excluded from this subclass, for which see subclass 202, above.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 70, and see the notes thereto for coating apparatus having means to clean or condition the work carrier or manipulator.
- 104, for coating apparatus having means to condition solid work contacting devices.
- 202, for coating apparatus having means to heat or cool the applicator and see (2) Note, above.
- 204** This subclass is indented under subclass 200. Coating apparatus having means to (1) remove coating material from a portion only of the coating surface of an applicator or (2) remove coating material in an uneven manner from the entire coating surface thereof before contact of the applicator with the work.
- (1) Note. The coating may be removed entirely from some areas of the applicator and left intact on other coatings of the applicator or the coating may be left thicker in some areas than in other areas or removed nonuniformly in any way. In this manner the coating will, of necessity, be applied to the base in patterns,

stripes or discontinuous areas or thicker in one portion than in the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 102, and see the notes thereto for apparatus for removing the coating material from the base so as to leave the coating on the base in patterns, stripes or thicker in one part than in another.
- 211, for other means for applying coating material to the base in a pattern or definite circumscribed area of application.
- 261+, for coating apparatus having means to remove coating material from a rotary applicator before application to the base in which the material is removed uniformly over the surface of the applicator.

205 This subclass is indented under subclass 200. Coating apparatus provided with means to intermittently alter the shape of a flexible or otherwise deformable applicator, to cause the applicator to conform to the surface of an object to be coated.

- (1) Note. Some special means must be provided to directly alter the shape of the applicator. Mere resilient or flexible applicators, such as brushes or pads which deform on being pressed against the work, are excluded from this subclass, for which see subclasses 264+.
- (2) Note. The solid applicator is usually (1) placed within a hollow work piece and then expanded into contact with the inner surfaces of the work piece to transfer coating material to the inner surface, or (2) contracted about the external surface of the work piece to transfer coating to that surface.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 214+, and 254, for other coating devices having solid applicators contacting the inner surface of hollow work pieces.
- 264+, and see (1) Note, above.

206 This subclass is indented under subclass 200. Coating apparatus having two or more instrumentalities for applying a coating material to the work, at least one of which is not a solid applicator as defined in subclass 200.

- (1) Note. It is immaterial for the purpose of classification in this subclass whether the coating is a single coating or plural coating, whether coatings are applied simultaneously or sequentially, or in which order the coatings are applied.
- (2) Note. Patents in this subclass are cross-referenced to the appropriate single coating subclasses below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 216+, for various arrangements of plural solid applicators.
- 715+, for combinations of an applicator coating device and means for applying the coating wherein the coating material is in a gaseous or vaporous state.

207 This subclass is indented under subclass 200. Coating apparatus in which the coating device is supported, attached to or suspended from the work, and travels along the surface to be coated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 305, and see the notes thereto, for other coating apparatus supported and/or guided by the work being coated.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, appropriate subclasses for other work traversing solid applicators and see the reference to Class 15 in section IX of the class definitions of this class (118) for the line between Class 15 and Class 118.
- 401, Coating Implements With Material Supply, subclass 48 for a hand-manipulated coating implement with material supply, including work-contacting supporting or stabilizing

means; and subclass 193 for such an implement including a guide.

- 208** This subclass is indented under subclass 207. Coating apparatus wherein the work is of great length with respect to its width and thickness, the cross-sectional dimensions of which are approximately equal.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

305+, and see the notes thereto for other work traversing coating devices, and subclass 307 when the work is of strand, rod or bar form.

SEE OR SEARCH CLASS:

401, Coating Implements With Material Supply, subclass 10 and 11, respectively, for an implement of that class including a tool which includes plural work-contacting faces or a concave work-contacting face.

- 209** This subclass is indented under subclass 200. Coating apparatus having means for manipulating, restraining, retaining, supporting, guiding, feeding or discharging the work in addition to any movement of the work caused by the applicator.

(1) Note. Where two or more opposed applicators act to handle or support the work between them, classification is in this or indented subclasses.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

305+, and see the notes thereto for coating apparatus supported by and traversing the work.

- 210** This subclass is indented under subclass 209. Coating apparatus having means to change at will the rate of relative movement between the work and applicator.

(1) Note. For example, the relative rates of work and applicator motions may be altered for the purpose of increasing or decreasing the thickness of film of coating material deposited on the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

668+, for coating devices having automatic control means for sensing a condition and causing a control operation to vary the rate of work and applicator movement.

- 211** This subclass is indented under subclass 209. Coating apparatus including means which applies the coating in definite configurations forming restricted areas for special purposes.

(1) Note. Apparatus using applicators having roughened, grooved, stippled or other irregular surfaces where the purpose is not primarily to apply the coating in definite patterns or areas, but merely to allow the applicator to retain more coating material, to cause better feed of the work, or to coat the work in spots which are indiscriminately applied and not definitely located for special purposes, are excluded. Such devices are classified in the appropriate subclasses where the type apparatus is classified.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

204, for apparatus having means for partially removing the coating from the applicator or other coating material transfer means so as to leave the coating on the work in patterns, strips, or thicker in one part than another.

216+, and see the notes thereto for apparatus for applying the coating in plural bands or stripes of definite width which may cover only part of the work.

SEE OR SEARCH CLASS:

101, Printing, appropriate subclasses for means adapted to produce characters for designs on surfaces by impression of types or dies or by employing coating material thereto through openings of previous portions of a pattern sheet, as in stenciling or by impression from planos:graphic or intaglio surfaces.

427, Coating Processes, subclasses 256+ for coating processes wherein a non-uniform coating is obtained.

- 492, Roll or Roller, subclasses 30+ for a roll, per se, not elsewhere provided for, having surface projections, indentations or slits.
- 212** This subclass is indented under subclass 211. Coating apparatus including applicators having areas raised or depressed relative to a base level which areas apply coating material to the work.
- SEE OR SEARCH CLASS:
- 101, Printing, subclasses 150+ for printing machines in which printing is done by means of surfaces dependent upon design grooves to retain the ink, and see other appropriate subclasses in Class 101 for printing by means of inked raised areas.
- 213** This subclass is indented under subclass 211. Coating apparatus in which part of the work is shielded by a solid member interposed between the work and the coating device, the shield preventing transfer of coating material onto the work part so shielded.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 301, for projection coating devices utilizing a mask or stencil.
- 406, for immersion coating apparatus utilizing a mask or stencil, and see the notes thereto for other apparatus utilizing masks or stencils.
- 214** This subclass is indented under subclass 209. Coating apparatus specialized or peculiarly adapted to enter or contact the inner surface of a cavity or hole within the confines of the work and apply a coating thereto.
- (1) Note. Those patents which have apparatus to coat surfaces in addition to the inside surface only of the hollow work are cross-referenced to the appropriate subclasses for such apparatus.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 254, and see the notes thereto for other devices for applying a coating to the inside of a hollow work piece.
- 215** This subclass is indented under subclass 214. Coating apparatus having means to coat the inside only of the hollow work piece.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 254, and see the notes thereto, for other devices for applying a coating to the inside of hollow work.
- 216** This subclass is indented under subclass 209. Coating apparatus having (1) two or more applicators, (2) a single applicator divided into Sections, as by grooves, so as to apply coating to the work in parallel bands or stripes, (3) a single applicator having separate supply means for the coating material so that the coating is applied in parallel bands or stripes, or (4) any combination of the above.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 204, for coating devices in which coating is applied in parallel bands or stripes because of scrapers acting on the applicator to remove coating bands therefrom.
- 206, for the combination of a solid applicator with other coating applying devices.
- 211+, and see the notes thereto, for coating apparatus having pattern or circumscribed area applicators.
- 255, for apparatus having plural applicators and/or material supplies with no means to handle the work.
- 304, for a projector or spray-type coating device combined with a nonsolid applicator.
- 313+, for coating apparatus having plural projector or spray-type applicators.
- 217** This subclass is indented under subclass 216. Coating apparatus having at least two solid applicators which act in a different manner to transfer coating material to the work.
- (1) Note. In this subclass may be found, by way of example, a rotary solid applicator and a stationary pad-type applicator.

- 218** This subclass is indented under subclass 216. Coating apparatus having means to turn the article about an axis passing therethrough during the coating operation.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
416, and see the notes thereto for the other coating apparatus having means to rotate the article.
- 219** This subclass is indented under subclass 218. Coating apparatus wherein the plural solid applying surfaces are so arranged and related that the coating is applied to the base in parallel, adjacent, spaced, and/or overlapping stripes.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
221, for plural solid applicator surfaces where the work does not rotate.
- 220** This subclass is indented under subclass 216. Coating apparatus wherein at least two of the solid applicator surfaces coat different work pieces.
- 221** This subclass is indented under subclass 216. Coating apparatus wherein the plural solid applicator surfaces are so arranged that the coating is applied to the base in parallel, adjacent, spaced, and/or overlapping stripes.
- 222** This subclass is indented under subclass 221. Coating apparatus having means to vary the positional relationship of the solid applicator surfaces.
- 223** This subclass is indented under subclass 216. Coating apparatus wherein the work to be coated traverses a path which passes two or more solid applicators so positioned that the work contacts one applicator after the other.
- 224** This subclass is indented under subclass 223. Coating apparatus having (1) two or more rotating applicators in direct apposition between which the work passes or (2) rotating work feeders and applicators in direct apposition between which the work passes.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
114+, and 119, for coating apparatus wherein the work passes between a backing member and an opposed solid work treating device acting on the coating after application.
227+, and 248+, for other coating apparatus having opposed rotary work feeders and/or applicators.
- 225** This subclass is indented under subclass 216. Coating apparatus having at least two solid applicators so arranged as to apply the coating material to the work at the same time.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
223+, for coating apparatus wherein the work moves past sequentially arranged applicator which may or may not act on the work at the same time.
- 226** This subclass is indented under subclass 225. Coating apparatus having at least two applicators in direct apposition one to the other.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
114+, and 121+, for coating apparatus having opposed solid means acting on the coating after application of the coating to the base.
- 227** This subclass is indented under subclass 226. Coating apparatus wherein both of the applicators turn about an axis of rotation passing through the applicator.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
114+, for coating apparatus having opposed rotary members acting on the coated work.
- 228** This subclass is indented under subclass 227. Coating apparatus having a cantilever mounting for at least one of the opposed rotary applicators whereby work of indefinite width may be passed between the opposed members.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
250, for opposed rotary applicators and work back-ups at least one of which is supported by a cantilever member.
- 229** This subclass is indented under subclass 209. Coating apparatus having a cylindrical body around the periphery of which flexible strand form work is wound in fixed position, the body being indexed about its longitudinal axis whereby successive portions of the wound body are presented to the coating means for applying a coating to the work wound thereabout.
- (1) Note. The art term usually used to describe these devices is "yarn striper".
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
230+, and see the notes thereto for other coating devices using a drum type work conveyor.
- 230** This subclass is indented under subclass 209. Coating apparatus having means to move the work about an axis of rotation, which axis is external of the work thus moving the work in an arc or circle.
- (1) Note. The apparatus in this subclass usually moves the work from work station to work station or through a coating zone as distinguished from devices which rotate the work about an axis internal of the work to present every portion of the work to the coating instrumentality such as is found in subclass 232.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
232+, for apparatus for rotating work about an internal axis and see (1) Note, above.
319, for apparatus having turret type work conveyors having a projection coating device, and see the notes thereto for the location of other turret type work conveyors.
- 231** This subclass is indented under subclass 230. Coating apparatus having means on its periphery for clamping discrete workpieces that are flexible and very thin relative to its width and length.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
236+, and see the notes thereto, for other apparatus for handling sheet-form work.
- SEE OR SEARCH CLASS:
271, Sheet Feeding or Delivering, subclass 277 for sheet handling devices, per se, comprising drums or having clamps.
- 232** This subclass is indented under subclass 209. Coating apparatus having means to turn the work about an axis passing through the work while in contact with the applicator.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
52+, for other coating apparatus in which the article is rotated at a speed sufficient to apply centrifugal force to the coating on the base.
416, and see the notes thereto, for other apparatus for rotating the work while being coated.
- 233** This subclass is indented under subclass 232. Coating apparatus wherein the base to be coated is freely mounted for rotation and is rotated by the applicator in contact therewith.
- 234** This subclass is indented under subclass 209. Coating apparatus having means peculiar or specialized, to applying a coating to flexible running length work, a cross Section of which is approximately equal.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
78, for apparatus for coating strands or cords utilizing solid or self-sustaining coating material.
122, and 123+, for other patents peculiar or specialized with the treatment of running lengths of material in which a

- solid work treating means acts on the coating after application to the base.
- 305, for coating apparatus for traversing a strand, rod or bar and coating the same.
- 420, for immersion coating devices for coating work in the form of flexible strands or cords.
- SEE OR SEARCH CLASS:**
- 28, Textiles: Manufacturing, subclasses 217+ and especially 246, 261, 265+, and 285+ for apparatus for performing mechanical operations in finishing braids, yarns, threads and similar strands with finishing operation including the application of gas or liquid.
- 57, Textiles: Spinning, Twisting, and Twining, subclass 7, 32, 286, 292, and 295, and see the notes thereto for textile spinning, twisting and twining apparatus having means to apply a coating material to the textile.
- 101, Printing, subclass 172 for devices which involve printing with inks of different colors on strands either singly or side by side.
- 184, Lubrication, subclasses 15.1+ for devices intended to apply lubricant to a belt, cable or chain and constructed with such purpose in view.
- 235** This subclass is indented under subclass 209. Coating apparatus having means for coiling or uncoiling running length flexible work to remove it from, or to supply it to, the coating apparatus.
- (1) Note. In this subclass may be found, for example, strip servers which feed a strip from a roll supply and moisten the strip.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 39, and 40+, for strip servers which feed a strip from a roll supply combined with means to sever the strip.
- SEE OR SEARCH CLASS:**
- 242, Winding, Tensioning, or Guiding, appropriate subclasses for a winding, tensioning, or guiding a running material.
- 236** This subclass is indented under subclass 209. Coating apparatus having means for handling individual sheets or for applying a coating to the faces of sheets arranged in a pile.
- (1) Note. A "sheet" is defined in the definitions of subclass 231.
- (2) Note. Where a stack of sheets is handled as a unit and coated as a unit rather than as discrete sheets, classification is in the appropriate subclasses which provide for the specific work handling or coating apparatus.
- (3) Note. In this and the indented subclass may also be found, for example, devices for applying adhesive to the top sheet in a stack of sheets and then removing the coated sheet from the stack so that the next sheet may be coated. Here also are devices for stacking or unstacking sheets before or after the coating operation.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 231, for coating apparatus having a rotating turret, wheel, or drum type work conveyor for handling sheet form work.
- SEE OR SEARCH CLASS:**
- 221, Article Dispensing, appropriate subclasses for article dispensing not otherwise provided for and see the reference to class (221) in section IX of the class definition of this class (118) for a statement of the class line.
- 271, Sheet Feeding or Delivering, appropriate subclasses for sheet feeding or delivering devices, per se, and see (2) Note of the main class definitions of that class for other sheet handling devices.
- 412, Bookbinding: Process and Apparatus, subclasses 9+ for apparatuses for applying glue or adhesives to the back of a stack of sheets combined with other operations provided for in that class; in particular, subclass 36 for adhesive tapes used in an edge binding operation; and subclass 37 for adhesives used in edge binding opera-

tions. Riffling or otherwise disturbing the stacked sheets to aid in the penetration of glue or adhesives between the sheets combined with adhesive or glue applying may also be found in class (412).

237 This subclass is indented under subclass 236. Coating apparatus having means positioning the applicator so that it rests upon the upper surface of the stack of sheets, whereby as each sheet is removed, the sheet immediately will support the applicator.

238 This subclass is indented under subclass 209. Coating apparatus having means for supporting and presenting the work to the applicator, which means has a reversible motion to and from the applicator surface.

(1) Note. In each case the work is supported in fixed position relative to the presenting means during its motion transmitting movement.

(2) Note. Mere backups for pressing the work against the applicator to insure coating are excluded from this subclass. See subclasses 248+ and 253 for such subject matter.

SEE OR SEARCH THIS CLASS, SUBCLASS:

248+, for coating apparatus having a backup for pressing the work against the rotary applicator and see (2) Note above.

253, for coating apparatus having fixed position applicators with movable back up members for pressing the work against the applicator and see (2) note above.

239 This subclass is indented under subclass 209. Coating apparatus having means to impart a motion to the work which means is a flexible transporting means of continuous or indefinite length.

SEE OR SEARCH THIS CLASS, SUBCLASS:

324, and see the notes thereto for other devices having endless conveyors.

240 This subclass is indented under subclass 209. Coating apparatus wherein an applicator moves across the surface of the work with a motion that at any point on the surface of the work is other than in a straight line.

SEE OR SEARCH THIS CLASS, SUBCLASS:

241+, for coating apparatus in which the applicator has a reciprocating or oscillating motion.

244+, for coating apparatus in which the applicator has a rotary motion.

241 This subclass is indented under subclass 209. Coating apparatus having means to impart to the applicator a reversible or alternate back and forth motion.

(1) Note. In this subclass may be found, for example, apparatus in which the applicator moves from a rest position into contact with the work to apply a coating thereto and then back to the rest position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

120, for coating apparatus having a reciprocatory solid member modifying the coating.

240, for coating apparatus wherein the applicator has compound motion while in contact with the work surface being coated.

256+, for other movably mounted applicators having no means to manipulate support or guide the work.

242 This subclass is indented under subclass 241. Coating apparatus wherein the applicator moves in a plane parallel to the surface being coated while in contact with this surface.

SEE OR SEARCH THIS CLASS, SUBCLASS:

229, for devices in which the applicator moves transversely of the axis of strand form work wound on an indexed drum.

243 This subclass is indented under subclass 241. Coating apparatus in which the applicator moves from a source of coating material to the

- work and then back to the source of coating material.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
263, for other coating apparatus having applicators which reciprocate between a coating position and the source of coating materials supply.
- 244** This subclass is indented under subclass 209. Coating apparatus wherein the coating transfer surface of the applicator turns about an axis of rotation.
- (1) Note. The surface of the applicator may be continuous or discontinuous, solid or yielding e.g., it may consist of the bristle ends of a brush, and it may extend only along a portion or segment of the periphery of the applicator.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
110+, for coating apparatus having solid means acting on the coating after application to the base which solid means has a work treating surface which rotates about an axis.
216, for coating apparatus having plural or Sectioned applicators one of which might be a rotary applicator.
258+, for rotary applicators having coating material supply but no work handling means and see the notes thereto for other apparatus having rotary applicators.
- 245** This subclass is indented under subclass 244. Coating apparatus having a normally stationary solid member contacting the periphery of the rotary applicator which solid member prevents the coated article from adhering to the applicator in its rotary motion.
- SEE OR SEARCH CLASS:
100, Presses, subclass 174 for roll type presses having roll strippers.
- 246** This subclass is indented under subclass 244. Coating apparatus provided with means for causing the work to follow the surface of the rotary applicator over at least a portion of the circumference of said surface.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
44, for coating apparatus having means which does not cooperate with the coating applicator to deform the work.
- 247** This subclass is indented under subclass 244. Coating apparatus having a work pressing member not attached to the work but which is alternately moved into position to press the work against the applicator and moved out of work pressing position.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
238, for work holders which grasp work pieces and have a motion of reciprocation in presenting the work to the solid, applicator.
- 248** This subclass is indented under subclass 244. Coating apparatus in which the work is retained against a rotary applicator member by a pressing member in direct apposition to the applicator, i.e., the work is engaged between the pressing or retaining means and the applicator.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
119, for coating apparatus having opposed rotary working and backing members which working member acts on the coated base after coating application.
224, for coating apparatus in which the base to be coated moves between sequentially arranged pairs of opposed rotary work feeders and/or applicators.
226+, for coating apparatus in which the base to be coated moves between two opposed applicators which apply a coating to opposite sides of the work.
- 249** This subclass is indented under subclass 248. Coating apparatus wherein the work backup is cylindrical in form and turns about its longitudinal axis.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 114+, for coating apparatus having opposed rotary members acting on the coated base.
 224, for plural rotary applicators and opposed backup couples.
- SEE OR SEARCH CLASS:
 492, Roll or Roller, for a roll, per se, not elsewhere provided for, and see References to Other Classes of the class definition for the loci of roll pairs with working surface.
- 250** This subclass is indented under subclass 249. Coating apparatus having a cantilever mounting for at least one of the opposed rotary members whereby work of indefinite width may be passed between the opposed members.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 228, for opposed rotary applicators having a cantilever mounting for at least one of the opposed rotary applicators.
- 251** This subclass is indented under subclass 248. Coating apparatus having a cantilever mounting for at least one of the opposed members whereby work of indefinite width may be passed between the opposed members.
- 252** This subclass is indented under subclass 244. Coating apparatus having a normally stationary member contacting with the work for determining the relationship of the coating surface of the rotary applicator to the surface of the work being coated.
- (1) Note. The guide or gauge member may be a part of, or integral with, the rotary applicator.
- SEE OR SEARCH CLASS:
 271, Sheet Feeding or Delivering, subclasses 226+ for sheet feeding and delivering devices with rotary conveyors having means to position the lateral edge of the sheet parallel to the line of travel.
- 401, Coating Implements With Material Supply, subclass 10 or 193 for hand-manipulated coating implements with material supply wherein work is guided, respectively, between confronting tool faces (subclass 10) or by a tool guide for engaging a work surface (subclass 193); and see, also, subclass 48, wherein means stabilizing the implement acts as a guide, as well.
- 492, Roll or Roller, subclasses 9+ for a roll, per se, not elsewhere provided for, with measuring, testing, or indicating means.
- 253** This subclass is indented under subclass 209. Coating apparatus having a static applicator and movably mounted members to press the work against the applicator during the coating operation.
- (1) Note. The movably mounted members do not move the work along the surface of the applicator but merely press the work into contact with the applicator. The appropriate work handling subclasses above provide for apparatus for moving work relative to the coating surface of an applicator with a rubbing motion.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 238, for coating apparatus having a work holder for grasping the work and imparting a reciprocating motion thereto.
- 254** This subclass is indented under subclass 200. Coating apparatus specialized or peculiarly adapted to enter and contact the inner surface cavity or hole within the confines of the work and applying a coating thereto.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 55, for devices for coating the inside of a hollow article utilizing centrifugal force to facilitate the coating operation.
 105, for apparatus having solid means acting on a coating applied to the inside of a hollow workpiece after applica-

- tion of the coating material to the workpiece.
- 214+, for coating apparatus having applicators for coating the inside of a hollow workpiece and having also means to handle, retain, or relatively guide the work with respect to the applicator.
- 306, and see the search notes thereto for coating devices for coating the inside of hollow work in which the coating device is supported by and traverses the inner surface of the hollow work.
- 317+, for coating apparatus for spraying a coating against the inside of a hollow workpiece.
- 408, for coating apparatus for coating the inside of a hollow work piece by immersion.
- 622, for hollow work interiorly coated by means of electrostatic and/or electromagnetic attraction or projection of the coating material to the work.
- SEE OR SEARCH CLASS:**
- 15, Brushing, Scrubbing, and General Cleaning, subclass 56 and 104.03+ for devices especially adapted for cleaning miscellaneous receptacles, pipes and tubes, by means of a brush, broom or other cleaning instrument.
- 166, Wells, appropriate subclasses for apparatus for cementing wells.
- 255** This subclass is indented under subclass 200. Coating apparatus having (1) two or more applicators, (2) a single applicator divided into Sections as by grooves so as to apply coating to the work in parallel bands and stripes, (3) a single applicator having plural means for supplying coating material so that the coating is applied in parallel bands or stripes, or any combination of the above.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 204, for coating devices in which coating is applied in parallel bands or stripes because of scrapers acting on the applicator to remove bands of coating material therefrom.
- 216, for other coating apparatus having plural applicators and/or material supply and also having work handling or feeding means.
- 256** This subclass is indented under subclass 200. Coating apparatus in which the applicator is so supported as to be capable of motion during the coating operation.
- (1) Note. The motion of the applicator may be a motion of the working surface of the applicator with respect to the surface of the article being coated or it may be bodily motion of the applicator to or from a source of coating material supply during the normal operation of the machine.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 207+, for solid applicators having work supported or guided applicators and which traverse the work in applying the coating.
- 209+, for coating apparatus having movable applicators and means to handle, guide or feed the article.
- 257** This subclass is indented under subclass 256. Coating apparatus wherein the solid applicator is a strip, loop, or belt of flexible material, coated or impregnated with coating material.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 106, for coating apparatus having solid work treating means acting on the coating after application to the base in which the work treating means is in the form of a moving web or belt.
- 258** This subclass is indented under subclass 256. Coating apparatus in which the applicator surface turns about an axis of rotation.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 110+, for coating apparatus having a rotary member acting on the coating after application to the base.
- 216+, for coating apparatus having arrangements of plural rotary applicators with work handling means for the base to be coated.
- 244+, for other coating apparatus having rotary applicators in addition to work

handling means for handling the coated base or the base to be coated.

SEE OR SEARCH CLASS:

492, Roll or Roller, for a roll, per se, not elsewhere provided for, and see References to Other Classes of the class definition for the loci of roll pairs with working surface.

259 This subclass is indented under subclass 258. Coating apparatus in which the coating material is supplied to the applicator surface from a spaced coating material supply by means of a pump and/or means to spray, project or drip the coating material on the applicator surface.

(1) Note. Gravity feed which does not spray, project or drip the coating material on the applicator surface may be found in subclass 258, or other appropriate indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

258+, and see (1) Note supra.

SEE OR SEARCH CLASS:

101, Printing, subclass 315, and see the search notes thereto for devices adapted for inking the printing member of a rotary press, the roller being supplied with ink from a reservoir.

401, Coating Implements With Material Supply, subclasses 143+ for a hand-manipulated coating implement having means for producing force on the material for moving it to or through the tool.

260 This subclass is indented under subclass 258. Coating apparatus in which the coating material supply is fed to the applicator by means of an absorbent or porous capillary feed member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

268, for absorbent or porous applicators which are static and in which the coating material is fed through a wick from a separate source of coating material supply, and see especially the search notes thereto, for other devices having wick feed means.

SEE OR SEARCH CLASS:

184, Lubrication, subclass 64 for feeding lubricant to a bearing surface in which the lubricant is fed through a wick by capillary attraction.

261 This subclass is indented under subclass 258. Coating apparatus having (1) a solid transfer member which separates a film of coating material from a bulk supply and applies said film to the applicator, or (2) a member for limiting the thickness of the film of coating material retained on the applicator.

(1) Note. The means for limiting the thickness of the film retained on the applicator may be, by way of example, a solid scraper edge or it may be a so-called "air-doctor" or gaseous blast which blows off the surplus coating material.

(2) Note. In every instance the doctor member regulates the thickness of the film on the applicator before the applicator contacts the base to be coated. For members which scrape excess coating material from the applicator after the completion of the coating operation, see subclass 203 of this class.

SEE OR SEARCH THIS CLASS, SUBCLASS:

63, and see the notes thereto for devices for removing surplus coating material from the coated article by means of a blast of gas.

100+, for coating apparatus having solid means contacting the base after the base is coated for the purpose of removing surplus coating material from the base.

203, for coating apparatus in which excess or surplus coating material is removed from the applicator after the applicator surface contacts the base to be coated, and see (2) Note, above.

SEE OR SEARCH CLASS:

101, Printing, subclasses 167+ and see the notes thereto, for devices there provided limited in function to removing the ink from the printing surface

- except where retained by the design-grooves.
- 165, Heat Exchange, subclass 91 for a rotatable heat exchanger drum with a surface scraper of broader application.
- 262** This subclass is indented under subclass 261. Coating apparatus in which the means to limit or apply the coating material to the rotary applicator has a generally cylindrical contacting surface, which surface turns about its longitudinal axis.
- (1) Note. The rotary member or doctor need not be rotated during the time that it regulates the thickness of the coating on the applicator but may, for example, rotate only intermittently to permit foreign matter to pass between the applicator and the doctor.
- (2) Note. This subclass also provides for rotary feeders which carry a film of coating material to the applicator itself and combinations of a plurality of such rotary feeders.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 243, for rotary applicators movable bodily to and from a source of coating material.
- 263** This subclass is indented under subclass 256. Coating apparatus in which the applicator has a reversible motion between the base to be coated and a source of coating material.
- (1) Note. Mere yieldably mounted pad or absorbent type applicators which may be deformed by pressure to contact a source of coating material supply are excluded from this subclass, and will be found in subclass 265.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 243, for reciprocating applicators having, in addition, means to handle or retain the work.
- 265, and see (1) Note, above.
- 264** This subclass is indented under subclass 200. Coating apparatus wherein the applicator is a static structure of saturable or fluid permeable material impregnated or saturated with coating material.
- (1) Note. In this and in the indented subclasses may be found, for example, so-called hand-stamp ink pads.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 401, for coating devices having capillary passages for bringing fluid into contact with the base wherein the passages are other than a porous or absorbent mass or brush.
- SEE OR SEARCH CLASS:
- 15, Brushing, Scrubbing, and General Cleaning, subclass 104.92 for a static cleaning implement having a tool which is either impregnated or coated with material supply; and subclasses 104.93+ for a hand-manipulated cleaning implement having such a tool.
- 401, Coating Implements With Material Supply, subclasses 196+ for a hand-manipulated device with material supply and a porous applying tool through which the material flows.
- 265** This subclass is indented under subclass 264. Coating apparatus in which at least a portion of the pad or applicator surface is distorted into contact with the coating material supply.
- (1) Note. Deformation of the surface of the applicator, per se, must occur, resulting either in indirect application of coating material to the applicator from a remote supply, or in direct contact of the applicator into coating material supply.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 243, and 263, for coating devices in which the entire applicator is removably mounted for movement to a source of coating material supply.

- 266** This subclass is indented under subclass 264. Coating apparatus having either (1) a movable member for separating coating material from a source of supply and transporting it to the applicator surface, or (2) pump or pressure means other than gravity head for flowing a stream of coating material from a source of supply to the applicator surface.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 265, for other pads or absorbent or porous applicators in which the pad or applicator is deformable to contact the coating material supply.
- 267, for gravity feed from a separate coating material supply to the pad.
- SEE OR SEARCH CLASS:
- 401, Coating Implements With Material Supply, subclasses 143+ for an implement of that class provided with means to produce a force on the material so as to move it from the supply toward the tool; and subclass 191, for such an implement wherein the tool is movable to and from the material supply for receiving material therefrom and applying it to a surface.
- 267** This subclass is indented under subclass 264. Coating apparatus having a source of coating material supply spaced from the applicator surface and having means causing the coating material to flow by gravity alone to the coating surface.
- (1) Note. The coating material may merely drip under the influence of gravity from an overhead source of coating material onto the surface of the pad or it may be conducted to the under surface of a porous pad through a passageway from a distant source of supply.
- 268** This subclass is indented under subclass 264. Coating apparatus in which the feed from the supply reservoir to an applicator spaced from the coating reservoir is by means of capillary force through a saturable member which may be either integral with or separate from the applicator.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 260, for apparatus having a wick for feeding fluid to a movably mounted applicator.
- 401, for immersion coating devices having a capillary tube for feeding the fluid coating material.
- SEE OR SEARCH CLASS:
- 222, Dispensing, subclass 187 for dispensers in which the discharge or dispensing feed is by means of a wick or absorbent material and see especially the search notes for other devices utilizing a wick or wick-like member for feeding fluid.
- 269** This subclass is indented under subclass 264. Coating apparatus in which the absorbent layer of the applicator which normally contacts the article to be coated may be inverted or taken off to expose a fresh surface.
- 270** This subclass is indented under subclass 264. Coating apparatus in which the coating applicator is a resilient and porous body or mass which is confined in a receptacle which holds a supply of coating material and/or prevents loss of coating material from the applicator.
- 271** This subclass is indented under subclass 264. Coating apparatus in which the applicator is coated or impregnated with a normally solid material which requires the application of heat to melt it.
- 300** This subclass is indented under the class definition. Coating apparatus wherein coating material, unsupported at the moment of contact with the work to be coated, is sprayed, poured, dripped, flung or impelled against the base to be coated.
- (1) Note. If the coating material is supported at the instant of contact with the base to be coated, it is considered to be applied by an applicator (subclasses 200+) or by immersion (subclasses 400+).

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 24+, and see the notes thereto, for coating devices of the spray type for coating edible work.
- 58+, for noncoating gas and/or vapor contact with a base.
- 200+, and see (1) Note, above.
- 400+, and see (1) Note, above.
- 621+, for coating apparatus in which the coating material is caused to move to the work to be coated by the force of an electrostatic and/or electromagnetic field.
- 715+, for coating apparatus in which the coating material is in a gaseous or vaporous condition when it contacts the base to be coated.

SEE OR SEARCH CLASS:

- 65, Glass Manufacturing, subclasses 348+ for gas solid contact means comprising spray nozzles and mounting means therefore in glass heat treating apparatus.
- 239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses, for devices which project, discharge or distribute fluid. See section IX of this class (118) for the line between classes (239) and (118).

- 301** This subclass is indented under subclass 300. Coating apparatus in which at least a part of the work is shielded by a solid member interposed between the work and the coating device, the shield preventing transfer of coating material onto the work part so shielded.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 323, for coating apparatus having a moving spray gun applying a coating over the surface of the work, the motion being such as to apply the coating in a particular pattern.
- 406, and see the notes thereto, for other coating apparatus having masks or stencils.

SEE OR SEARCH CLASS:

- 239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 103, 104, 150, and 288 for apparatus there provided for involving spraying means and including solid wall type guard means or shields which are positioned relative to the nozzle for preventing undesirable spreading of the spraying material; for fluid type shields preventing undesirable spreading of the spray material, Search Class 239, subclasses 105 and 290+.

- 302** This subclass is indented under subclass 300. Coating apparatus having means to (1) maintain desired temperature conditions in the spray system, or (2) place the spray system in condition for the coating operation.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 58+, and see the notes thereto, for apparatus having means to heat or cool the work.
- 203, and see the notes thereto, for other apparatus having means to clean or condition the same.

SEE OR SEARCH CLASS:

- 239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 128+ for spray devices having heating or cooling means to treat the system or the contained fluid; and subclasses 79+ for spray devices in which a solid material is fused by the application of heat at the terminal element and the resulting fluid is sprayed from the nozzle.

- 303** This subclass is indented under subclass 300. Coating apparatus having means to pass a stream of discrete particles of material past a coating material projector whereby the discrete particles of the stream are coated.

- (1) Note. In this subclass, for example, may be found devices for applying coating material to a stream of coal passing underneath the spray discharge device.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

19, and 417+, and see the notes to subclass 417 for devices for tumbling articles to be coated in the presence of a mass of coating material.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 336, 398+ and 549 for spray systems having means to introduce particulate material into the fluid stream being projected.

427, Coating Processes, subclasses 212+ for processes of coating particles, flakes, or granules.

304 This subclass is indented under subclass 300. Coating apparatus having two or more instrumentalities for applying a coating material to the work at least one of which is not a spray applicator under the definition of subclass 300, and not provided for above.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

206, for the combination of a spray coating device and a solid applicator coating device.

305 This subclass is indented under subclass 300. Coating apparatus in which the coating device is supported by, attached to or suspended from the work and traverses the surface to be coated.

(1) Note. In this subclass may be found by way of example devices for painting a smokestack, which devices are suspended from the top of the smokestack by means of cables and travel up and down the smokestack to paint the same.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

108, for coating apparatus that traverses the work and has solid means acting on the coating applied to the base.

207+, for work traversing devices wherein the coating is applied to the base by means of a solid applicator.

SEE OR SEARCH CLASS:

114, Ships, subclass 222 for devices of various types especially adapted to cleaning, painting, or scraping a ship's hull, many of which devices are attached to or supported from the hull.

239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses for fluid distributing or discharging devices which traverse the work at the will of the operator and see the class definition, Lines With Other Classes and Within This Class, of this class (118) for the line between Class 239 and Class 118.

306 This subclass is indented under subclass 305. Coating apparatus in which the coating device traverses and is supported by the inner surface of a cavity or hole within the confines of the work being coated.

(1) Note. In this subclass may be found, for example, devices for applying a coating of cement to the inner surfaces of pipes, which devices have wheeled carriages carrying the projector, the carriage running along the inner surface of the pipe while spraying the inner surface with the cement material; except that inclusion of trowel means defines a molding apparatus. See the Search Notes below.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

317, for nontraversing devices for applying a coating to the inside of a hollow workpiece by means of a projector.

SEE OR SEARCH CLASS:

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, for a molding apparatus including a trowel means.

307 This subclass is indented under subclass 305. Coating apparatus wherein the work is of great length with respect to its width and thickness and is of relatively uniform cross sectional dimensions of both width and thickness.

(1) Note. Included herein are vehicles or carriages (e.g., railway cars) which

travel along a guiding and supporting means which includes a rail, said vehicle or carriage having means to spray a coating liquid onto all or any part of the rail.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 208, for coating devices supported on a strand, rod or bar and having a solid applicator for applying the coating to the work.
- 421, for immersion tanks attached to strand-form work and movable therealong for coating the strand.

SEE OR SEARCH CLASS:

- 184, Lubrication, subclasses 15.1+ for devices intended to apply lubricant to a belt, cable, or chain and constructed with such purpose in view; and subclasses 3.1+ for oilers for the wheel-flange-contacting surfaces of railway track rails.

308 This subclass is indented under subclass 300. Coating apparatus specialized or peculiarly adapted to apply to the base a coating material in the form of fibers, granules, pellets, beads, flakes, platelets or powder.

- (1) Note. The patents are placed in this and the indented subclasses on the basis of a particulate coating material being disclosed.
- (2) Note. The fibers or particular material may be dry or moistened but where they are suspended in a liquid, see the appropriate subclasses below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 47, for apparatus for the production and deposition of carbon in the presence of the base, such as, for example, by the burning or cracking of gaseous hydrocarbons in the presence of the base.
- 303, for coating apparatus for projecting a coating material against particulate type base material, and for apparatus for first applying an adhesive coating to particulate material before contact-

ing the particulate material with the base to be coated.

- 620+, for apparatus directed to the employment of an electrostatic field to effect deposition or orientation of the particulate material.

SEE OR SEARCH CLASS:

- 222, Dispensing, appropriate subclasses, for apparatus for dispensing particulate material and see especially paragraph numbers 12, 16 and 17 of the class definitions of that class (Class 222) for the location of other apparatus for sanding, abrading, throwing, spraying, scattering, and dusting of particulate material.
- 239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 650+ for a container for nonfluid material and an associated scattering or strewing means whereby the material may be distributed over an extended area.
- 291, Track Sanders, appropriate subclasses, for means for applying sand, or like material, to vehicle wheel treads or to vehicle tracks, such as automobile roads or railway rails, or to both the wheel treads and tracks for the purpose of increasing the tractive effect between such wheels and roads or rails.
- 406, Conveyors: Fluid Current, appropriate subclasses for conveyors utilizing a pneumatic current for conveying particulate material from one place to another.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 80.1+ for apparatus including air-felting means for forming self-sustaining bodies from particulate material.
- 427, Coating Processes, subclasses 180+ for coating processes wherein the coating is applied in the form of solid particles or fibers.

309 This subclass is indented under subclass 308. Coating apparatus having a housing surrounding the work and means to saturate the atmosphere within the housing with finely divided particulate material.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 634, for apparatus for coating a base by electrostatic projection in which the work is positioned in a housing.
 715+, for apparatus for coating a base with a gaseous or vaporized coating material in which the work is positioned in a housing.
- 310** This subclass is indented under subclass 308. Coating apparatus having at least two diverse sources of the particulate material to be applied to the base.
- (1) Note. The various supplies of particulate material may be diverse as to color or size of particles, or any other distinguishing characteristics.
- 311** This subclass is indented under subclass 310. Coating apparatus having means to join the plural streams of particulate material and project them through a single orifice.
- 312** This subclass is indented under subclass 308. Coating apparatus having means to collect the surplus particulate material and cause the material to return to the source of supply or to treat the particulate coating material by nonradiant heating means.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 429, for apparatus having means to recirculate or subject to nonradiant heat the coating materials in an immersion coating device.
 600+, for treatment of coating material by means other than nonradiant heating means.
- 313** This subclass is indented under subclass 300. Coating apparatus having more than one projector for applying coating material to the work.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 206, for the combination of one or more projector type coating devices combined with a solid applicator type of coating device.
- 216+, for coating apparatus having plural solid applicators for applying a coating to an article.
 411, and 412, for apparatus having plural work confined pools of coating material.
- 314** This subclass is indented under subclass 313. Coating apparatus having means to convey the work along a path and having at least two projectors spaced along the path whereby the work receives coating material from one projector after the other.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 223+, for coating apparatus wherein the work moves past sequentially arranged solid applicators.
- SEE OR SEARCH CLASS:
 134, Cleaning and Liquid Contact With Solids, subclass 61 for fluid treating apparatus there provided, having sequential work treating receptacles or stations with means to transfer work or to transfer the fluid applying devices.
- 315** This subclass is indented under subclass 313. Coating apparatus wherein at least two of the coating material projectors apply coating material to the work at the same time.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 225+, for coating apparatus wherein at least two solid applicators act on the base at the same time.
 314, for coating apparatus wherein the work moves past sequentially arranged projectors which may or may not act on the work at the same time.
- 316** This subclass is indented under subclass 315. Coating apparatus wherein at least two of the coating material projectors are positioned in direct apposition one to the other.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
 226+, for coating apparatus having two or more opposed solid applicators.

- 317** This subclass is indented under subclass 300. Coating apparatus, peculiar or specialized to applying a coating to the inner surface of a cavity or hole within the confines of the work.
- (1) Note. In this subclass may be found, for example, apparatus for supporting a hollow article and means to cause the projector to be inserted into and removed from the hollow article. Also in this subclass may be found devices for supporting the hollow article and causing the projector to have a motion to cover the inner surfaces of the hollow article with coating material without the projector actually entering the hollow article.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
254, and see the notes thereto for other coating apparatus for applying a coating to the inside of a hollow article.
- 318** This subclass is indented under subclass 317. Coating apparatus having means to turn the work about an axis passing therethrough during coating.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
416, and see the notes thereto, for other coating apparatus having means to rotate the article.
- 319** This subclass is indented under subclass 300. Coating apparatus having means to convey the work to be coated about an axis of rotation which axis is external of the work thus moving the work in an arc or circle.
- (1) Note. The devices in this subclass are usually for conveying the article between work stations rather than devices to manipulate the work so as to present each portion of the work to the coating device, such as are found in subclass 320 above and other rotating work subclasses.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
230+, and see the notes thereto, for other apparatus having turret type work conveyors.
320, for coating devices in which the work is rotated about an axis which passes through the work, and see (1) Note, above.
- SEE OR SEARCH CLASS:
198, Conveyors: Power-Driven, appropriate subclasses for rotatable conveyors, particularly subclass 803.16.
- 320** This subclass is indented under subclass 300. Coating apparatus having means to rotate the work being coated about an axis passing there-through during the coating operation.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
416, and see the notes thereto, for other coating apparatus having means to rotate the work.
- 321** This subclass is indented under subclass 320. Coating apparatus having a mobile mounting for the projector.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
323, and see the notes thereto, for other projector type coating apparatus having a moving projector.
- 322** This subclass is indented under subclass 320. Coating apparatus having a flexible transporting means of continuous or indefinite length for the work.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
323, and see the notes thereto for other projector type coating apparatus having an endless conveyor for the work.
- 323** This subclass is indented under subclass 300. Coating apparatus having a mobile mounting for the projector.
- (1) Note. In this subclass may be found, for example, apparatus for (1) applying the

coating in a design by moving the projector over the surface of the work being coated in a particular manner, and (2) for moving the projector over the surface of the work to insure a uniform coating over the entire surface of the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 305+, for coating apparatus in which the projector is supported by and traverses along the work coated.
- 317, for coating apparatus for applying coating to the inside of a hollow workpiece wherein the projector is mounted for motion to position it within the hollow workpiece.
- 321, for coating apparatus having a moving projector for applying coating material to rotating work.
- 631, for a movable coating projector for spray coating by means of electrostatic projection of the coating material to the work.

SEE OR SEARCH CLASS:

- 134, Cleaning and Liquid Contact With Solids, subclass 172 for apparatus for contacting solids with liquids in which at least one fluid spray or jet applying conduit or nozzle is movably mounted, including those movable due to flexibility.

- 324** This subclass is indented under subclass 300. Coating apparatus having a flexible transporting means of continuous or indefinite length for the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 239, for coating apparatus having a solid applicator and a work carrier or manipulator in the form of an endless carrier.
- 630+, for means to transport work for spray coating by means of electrostatic projection of the coating material to the work.

SEE OR SEARCH CLASS:

- 34, Drying and Gas or Vapor Contact With Solids, subclass 658 for devices there provided for having an endless

conveyor for conveying the material treated.

- 134, Cleaning and Liquid Contact With Solids, subclasses 70+, and 124+ for apparatus provided for in that class having an endless conveyor for the work.
- 198, Conveyors: Power-Driven, appropriate subclasses for endless belt conveyors, particularly subclasses 804+ and search notes thereunder which recite the locations of other endless belt patents.

- 325** This subclass is indented under subclass 300. Coating apparatus specialized or peculiarly adapted to coat flexible work traveling longitudinally of itself, the length of which may be continuous and uninterrupted as distinguished from apparatus which handles the work as discrete units.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 77+, for apparatus for transferring solid coating material to running length work by rubbing contact.
- 117, 118, 122, and 123, for apparatus having solid members acting on coated running length work.
- 234, and 235, for apparatus for coating indefinite length work by means of a solid applicator.
- 419+, for apparatus for coating indefinite length work by means of immersion.

SEE OR SEARCH CLASS:

- 134, Cleaning and Liquid Contact With Solids, subclass 64 and 122 for devices for contacting solids with liquids, the solid being in the form of a sheet, strand, web, or bar traveling longitudinally of itself.

- 326** This subclass is indented under subclass 300. Coating apparatus having means to collect or remove excess coating material from the atmosphere surrounding the article being coated, usually in the nature of a housing or casing at the coating station.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 50, and 715+, for coating apparatus having a vacuum or fluid pressure chamber within which the work is positioned.
- 58+, for coating apparatus having means for bringing a noncoating gas or vapor into contact with work.
- 628, for collecting means comprising an electrode for collecting fugitive electrostatic projected spray coating material.

SEE OR SEARCH CLASS:

- 454, Ventilation, subclasses 49+ for devices for conducting away fumes, vapors, steam, dust, etc., from various places. Class 454 is the parent class for apparatus for supplying air to and removing it from enclosures, for distributing and circulating the air therein, and for preventing its contamination, including ventilated hoods or oftakes which do not claim work handling or specific coating means in combination. See also the search notes in the class definition of Class 454 for the location of other ventilated structures.

400 This subclass is indented under the class definition. Coating apparatus wherein the work to be coated is (1) introduced or dipped wholly or partially into a bath, puddle or other enclosed or restricted bulk supply of coating material, or (2) where a supported stream, column, puddle or other enclosed restricted bulk supply of coating material is brought into contact with the work to be coated.

- (1) Note. The base may contact the coating material in the bulk supply of coating material or it may contact only a thin column of coating material which has been conducted away from the bulk supply of the coating material.
- (2) Note. To be classified in this and the indented subclasses coating material must be supported up to the instant it contacts the base to be coated and must be more than a film on a solid supporting

surface. Compare, for example, subject matter of subclass 300 in which the coating material is flung or projected against the base, and subclass 200 for solid applicators supporting a wetting film of coating material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 26+, for immersion coating devices in which the work is edible.
- 56, for the combination of an immersion coating device and means to manipulate the work in some manner to distribute or move surplus coating material.
- 76+, for coating apparatus in which the work contacts a solid self-sustaining block of coating material.
- 200+, and see (2) Note, above.
- 300+, and see (2) Note, above.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclasses 257.05+ for applicator-loading supply means into which a coating tool is dipped to transfer material to the tool surface, particularly subclasses 257.07+ for inkwells; and see the search notes to subclass 257.07.
- 117, Single-Crystal, Oriented-Crystal, and Epitaxy Growth Processes; Non-Coating Apparatus Therefor, for processes and non-coating apparatus for growing therein-defined single-crystal of all types of materials, including inorganic or organic, especially subclasses 54+ for processes of liquid phase epitaxy corresponding to the liquid phase epitaxy apparatus found in Class 118.
- 119, Animal Husbandry, subclass 158 for apparatus for dipping animals in an insecticidal liquid.
- 134, Cleaning and Liquid Contact With Solids, appropriate subclasses for other devices for contacting solids with liquids for cleaning and purposes not provided for in other classes. See (2) Note of the class definitions of that class (134) for the line between that class and Class 118.

- 137, Fluid Handling, subclasses 386+ for liquid level maintaining a responsive system, and appropriate subclass for fluid handling systems including receptacles with means to supply fluid material thereto.
- 144, Woodworking, subclasses 50+ for apparatus for dipping matches to form heads.
- 366, Agitating, appropriate subclass for commingling of fluid and particulate material. See section IX of the class definition of Class 118 for the line between Class 118 and Class 366.
- 396, Photography, subclasses 564+ for photos:graphic fluid-treating apparatus.
- 401, Coating Implements With Material Supply, subclasses 126+ for the combination of a supply container and an applicator which either overlies the supply of coating material or depends from a closure into the supply.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclass 301 for apparatus for sterilizing by immersion.
- 451, Abrading, subclass 113 for abrading apparatus wherein the article to be abraded is immersed in the abrading medium.
- 401** This subclass is indented under subclass 400. Coating apparatus having a receptacle or tube for containing the coating fluid the level of which is kept constant by (1) a tube of capillary dimensions for conducting fluid to the receptacle from a source of supply, or (2) the liquid supply chamber, otherwise sealed, has an outlet leading to the immersion receptacle, which outlet is closed by liquid accumulating in the coating receptacle to stop flow thereunto except when material is removed from the coating receptacle whereupon an amount corresponding to that removed is thereby permitted to flow out of the supply chamber to replenish the coating receptacle.
- (1) Note. This subclass does not include absorbent or porous pads or brushes which may use capillary action to conduct or convey coating material, and for such subject matter search the solid applicator subclasses referenced in the search notes below.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
264+, for solid applicator, andsee (1) Note, above.
- SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 261 for barometric supply for battery or electrolytic cell replenishment, and subclasses 453+ for other barometric control of fluid flow.
- 222, Dispensing, subclasses 585+ for a barometric inkwell which includes a dip cup for receiving and coating the surface of a dip pen.
- 401, Coating Implements With Material Supply, subclass 120 for the combination of an applicator and a barometric supply container including a zone whereat the applicator is dipped into, and coated with, coating material.
- 402** This subclass is indented under subclass 400. Coating apparatus having one or more strata of coating material directly supported upon the surface of a pool of liquid material, which liquid material may itself be another coating material.
- (1) Note. In this subclass may be found, for example, machines for producing a so-called "marbled surface" on work by distributing and floating drops of variously colored coating material over a supporting liquid and bringing the object to be coated into contact with the floating coating material.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
421, for immersion type coating devices having a floating receptacle for holding the coating material.
- SEE OR SEARCH CLASS:
427, Coating Processes, subclasses 256+ especially subclasses 262, 267, 274, and 280 for processes of producing a variegated surface coloring in the coating applied.

403 This subclass is indented under subclass 402. Coating apparatus having pools of more than one coating material, one of the pools floating on a second pool, the base to be coated contacting and being coated by both pools.

404 This subclass is indented under subclass 400. Coating apparatus wherein the article coated enters or leaves the coating material pool below the upper surface of the pool through a restraining surface of the coating material receptacle.

- (1) Note. Since the article enters or leaves the coating material below the upper level of the material, gland, packing or die means are usually provided to prevent leakage or escape of coating material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

125, for coating apparatus having a die passage separate and distinct from the coating supply means for modifying the coating on the work.

SEE OR SEARCH CLASS:

65, Glass Manufacturing, subclasses 147+ for apparatus for laminating wire to glass in combination with glass forming means.

405 This subclass is indented under subclass 404. Apparatus specialized or peculiarly adapted to coat work the length of which may be continuous or uninterrupted as distinguished from apparatus which handles the work as discrete units.

SEE OR SEARCH CLASS:

164, Metal Founding, subclass 419 for apparatus for casting a metal layer against a base passing through a mold or die.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 113+ for apparatus for casting a nonmetallic layer against a base passing through an extrusion shaping chamber, where the configurations of the base and layer are diverse.

406 This subclass is indented under subclass 400. Coating apparatus in which part of the work is shielded by a solid member interposed between the work and the coating medium, the shield preventing contact of the coating material with the part of the work so shielded.

- (1) Note. In this subclass may be found, for example, apparatus in which a portion of the work is masked to yield a configured outline; also devices for closing an opening in a hollow article so the external surface only is coated.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

213, and 301, for other coating devices having masks or stencils.

504, for work surface shields, masks or protectors, per se.

SEE OR SEARCH CLASS:

101, Printing, subclasses 114+ for printing devices using tools or members having designed areas through which ink pigment or other coating substance may pass to the surface to be printed upon.

407 This subclass is indented under subclass 400. Coating apparatus wherein the pool of coating material is confined, retained or supported at least in part by a surface of the work being coated, relative motion between the work and the confined coating material separating a film of the material adhering to the work.

- (1) Note. In this and the indented subclasses may be found, for example, hoppers or containers for coating material positioned above the base to be coated with an open bottom of the hopper or container directly in contact with the base to be coated so that the bottom of the batch of coating material is supported at least in part by the base being coated. Also in this subclass may be found the so-called striping devices in which coating material is fed under pressure through a thin tube and into direct contact with a moving base, the column of coating material being supported up to the instant of contact with the base material.

SEE OR SEARCH CLASS:

117, Single-Crystal, Oriented-Crystal, and Epitaxy Growth Processes; Non-Coating Apparatus Therefor, for processes and non-coating apparatus for growing therein-defined single-crystal of all types of materials, including inorganic or organic, especially subclasses 54+ for processes of liquid phase epitaxy corresponding to the liquid phase epitaxy apparatus found in Class 118.

408 This subclass is indented under subclass 407. Coating apparatus having means to apply coating material to the inside surfaces only of a hollow article which inside surfaces support or retain a batch of coating material against gravity.

(1) Note. Apparatus for coating the inside of a hollow work piece by merely immersing the entire object in coating material is excluded from this subclass, and may be found in appropriate subclasses set forth below.

(2) Note. In this subclass may be found, for example, devices for coating the inside of a hollow work piece such as a container in which the container is filled with coating material then inverted to drain off the surplus coating material, leaving a film of coating material on the inside of the hollow work piece.

SEE OR SEARCH THIS CLASS, SUBCLASS:

254, for other coating devices for applying a coating to the inside of a hollow work piece; and see the notes thereto.

406, for apparatus of the immersion or work confined pool type for coating the inside surface of a hollow work piece in which the outer surface is masked or protected, and the entire work piece is immersed in a pool of coating material.

423+, for apparatus for moving a hollow article bodily into an immersion pool to coat the inside surfaces.

SEE OR SEARCH CLASS:

134, Cleaning and Liquid Contact With Solids, subclass 150 for apparatus there provided, in which the work is of a receptacle form, the receptacle form work constituting the sole treating liquid holding means.

409 This subclass is indented under subclass 407. Coating apparatus having means to turn the work about an axis of revolution passing through the article during the coating operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

416, and see the notes thereto, for other coating devices in which the base is rotated during the coating operation.

410 This subclass is indented under subclass 407. Coating apparatus in which forced feed means other than or in addition to gravity are provided to move the coating material from the source of supply into contact with the base to be coated.

411 This subclass is indented under subclass 410. Coating apparatus in which plural conducting means feed separate columns or pools of coating material into contact with the work.

SEE OR SEARCH THIS CLASS, SUBCLASS:

216+, for coating devices in which plural solid applicators coat the work.

313+, for coating apparatus in which plural sprays coat the work.

412 This subclass is indented under subclass 407. Coating apparatus in which plural conducting means pass separate columns or pools of coating material into contact with the work.

SEE OR SEARCH THIS CLASS, SUBCLASS:

411, for plural coating devices having a nongravity flow assistant.

413 This subclass is indented under subclass 407. Coating apparatus in which at least a portion of the pool receptacle wall in contact with the work at the point of departure of the work from the pool determines the thickness of the film of

coating material retained on the work and in which the wall portion is mounted for motion to (1) vary the spacing between the wall portion and the work and/or (2) obtain a relative motion between the working face of the wall portion and the work.

- (1) Note. The difference between the subject matter of this subclass and the subject matter of subclass 100 is that the subject matter of the present subclass has a movable member which is part of the coating material supply chamber. In subclass 100 the movable members, for determining the thickness of the coating, contact the coating after application of the coating material to the base and are distinct and separate instrumentalities from the coating material supply.

SEE OR SEARCH THIS CLASS, SUBCLASS:

100+, and see (1) Note, above.

- 414** This subclass is indented under subclass 413. Coating apparatus in which the movable wall portion for determining the thickness of the coating is a cylinder and turns about the axis of the cylinder.

SEE OR SEARCH THIS CLASS, SUBCLASS:

110+, for coating apparatus having a rotary member acting on the coating distinct from the device which applies the coating.

- 415** This subclass is indented under subclass 407. Coating apparatus in which a confined column or pool of coating material is supported or positioned above the base to be coated and the bottom of the pool or column is in contact with the work to be coated so that the work supports and confines the bottom of the pool of coating material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

300+, for coating devices having a hopper or container superposed above the base to be coated but not in direct contact therewith so that the coating material falls freely onto the base to be coated.

413+, for coating devices having a superposed hopper with a movable doctor as one wall thereof.

- 416** This subclass is indented under subclass 400. Coating apparatus having means to turn the work being coated about an axis passing through the work during the coating operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52+, for devices in which an article is immersed in coating fluid, then rotated to remove surplus coating material.

56+, for devices which impart a motion to the work after coating for the purpose of modifying the coating.

107, for devices having solid means for treating a coated base having means to rotate the coated base.

218+, 232+, 318, 320, and 409, for other coating devices in which the work is rotated during the coating operation.

500+, for subcombinations of work rotating devices, per se, for use in a coating operation.

SEE OR SEARCH CLASS:

134, Cleaning and Liquid Contact With Solids, subclasses 157+ for apparatus of that class in which the work support is mounted so as to have a rotary revolving, swinging or oscillating motion.

- 417** This subclass is indented under subclass 400. Coating apparatus having means to agitate a mass of discrete particles of work in intimate contact with a batch of coating material.

- (1) Note. In this and the indented subclass may be found, for example, devices for coating seeds in which a plurality of seeds are placed in a container along with the coating material and the seed and the coating material are agitated together to distribute the material over the seeds and thereafter the excess material being separated from the coated seeds.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

19, for similar devices for coating edible materials.

SEE OR SEARCH CLASS:

366, Agitating, especially subclasses 219+ for devices which merely agitate the base to be coated in contact with a coating material supply, and see section IX of the class definition of this class (118) for the line between Class 118 and Class 366.

451, Abrading, subclasses 326+ for apparatus for abrading by tumbling.

418 This subclass is indented under subclass 417. Coating apparatus having a container which turns about an axis in which the materials are agitated together.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

421, for other movably mounted immersion receptacles.

SEE OR SEARCH CLASS:

69, Leather Manufactures, subclass 30 for apparatus for treating hides in which the hides are enclosed in a rotating drum during the fluid treatment.

427, Coating Processes, subclass 242 for processes of coating by rumbling or tumbling.

419 This subclass is indented under subclass 400. Coating apparatus specialized or peculiarly adapted to coat work traveling longitudinally of itself the length of which may be continuous and uninterrupted as distinguished from apparatus which handles the work as discrete units.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

65, 67 and 68, for coating apparatus combined with means for drying running length work.

77+, for apparatus for transferring solid coating material to running length work by rubbing contact.

117, 118+, 122, and 123+, for apparatus having solid members acting on coated running length work.

235, for apparatus for coating indefinite length work by means of a solid applicator.

325, for apparatus for coating webs or strands using a projector type coating device.

405, for devices for coating running length work wherein the work enters or leaves the coating pool below the upper surface of the pool.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclass 623 for drying and gas or vapor contact with running length base material, and see the search notes of these subclasses for other running length material handling apparatus.

164, Metal Founding, subclass 418 for apparatus for casting metal onto a running indefinite length base.

420 This subclass is indented under subclass 419. Apparatus for coating flexible running length work the cross sectional dimensions of which are approximately equal.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

234, and see the notes thereto for other apparatus for coating strand form work.

421 This subclass is indented under subclass 400. Coating apparatus wherein the immersion receptacle is movably mounted or wherein the pool level may be varied.

(1) Note. In this subclass may be found, for example, devices in which the work to be coated is held above a coating material container and the container is raised to cause the article to be immersed therein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

407+, for other coating apparatus having a movable coating material carrier.

417+, for tumbling devices.

- SEE OR SEARCH CLASS:
 134, Cleaning and Liquid Contact With Solids, subclasses 117+ and 150 for devices in which there is a receptacle for treating fluid which receptacle is mounted for motion.
 366, Agitating, subclasses 219+ for mixing chambers which move, in whole or part, to effect agitation.
- 422** This subclass is indented under subclass 400. Coating apparatus having means to clear the surface of the immersion pool of noncoating materials or to agitate materials carried on or otherwise prepare the surface of the immersion pool.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
 429, for pool conditioning that treats more than the surface.
- SEE OR SEARCH CLASS:
 159, Concentrating Evaporators, subclass 42 for devices for straining or skimming liquids in a concentrating evaporator.
 366, Agitating, appropriate subclasses for agitators, per se.
- 423** This subclass is indented under subclass 400. Coating apparatus having work handling means for displacing the work relative to the coating material pool to cause immersion of the work in the pool or withdrawal of the work from the pool.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
 421, for devices for immersing articles in which the immersion pool moves to cause the immersion.
- SEE OR SEARCH CLASS:
 69, Leather Manufactures, subclass 32 for apparatus for the fluid treatment of hides, skin and leather, including means for moving the hide, skin or leather through the fluids with which the same is treated.
- 198, Conveyors: Power-Driven, appropriate subclasses for conveyors, per se, particularly subclass 346.1 for a conveyor arranged to dip a load into a treating tank.
- 204, Chemistry: Electrical and Wave Energy, subclasses 198+ for electrolytic coating apparatus having means for moving articles through the electrolyte.
- 424** This subclass is indented under subclass 423. Coating apparatus having at least one pair of opposed rotary cylindrical bodies for conveying the work therebetween.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
 114+, and see the notes thereto, for opposed roll couples for modifying the coating on the base.
- SEE OR SEARCH CLASS:
 198, Conveyors: Power-Driven, subclass 624.
- 425** This subclass is indented under subclass 423. Coating apparatus in which work carrier or manipulator has a reversible motion or moves in alternate directions.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
 54, for devices for immersing and centrifuging an article having a reciprocating work carrier for immersing the article.
 238, for other coating devices having a reciprocating work holder and in which the coating device is a solid applicator.
- 426** This subclass is indented under subclass 423. Coating apparatus wherein the means for moving the work has a movement about an axis of rotation which axis is external of the work being rotated.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
 230+, and 319, for other coating devices having rotary work carriers.

416, for immersing devices which rotate the work about an internal axis during the coating operation.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclasses 184+ for apparatus there provided having rotary or swinging conveyors.

427 This subclass is indented under subclass 400. Coating apparatus having at least two solid members immersed in the coating pool with the work disposed therebetween, the solid members moving with respect to each other to manipulate the work to bring about a more intimate contact between the work and the coating material.

(1) Note. For example, in this subclass may be found devices which beat, scrub, press, or agitate the work while immersed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

100+, for other coating devices having solid work treating means which act on the coated base after the coating is applied rather than during the coating operation.

SEE OR SEARCH CLASS:

12, Boot and Shoe Making, subclass 41.3 for apparatus for plibilizing soles with fluid treatment.

28, Textiles: Manufacturing, subclasses 217+ and especially 246, 261, 265+, and 285+ for thread finishing including a fluid treatment.

68, Textiles: Fluid Treating Apparatus, appropriate subclasses for fluid textile treating devices there provided for and having solid means acting on the material being treated.

241, Solid Material Comminution or Disintegration, subclasses 15+ and 38+ for apparatus there provided for having means to apply fluid to the work treated.

366, Agitating, appropriate subclasses, for devices for agitating a particulate base in the presence of coating material and see section IX of the class defini-

tions of this class (118) for the line between the two classes.

428 This subclass is indented under subclass 400. Coating apparatus wherein the immersion vessel is provided with normally stationary surfaces upon which the work rests or which direct the work as it is moved through the immersion pool.

SEE OR SEARCH THIS CLASS, SUBCLASS:

252, for coating apparatus having a solid applicator and means to guide the work.

423+, for immersion coating devices having means to move the article through the immersion pool.

500+, for work handling or supporting devices, per se.

429 This subclass is indented under subclass 400. Coating apparatus having specific structure of the immersion receptacle peculiarly adapting it to the coating operation and/or means for manipulating the coating material or subjecting it to nonradiant heat.

(1) Note. Included here, for example, are devices for recirculating coating material, supplying or replenishing the supply of coating material in the tank, or devices for guiding or flowing the coating material into intimate contact with the article immersed in the coating material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

401, for coating devices having a capillary tube feed from a source of supply to the immersion pool or a barometric column feed from a source of supply to the immersion pool.

600+, for means for treating coating material other than by the application of nonradiant heat.

668+, for means for controlling or conditioning the coating material having automatic controls.

SEE OR SEARCH CLASS:

- 68, Textiles: Fluid Treating Apparatus, subclasses 147+ for textile treating machines wherein the treatment is effected by reason of relative motion between the fluid and the article being treated.
- 126, Stoves and Furnaces, subclass 284 for heated glue pots.
- 137, Fluid Handling, appropriate subclass for fluid handling systems including tanks of general application.
- 210, Liquid Purification or Separation, subclass 193 for a filter with precoat adding means.
- 220, Receptacles, pertinent subclasses, for tank or container structure, per se.
- 266, Metallurgical Apparatus, appropriate subclass for furnace or pots for holding molten metal.

500 This subclass is indented under the class definition. Coating apparatus having means, per se, to grasp or manipulate the work.

- (1) Note. The subclasses above provide for work handling devices claimed in combination with means to coat or treat the coated article. To complete the search for particular types of work handling devices search must be made in the various work handling subclasses set forth above.
- (2) Note. The work handling and holding devices found here either (1) hold the work with no means to move the work from one place to another, or (2) impart a motion to the work for the purpose of assisting the coating operation, such as rotating the work during a spray coating operation. Class 198 provides for mechanisms, per se, for moving work pieces from one place to another even when disclosed in combination with a coating device.

SEE OR SEARCH CLASS:

- 198, Conveyors: Power-Driven, subclasses 343.1+ and 373 for a conveyor provided with a device for orienting an article.

- 221, Article Dispensing, appropriate subclasses for article dispensing not otherwise provided for, and see the reference to Class 221 in section IX of the class definition of this class (118) for a statement of the class line.
- 269, Work Holders, appropriate subclasses. Class 269 is the residual locus for patents to a device for clamping, supporting and/or holding an article (or articles) in position to be operated on or treated. See notes thereunder for other related loci.
- 294, Handling: Hand and Hoist-Line Implements, appropriate subclasses for such devices not limited by disclosure to, or claiming use in, a coating operation.

501 This subclass is indented under subclass 500. Coating apparatus having means positioned beneath the work holder to receive surplus coating material that falls from the coated work, or the coating applicator.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 31, for drain troughs and implements for use in the coating of edible materials.

502 This subclass is indented under subclass 500. Coating apparatus having means to penetrate the article to assist in holding the article.

SEE OR SEARCH CLASS:

- 294, Handling: Hand and Hoist-Line Implements, subclass 61, and see the notes thereto, for other devices for handling articles and designed to be plunged into or through the article engaged.

503 This subclass is indented under subclass 500. Coating apparatus having at least two opposed jaws between which the article is held for handling.

SEE OR SEARCH CLASS:

- 24, Buckles, Buttons, Clasps, etc., subclasses 455+ for clasps.
- 81, Tools, subclasses 300+ and 487 the notes thereto, for other opposed jaw type work grasping or manipulating devices.

- 269, Work Holders, subclasses 86+ for patents to a work holder with relatively movable jaws.
- 294, Handling: Hand and Hoist-Line Implements, appropriate subclasses, especially 87.1+ for grapple devices not limited by disclosure to, or claiming use in, a coating operation and subclass 99.2 for tweezers.
- 504** This subclass is indented under the class definition. Apparatus comprising a solid member interposed between an applicator and a surface to be protected for preventing the transfer of coating material to surfaces shielded.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 213, 301 and 406, for the combination of a shield, mask or protector and means to apply coating material.
- SEE OR SEARCH CLASS:
- 15, Brushing, Scrubbing, and General Cleaning, subclass 246 and 248 for similar devices attached to a hand manipulated coating implement during use.
- 101, Printing, subclasses 127+ and see the notes thereto for stencils.
- 132, Toilet, subclass 73, 216 and 319 for templet type devices for use in the application of cosmetics.
- 148, Metal Treatment, subclass 22 for compositions specialized for use in masking areas of metal surface to protect said areas during a metal treatment. See subclass 149 for processes including shielding metal surfaces during heat treatment operation.
- 451, Abrading, subclasses 29+ for a method of abrading including use of an abrading shield, subclass 445 for an erasing shield, subclass 448 for a button cleaning shield, and subclass 457 for a work guard for use during abrading.
- 505** This subclass is indented under subclass 504. Coating apparatus which are affixed to the work or base during the coating operation.
- 506** This subclass is indented under the class definition. Coating apparatus not provided for in any of the other subclasses.
- 600** This subclass is indented under the class definition. Coating apparatus combined with means, other than nonradiant heating means, to create and/or maintain a desired condition of the coating material.
- (1) Note. Such means may be operative either before or during the time the so-treated coating is being applied to the base, or at both such times.
- (2) Note. Coating devices combined with nonradiant heating means are classified on the basis of the particular coating devices.
- (3) Note. This class (118) provides for coating apparatus herein classifiable including (a) radiant energy heating means or (b) separate work heating or treating gas or vapor nozzles, whose primary function is to heat or treat the work before or after coating thereof.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 620+, for coating apparatus including means to apply electrical and/or radiant energy to the workpiece and/or coating material; and see the notes thereto.
- 602** This subclass is indented under subclass 600. Coating apparatus including means to withdraw the coating material from the coating zone, means to treat the withdrawn coating material, and means to return such material to the coating zone subsequent to treatment.
- (1) Note. Similar coating devices, not effective to treat recirculated material other than by nonradiant heat, will be found classified upon the basis of the nature of the coating operation, and see particularly subclasses 29, 312 and 429.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 29, 312, 429, and see (1) Note, above.

603 This subclass is indented under subclass 602. Coating apparatus which treats the coating material by removing foreign matter or undesirable components such as oversize particles or agglomerates.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

610, for separating means operating upon nonrecirculated coating material; and see the note thereto.

SEE OR SEARCH CLASS:

96, Gas Separation: Apparatus, subclasses 155+ for degasifying means for liquid, per se.
 209, Classifying, Separating, and Assorting Solids, appropriate subclasses for solid separation devices, and see the notes to the definition of that class (209).
 210, Liquid Purification or Separation, appropriate subclasses for liquid separation devices, and see the notes to the definition of that class (210).

606 This subclass is indented under subclass 600. Coating apparatus which is effective to administer to the coating material a treatment in the nature of a fiber preparation operation, such as fiber mass disintegration, assembly, or cleaning, or fiber parallelizing within the mass.

SEE OR SEARCH CLASS:

19, Textiles: Fiber Preparation, pertinent subclasses, particularly subclass 66 for fiber treating apparatus, per se.
 83, Cutting, appropriate subclasses for means for severing filaments or fibers without any further fiber treatment.

608 This subclass is indented under subclass 600. Coating apparatus in which the coating material treating means operates to knead, mill, rub, grind, comminute, or otherwise break down, smooth, or homogenize such material by a triturating action.

SEE OR SEARCH CLASS:

99, Foods and Beverages: Apparatus, subclass 494 for applying a solid or particulate material to food.

241, Solid Material Comminution or Disintegration, subclasses 31 through 301, for solid material comminuting apparatus; and see the notes to the class definition.

366, Agitating, subclasses 69+ for a kneading or mixing mill for rubber or heavy plastics.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 200+ for the combination of separate and distinct upstream agitating or kneading means and shaping or reshaping apparatus for nonmetals.

610 This subclass is indented under subclass 600. Coating apparatus including means for removing from the coating material foreign matter or undesirable components such as oversize particles or agglomerates.

(1) Note. A separator which also functions as a coating applicator will be classified on the basis of its function as an applicator, rather than in this subclass. Where, however, the separator deposits the coating material upon an applicator, the patent is classified in this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

603, for treatment of recirculated coating material by separation.

SEE OR SEARCH CLASS:

96, Gas Separation: Apparatus, subclasses 155+ for degasifying means for liquid, per se.
 209, Classifying, Separating, and Assorting Solids, appropriate subclasses for solid separation devices, and see the notes to the definition of that class (209).
 210, Liquid Purification or Separation, appropriate subclasses for liquid separation devices, and see the notes to the definition of that class (210).

612 This subclass is indented under subclass 600. Coating apparatus in which the treating means operates to shake, stir, or otherwise impart irregular or random motion to fluid or solid particulate coating material for the purpose of commingling the components or particles

thereof or creating or maintaining a fluent condition thereof.

SEE OR SEARCH CLASS:

366, Agitating, appropriate subclasses for agitating apparatus, per se.

620 This subclass is indented under the class definition. Coating apparatus combined with means to treat the work and/or coating material with electrical or radiant energy.

(1) Note. The energy may be applied, for example, in the form of an electrostatic or electromagnetic field or as infrared rays.

(2) Note. Generation of heat in the base caused by the application of electrical energy directly to the work will be found here. Generation of heat in the base by radiation will be found in subclasses 641+. The conversion of electrical or radiant energy into heat and the subsequent application of the heat in a nonradiant form to the work will be found in subclasses 58+.

(3) Note. As between the instant class and that of Class 347, Incremental Printing of Symbolic Information, the latter will take for placement a patent directed to a device of that class and including means to develop by coating a latent image produced by such device. However, recitation of further means to transfer the developed image, if by a coating operation otherwise proper for this class (118), will place the patent in this and indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

50.1, 724+ and 726+, for coating devices there provided for having electrical or radiant energy applied to the work or coating material.

58+, and see (1) Note, above.

SEE OR SEARCH CLASS:

96, Gas Separation: Apparatus, subclasses 15+ for apparatus for gas separation using an electric field (e.g.,

electrical precipitator, electrostatic type, etc.).

204, Chemistry: Electrical and Wave Energy, subclasses 194+ for electrolytic coating or forming apparatus, subclasses 622+ for electrophoretic or electro-osmotic coating or forming apparatus, and subclasses 298.02+ for sputter coating apparatus. See References To Other Classes of the Class 204 definition for the line between Class 118 and Class 204.

219, Electric Heating, appropriate subclasses for electrical heating means, per se.

346, Recorders, appropriate subclasses especially subclass 74.2 for magnetic recording.

347, Incremental Printing of Symbolic Information, subclasses 112+ for electrostatic printing devices including development of a latent image by a coating operation, and see (3) Note above.

427, Coating Processes, subclasses 458+ for processes of coating utilizing electrical, magnetic, or wave energy.

621 This subclass is indented under subclass 620. Apparatus wherein there is movement of coating material to the work to be coated, which movement is caused, in whole or in part, by the force of an electrostatic and/or electromagnetic field.

SEE OR SEARCH CLASS:

427, Coating Processes, subclasses 457+ for coating processes utilizing direct application of electrical, magnetic, wave, or particulate energy, specifically subclasses 472+ and 475+ for positioning, orientation or application of sprayed or non-sprayed coating material utilizing electrostatic charge, field or force.

622 This subclass is indented under subclass 621. Coating apparatus specialized or peculiarly adapted to apply a coating to the inner or concave surface of a cavity, bore, depression, or hole in the work.

(1) Note. A patent which includes in the claims a recitation of relationship

between the shape of the work and the coating apparatus may be placed in this subclass; in the absence of such recitation the patent will be classified elsewhere based on other features and cross-referenced here if the disclosure warrants.

SEE OR SEARCH THIS CLASS, SUBCLASS:

254, and see the notes thereto for other coating apparatus for applying a coating to the inside of a hollow article.

623 This subclass is indented under subclass 621. Apparatus wherein said apparatus has, at least in part, an electromagnetic field.

624 This subclass is indented under subclass 621. Apparatus wherein means are provided for varying the concentration or pattern of the lines of force of an electrostatic field for the purpose of obtaining a uniform or patterned coating on the work.

625 This subclass is indented under subclass 624. Apparatus wherein a multiplicity of electrodes is provided which may be individually energized in desired patterns whereby a coating is applied to the work according to the desired pattern.

626 This subclass is indented under subclass 621. Apparatus wherein the coating material is presented to the action of the electrostatic field in sheetlike or film form whereby the thus formed coating material is moved by the action of the field toward the work to be coated.

627 This subclass is indented under subclass 621. Apparatus wherein a means or force additional or supplemental to an electrostatic field is provided which aids the electrostatic field in moving the coating material toward the work to be coated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

623, for combined electrostatic and electromagnetic attraction or propulsion.

628 This subclass is indented under subclass 627. Apparatus wherein a surface other than and additional to the work desired to be coated is

provided, such surface having an electrical potential differing from that of the coating material to attract thereto any coating material which fails to be attracted to or projected upon the work.

629 This subclass is indented under subclass 627. Apparatus wherein the additional or supplemental force is provided by a blower or spraying mechanism.

SEE OR SEARCH THIS CLASS, SUBCLASS:

300+, for apparatus for spraying coating material upon the base to be coated.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 3 and 690+ for methods and apparatus, respectively, for projecting a liquid into the air which include a step or means for imparting an electrostatic charge to the projected liquid and see the notes to said subclass 690 for a statement of the line.

361, Electricity: Electrical Systems and Devices, subclasses 271+ for methods and apparatus for applying an electrical charge to materials, per se, and see the notes to Class 239, subclass 690 for a statement of the line.

630 This subclass is indented under subclass 629. Apparatus wherein a conveyor or similar means is provided to move one or more work pieces through the coating zone.

631 This subclass is indented under subclass 630. Apparatus wherein the additional blower or spraying mechanism is permitted to move or is given motion during the coating operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

323, for coating apparatus having a movable coating projector.

632 This subclass is indented under subclass 630. Apparatus wherein the conveyor line is arranged to have a return bend whereby the workpieces are kept in the vicinity or returned to the vicinity of the coating zone.

633 This subclass is indented under subclass 630. Apparatus wherein two or more conveyor lines of work are so arranged with respect to the blower or sprayer that the projected coating material from each such projector is attracted, part to one work transport line and part to another.

634 This subclass is indented under subclass 630. Apparatus having a specific housing or cabinet structure which surrounds or defines the coating zone.

635 This subclass is indented under subclass 630. Apparatus wherein a conductive work holder structure is provided having a protective non-conducting coating or casing which will prevent the conductive work holder structure from attracting coating material thereto.

636 This subclass is indented under subclass 627. Apparatus in which the additional or supplemental force is that of the earth's pull on the coating material as it falls freely through an electrostatic field.

- (1) Note. The coating material may be discharged from a hopper or similar apparatus onto the work which is located below.

638 This subclass is indented under subclass 621. Apparatus wherein the work to be coated is moved through an electrostatic field created between two or more spatially separated differentially charged electrodes.

639 This subclass is indented under subclass 620. Apparatus wherein previously coated work is subjected to the effects of an electrostatic and/or electromagnetic field for the purpose of removing built-up localized accumulations or "tears" of coating material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 63, and see the notes thereto for other apparatus for redistributing or removing surplus coating material.
638, for transfer of an uneven coating using spaced electrodes, e.g., image transfer.

SEE OR SEARCH CLASS:

- 399, Electrophotography, subclass 222 for an apparatus for applying developer material.

640 This subclass is indented under subclass 620. Apparatus wherein an electrostatic and/or an electromagnetic field is provided for the purpose of causing the particles of the coating material to assume a desired arrangement, formation or inclination to the work.

- (1) Note. The orientation here included may be applied to previously-coated work as well as to work coated by other than electrostatic or electromagnetic means.
(2) Note. In this subclass may be found, for example, devices for coating sandpaper in which the particles of abrasive are subjected to the action of the electric field so that they will position themselves properly on the base.

SEE OR SEARCH CLASS:

- 427, Coating Processes, subclasses 472+ for coating processes including aligning particles by electrostatic force.

641 This subclass is indented under subclass 620. Apparatus for subjecting the coated material to radiant heat energy.

- (1) Note. This subclass includes apparatus wherein the transfer of energy to the work may be a preheating operation prior to the coating application and/or a finishing operation after the coating has been applied.

- (2) Note. See (1) Note under subclass 620.

SEE OR SEARCH CLASS:

- 427, Coating Processes, subclasses 372.2+ for coating processes followed by heating of the coating.

642 This subclass is indented under subclass 641. Apparatus wherein the transfer of heat energy takes the form of one or more radiant or infrared transmission means for the purpose of solidifying or baking the previously applied coating material.

- 643** This subclass is indented under subclass 642. Apparatus wherein a second, dissimilar, drying means is provided.
- 663 CONTROL MEANS RESPONSIVE TO A RANDOMLY OCCURRING SENSED CONDITION:**
This subclass is indented under the class definition. Apparatus wherein the apparatus is provided with means which regulates the supply of energy or power to the apparatus or an element thereof to operate the same, the operation of the regulating means in turn being affected by a means which detects the chance occurrence of a characteristic or a change in a characteristic of (a) the work or product, (b) the coating material, or (c) the apparatus or some element thereof or the surrounding environment.
- (1) Note. A mere manually operated on-off switch will not be found in this or the indented subclasses unless it is combined with structure provided for herein.
- (2) Note. This subclass provides for those devices which are operated by an external energy or power source where the application of this external energy or power to the device is controlled by a condition sensor. Those devices employing a sensor which is moved by contact with an object to be coated and which have means to transmit this motion directly to an applicator it thereby use this motion directly to operate the applicator will not be found in this or the indented subclasses. For such devices see subclass 708.
- 664 Sampling of associated base:**
This subclass is indented under subclass 663. Apparatus wherein a means, other than the work, is provided to receive a coating, which coating is measured and compared to a standard whereby the rate of application of the coating to the work is adjusted.
- 665 Condition of coated material:**
This subclass is indented under subclass 663. Apparatus wherein the regulating means reacts to a device which detects a characteristic of the coating material which has been applied to the work.
- 666 Temperature responsive:**
This subclass is indented under subclass 663. Apparatus wherein the detecting means reacts to the variation of sensible heat.
- 667 Of coating material or applicator:**
This subclass is indented under subclass 666. Apparatus wherein the detecting device senses variations in the temperature of the material to be applied to the work or the device used to apply the coating material to the work.
- 668 Responsive to attribute, absence or presence of work:**
This subclass is indented under subclass 663. Apparatus wherein the detecting means reacts to a characteristic of the work or to the entrance or exit of the work from a particular position in the apparatus.
- 669 Selective application at a specific position:**
This subclass is indented under subclass 668. Apparatus wherein (a) a predetermined particular point or area on the work to receive the coating is detected or (b) coating material is applied to the work at a particular point or in a particular area in response to a detecting of a characteristic of the work.
- (1) Note. Examples of the types of coating apparatus to be found herein are means to deposit material at selected locations in a rotating unbalanced rotor to balance the same, applying coating to bare spots on the interior of a previously coated pipe, etc.
- 670 Defect in the workpiece sensed:**
This subclass is indented under subclass 668. Apparatus wherein a fault or imperfection in the work being coated is detected.
- (1) Note. Breakage of running length work is not considered to be a defect within the meaning of this subclass since the detectors used to sense loss of tension usually can be alternately used to sense either breakage or mere slackening of the running length.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
672+, for detectors which sense loss of tension in running length of work.
- 671 Proximity of work to electrically charged applicator sensed:**
This subclass is indented under subclass 668. Apparatus wherein the space between the work and a coating applying means is permeated by an electric potential and having means to detect a too close approach to the coating means by the work.
- 672 Running length work:**
This subclass is indented under subclass 668. Apparatus wherein a characteristic of a continuous, moving web or strand is detected.
- 673 Edge of running length of web material sensed:**
This subclass is indented under subclass 672. Apparatus wherein a deviation of a border of a continuum of sheetlike material having a width substantially greater than its depth from its normal workpath is detected.
- 674 Having means to sense speed of running length of work:**
This subclass is indented under subclass 672. Apparatus wherein the rate at which a continuous web or strand of material moves past a specific point is detected.
- 675 Removal of article sensed:**
This subclass is indented under subclass 668. Apparatus wherein the departure of the work from a coating station is detected.
- 676 Presence of work at or passage of work through coating station sensed:**
This subclass is indented under subclass 668. Apparatus wherein the appearance of the work at or the progress of the work through a location where the coating is to be applied is detected.
- 677 With means to remove or to prevent depositing of excess coating material:**
This subclass is indented under subclass 676. Apparatus wherein the detection of work at a point in the apparatus (a) actuates means to remove superfluous coating material from a coating position or (b) activates means to block or divert the application of coating material without the presence of work.
- 678 By means to interpose barrier:**
This subclass is indented under subclass 677. Apparatus wherein the means to block or divert the application of coating material is a physical shield placed between a coating material outlet and the position which is to be occupied by the work.
- 679 Having means to control coating application:**
This subclass is indented under subclass 676. Apparatus wherein means are provided to actuate or regulate a coating applying means.
- (1) Note. The coating means includes backup members or auxiliary members of the apparatus which are necessary to perform the coating operation.
- 680 By means to initiate movement of applicator or applicator adjunct:**
This subclass is indented under subclass 679. Apparatus wherein means are provided to begin movement of either a coating applying means from one point to another during a coating operation or an element associated with but external to the coating applying means which allows a coating to be applied to the work.
- (1) Note. An example of an associated element is a backup roll which is used to move the work into contact with the coating applying means so that the coating operation can be performed.
- 681 By means to move applicator or applicator adjunct from inoperative position to operative position:**
This subclass is indented under subclass 680. Apparatus wherein means are provided to regulate the movement of the coating material outlet or an ancillary piece of the coating apparatus associated with the coating material outlet from a nonuse position to a use position.
- 682 By means controlling the operation of a timing means:**
This subclass is indented under subclass 679. Apparatus wherein the means to actuate the coating applying means include means for con-

- trolling the time at which an operation occurs or the length of time during which the operation occurs.
- 683 Of a pump:**
This subclass is indented under subclass 679. Apparatus wherein the actuating means initiates or otherwise controls the operation of means to pump the coating material to thereby apply said material to the work.
- 684 Of a valve:**
This subclass is indented under subclass 679. Apparatus wherein the actuating means controls the movement of a flow obstructing means to effect or to regulate the application of coating material to the work.
- 685 Fluid motor actuated:**
This subclass is indented under subclass 684. Apparatus wherein a fluid motor means controls the movement of the flow obstructing means by either pneumatic or hydraulic pressure.
- 686 By means to control conveyor operation:**
This subclass is indented under subclass 676. Apparatus wherein the detection of the work at a point in the apparatus actuates means to regulate the movement of work transport means.
- 687 By means to intermittently advance conveyor:**
This subclass is indented under subclass 686. Apparatus wherein means are provided to cause the work transport means to start and stop at regular or irregular intervals.
- 688 Responsive to condition of coating material:**
This subclass is indented under subclass 663. Apparatus wherein the detecting means reacts to a characteristic of the material to be applied to the work.
- (1) Note. These characteristics are such things as density, concentration, etc., of the coating material.
- 689 Concentration of coating material in carrier medium:**
This subclass is indented under subclass 688. Apparatus wherein the coating material is composed of more than one component, the quantity of one being measured.
- 690 During application:**
This subclass is indented under subclass 689. Apparatus wherein the measurement of the quantity of one of the components of the coating material is performed during the time in which the coating material is travelling from an applying means to the work.
- 691 Photoelectric sensor:**
This subclass is indented under subclass 689. Apparatus wherein the means for measuring the quantity of one of the components of the coating material is composed of a light transmitting device and a light responsive device between which the coating material passes.
- 692 Pressure responsive:**
This subclass is indented under subclass 688. Apparatus wherein the supply of the coating material is controlled in response to variations in the force per unit area existing within said material.
- 693 Means to raise coating material to a predetermined level inside an enclosed container:**
This subclass is indented under subclass 688. Apparatus wherein the coating material is admitted to the interior of a receptacle and the advancing surface of the coating material is detected when it reaches a certain selected point.
- (1) Note. The art found in this subclass pertains to those devices in which the coating material is supplied to a container (which may be the work) and fills the container to a certain height whereupon a sensor is actuated which prevents further filling of the container.
- 694 Level of supply:**
This subclass is indented under subclass 688. Apparatus wherein the coating material is contained in a confined space and means are provided to sense the upper surface of the contained material.
- 695 INTERFACING CONTROL OF PLURAL OPERATIONS:**
This subclass is indented under the class definition. Apparatus wherein a plurality of independently driven and concurrently moving members operate on the work to be coated and

- means are provided to synchronize the movement for these members.
- 696 PROGRAM, CYCLIC, OR TIME CONTROL:**
This subclass is indented under the class definition. Apparatus having a regulating means which is provided with (a) means for operating the apparatus in response to a set of coded instructions, (b) means for regulating the sequence of operational steps performed in or by the apparatus, or (c) means for determining the time at which an operation occurs or length of time taken to perform such an operation.
- 697 Having prerecorded program medium:**
This subclass is indented under subclass 696. Apparatus wherein a set of coded instructions is contained on a registration means which can be fed through and read by the regulating means to control the operation of the apparatus.
- (1) Note. Examples of the registration means are magnetic tapes, punched cards, paper tapes, disk packs, etc.
- SEE OR SEARCH CLASS:
901, Robots, subcollection 43 for a programmed robot which performs a coating operation.
- 698 Having selection means for alternate operational sequences:**
This subclass is indented under subclass 696. Apparatus wherein a means is provided to choose between two or more modes in which the apparatus may operate.
- SEE OR SEARCH CLASS:
901, Robots, subcollection 43 for a robot which performs a coating operation.
- 699 Having timer:**
This subclass is indented under subclass 696. Apparatus wherein the regulating means is provided with means for controlling the time at which an operation occurs or the length of time in which said operation is performed.
- 700 Timing motor with cam or disk:**
This subclass is indented under subclass 699. Apparatus wherein the timing mechanism consists of a rotating, electrical motor which drives
- an irregularly shaped cylinder or a circular plate.
- 701 Notched rotating disk:**
This subclass is indented under subclass 700. Apparatus wherein the circular plate is provided with an angular cut in its periphery.
- 702 Sequential timing of plural operations:**
This subclass is indented under subclass 699. Apparatus wherein a means is provided to control the time at which an operation is performed in a series of operations.
- 703 Time delay means:**
This subclass is indented under subclass 699. Apparatus wherein a means is provided which causes an operation of the apparatus to be postponed for a specific period.
- 704 Sequential energization of plural operations:**
This subclass is indented under subclass 696. Apparatus wherein a means is provided to actuate the apparatus through a series of operations in a specific order.
- 705 Having means to reverse operation at end of travel path:**
This subclass is indented under subclass 696. Apparatus wherein a means is provided to cause a moving part of the apparatus to begin movement in the direction opposite to the one in which it has been moving upon reaching a terminal position.
- 706 Cyclic operation of singular element:**
This subclass is indented under subclass 696. Apparatus wherein only one specific part of the apparatus is moved from a starting position to a stopping position during each period of operation.
- 707 INTERCONTROL OR SAFETY INTERLOCK:**
This subclass is indented under the class definition. Apparatus in which means is provided for interrelating the operation of various parts of the apparatus so that upon the operation of one part, one or more other operating parts are disconnected or activated.
- (1) Note. A mere common drive means for plural parts of the coating apparatus are

not included but are found under appropriate type of apparatus.

- (2) Note. Safety interlocks which prevent an operator from being harmed when the apparatus is operating are found here.

708 **CONDITION RESPONSIVE CONTROL:**
This subclass is indented under the class definition. Apparatus wherein a work sensing means is provided which is contacted and moved by work moving therepast and wherein any movement imparted to the sensing means is transmitted directly to and causes the movement of some other element of the apparatus.

- (1) Note. Examples of subject matter to be found herein are valves having depending fingers rigidly connected thereto which are contacted by the work and which unseat the valve, means sensing the diameter of a wound package which controls the path taken by work being wound across a coating applying means, etc.

709 **Responsive to diameter of wound material spool:**
This subclass is indented under subclass 708. Apparatus wherein a means responds to a change in the diameter of a reel as material is wound thereon.

710 **Valve actuator:**
This subclass is indented under subclass 708. Apparatus wherein a valve is provided to control the flow of coating material, which valve has a sensing means associated therewith such that any motion imparted to the sensing means by contact with the work will be transmitted directly to the valve to actuate the same.

711 **Integral actuator extends through or is formed on valve seat:**
This subclass is indented under subclass 710. Apparatus wherein the sensing means is either an element carried by or a surface formed on (a) the valving member and extending through a circumscribing valve seat or (b) the valve seat.

712 **WITH INDICATING TESTING, INSPECTING, OR MEASURING MEANS:**

This subclass is indented under the class definition. Apparatus (1) having means to sense a condition and in response thereto actuate a signalling or indicating device or (2) being combined with means to perform a test upon, permit observation of, or perform a measuring operation upon (a) the coated or uncoated work, (b) the coating material, or (c) the apparatus.

713 **With means for visual observation:**

This subclass is indented under subclass 712. Apparatus wherein a means is provided to facilitate the visual examination of (a) the coating apparatus, (b) the work, or (c) the material applied by an operator.

714 **With means to return indicator to zero point:**

This subclass is indented under subclass 712. Apparatus wherein a means is provided to move the indicator from its indicating position to its initial rest position so that the indicator can be reused.

715 **GAS OR VAPOR DEPOSITION:**

This subclass is indented under the class definition. Apparatus wherein a coating material which is in the form of either the third state of matter, i.e., gaseous, or the transition between the second and third states of matter, i.e., vaporous, is condensed upon and forms a deposit of a base.

- (1) Note. The mere atomization of a liquid coating material by the influx of a pressurized gas thereby forming a fine mist is not included here. See Class 118, subclasses 300+.

SEE OR SEARCH CLASS:

117, Single-Crystal, Oriented-Crystal, and Epitaxy Growth Processes; Non-Coating Apparatus Therefor, for processes and non-coating apparatus for growing therein-defined single-crystal of all types of materials, including inorganic or organic, especially subclasses 84+ for processes of vapor phase epitaxy corresponding to the

vapor phase epitaxy apparatus found in Class 118.

716 Means to coat or impregnate particulate matter:

This subclass is indented under subclass 715. Apparatus wherein the base to be coated is granular.

717 Object embedded in particulate mass:

This subclass is indented under subclass 715. Apparatus wherein the base to be coated is fixed in a surrounding bed of granulated coating material.

718 Running length work:

This subclass is indented under subclass 715. Apparatus wherein the base which is being coated is longitudinally continuous and of indeterminate length.

719 Multizone chamber:

This subclass is indented under subclass 715. Apparatus wherein the coating apparatus is divided into a number of distinct areas wherein different aspects of the coating treatment can be performed.

720 Having means to expose a portion of a substrate to coating medium:

This subclass is indented under subclass 715. Apparatus wherein a mechanism is provided to selectively coat only a portion of the base with the coating material.

721 Substrate contacting mask:

This subclass is indented under subclass 720. Apparatus wherein said mechanism is a solid object which touches the base to prevent the underlying Section from being coated with the coating material.

722 With treating means (e.g., jarring, etc.):

This subclass is indented under subclass 715. Apparatus wherein a means is provided to condition either the base or the coating material in a manner other than and in addition to applying the coating to the base.

- (1) Note. The additional treatment of this and the indented subclasses may either enhance or perfect the actual coating operation or it may be totally unrelated with that operation. Examples of other

treatments to be found herein are vibrating or otherwise agitating the base, heating the base, etc.

SEE OR SEARCH CLASS:

96, Gas Separation: Apparatus, for apparatus for gas separation, per se.

723 By means creating additional electric field:

This subclass is indented under subclass 722. Apparatus wherein the means performing the additional conditioning creates an electric field which acts on the base or coating material.

724 By means to heat or cool:

This subclass is indented under subclass 722. Apparatus wherein a means is provided which alters the temperature which means is other than and in addition to any temperature altering means associated with a source of the coating material.

725 Substrate heater:

This subclass is indented under subclass 724. Apparatus wherein the temperature altering means heats the base or a support for the base.

726 Crucible or evaporator structure:

This subclass is indented under subclass 715. Apparatus wherein significance is attributable to a means which either vaporizes the coating material or contains the coating material during vaporization.

SEE OR SEARCH CLASS:

373, Industrial Electric Heating Furnaces, subclasses 11+ for crucibles used with electron beam vaporizing furnaces.

727 Movable crucible:

This subclass is indented under subclass 726. Apparatus wherein the holder of the coating material can be transported from one position to another.

728 Work support:

This subclass is indented under subclass 715. Apparatus wherein significance is attributable to a means which holds the base to be coated.

729 Moving work support:

This subclass is indented under subclass 728. Apparatus wherein the holding means for the base is capable of motion.

- 730 Rotary:**
This subclass is indented under subclass 729.
Apparatus wherein the base holding means is capable of circular motion.
- 731 Inverting:**
This subclass is indented under subclass 730.
Apparatus wherein a means is provided to flip the base holding means over to expose first one face of the base and then the other.
- 732 Porous:**
This subclass is indented under subclass 729.
Apparatus wherein the base holding means is foraminously constructed to allow gaseous flow therethrough.
- 733 Chamber seal:**
This subclass is indented under subclass 715.
Apparatus wherein a means is provided to prevent communication between a coating chamber and the exterior environment.

CROSS-REFERENCE ART COLLECTIONS

- 900 SEMICONDUCTOR VAPOR DOPING:**
Apparatus which implants impurities into a pure crystalline semiconductor material by vapor deposition to enhance the conductive characteristics of the semiconductor material.

END