

**CLASS 492, ROLL OR ROLLER****SECTION I - CLASS DEFINITION**

This is the generic class for a single device, not elsewhere provided for, which has a generally cylindrical work contacting surface which surface revolves about the longitudinal axis of the cylinder with rolling motion relative to the surface of the work. The device here classified includes only that part of the roll or roller structure and its support which is rotatably mounted except that a cover or a pad, per se, that is disclosed or claimed solely for or in combination with such a roll or roller is included herein. The device here classified may have more than a single roller as long as only a single side of a workpiece is contacted or treated during a single treatment cycle.

**SECTION II - NOTES TO THE CLASS DEFINITION**

- (1) Note. The roll or roller herein classified is generally a treating or shaping device although this class is the generic locus for a roll or roller not elsewhere provided for.
- (2) Note. A pair of rolls or rollers acting on different sides of a workpiece simultaneously is classified according to its particular function and is not included herein. See the pertinent references in References to Other Classes, below.
- (3) Note. Incidental disclosure of a roll or roller, per se, may also be found in those classes and subclasses listed in References to Other Classes, below.

The Search Notes below include all subclasses that refer to rolls in the subclass title or definition. Those classes and subclasses include roll making, but not setting forth such subject matter in a particular subclass is generally not included. The search notes are labeled as follows:

A. Roll or other rotary body, per se: (1) Method of making roll. (2) Roll with working surface. (3) Other rotary body.

B. Roll pair with working surfaces:

C. Other plural rolls or rollers.

D. Miscellaneous combinations including one or more rollers

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

- 7, Compound Tools, subclass 111 for a food or dough roller having handles at either end (a) combined with an implement or tool having a diverse function or (b) having interchangeable or rearrangeable parts for conversion to an implement or tool having a diverse function. (Roll or other rotary body, per se-Roll With Working Surface.)
- 7, Compound Tools, subclass 111 for a pastry type rolling pin with a combined or convertible feature. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 12, Boot and Shoe Making, particularly, subclass 8.3 for a lasting machine with driven rotating means for rubbing or carrying a shoe upper into conformity with a last, subclass 34 for a shoe sole laying and leveling machine utilizing a roller as a pressure applying member, subclass 65 for a toe or heel molding machine utilizing a roller as a molding member, and subclass 77 for a boot or shoe burnishing machine employing a rotating tool. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 12, Boot and Shoe Making, subclass 77 for a rotary machine or tool for burnishing a boot or a shoe and subclass 79.5 for a rotor for applying wax to a boot or a shoe and polishing the waxed area. (Originally in section II, under subsection A2, Roll With Working Surface.)
- 15, Brushing, Scrubbing, and General Cleaning, subclass 210.5 for a graining implement, per se, and see the notes thereto for the locus of other graining devices. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 15, Brushing, Scrubbing, and General Cleaning, particularly subclasses 179+ for a rotary implement of the brush or broom type; i.e., having a head constructed for rotation and having a working surface collectively constituted of the assembled ends of separate elements such as bristles, splints, fibers, broomstraws, grass, or other stems arranged in parallel relation and adapted for cleaning or polishing by brushing or scrubbing or for applying paint, powder, or

- other coating, coloring, or cleaning material and subclasses 230+ for a rotary implement under the class definition a working face composed of some sort of simple or compound fabric and adapted to act as a wiper, dauber, or polisher, or for applying a coating of fluid or powdered material. (Roll or other rotary body, per se-Roll With Working Surface.)
- 15, Brushing, Scrubbing, and General Cleaning, subclass 262 for a mop wringer employing one or more pressure rollers, the surfaces of the rollers acting on the mop to squeeze moisture therefrom. (Roll Pair With Working Surface.)
- 16, Miscellaneous Hardware (e.g., Bushing, Carpet Fastener, Caster, Door Closer, Panel Hanger, Attachable or Adjunct Handle, Hinge, Window Sash Balance, etc.), subclasses 87+ and, specifically, subclasses 91, 106, and 107 wherein a roller is employed in a bracket as a guide or stay member. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 16, Miscellaneous Hardware (e.g., Bushing, Carpet Fastener, Caster, Door Closer, Panel Hanger, Attachable or Adjunct Handle, Hinge, Window Sash Balance, etc.), subclasses 45+ for a roller or wheel used in a caster. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 19, Textiles: Fiber Preparation, subclass 49 for a rolling squeeze gin in which fiber is caught and drawn between two surfaces in rolling contact, the angle of contact being such that the seed being separated from the fiber will not enter. (Roll Pair With Working Surface.)
- 19, Textiles: Fiber Preparation, subclass 64.5 for a fiber preparation feeding roller, and subclass 112 for a carding cylinder. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 19, Textiles: Fiber Preparation, particularly subclass 54 for a gin roller to the cylindrical surface of which fibers cling and are drawn out in detaching seed from cotton and like fibers, subclasses 94 and 97 for the structure of a rotary beating or pricking member which separates and cleans fibers by means of teeth or blades which strike or pull the material, subclass 128 for combing rolls in the form of a cylindrical body with comb teeth mounted on the surface thereof through which fibers are relatively drawn into straightened and parallel positions, and subclasses 258+ for the structure of a drawing roll, per se, the surface of which is usually arranged to travel and cooperate with another surface travelling at a different speed to engage and grip a fiber strip at spaced points and thereby cause the fibers to slip by each other and the strip to become attenuated. (Roll or other rotary body, per se-Roll With Working Surface.)
- 24, Buckles, Buttons Clasps, etc., subclass 488 for a clasp utilizing a roll. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 26, Textiles: Cloth Finishing, particularly subclasses 99+ for a device employing a roller for spreading or smoothing cloth. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 26, Textiles: Cloth Finishing, subclasses 27+ for a roll or other device employed to finish cloth, the surface thereof treating the cloth by rubbing or friction. (Roll or other rotary body, per se-Roll With Working Surface.)
- 28, Textiles: Manufacturing, particularly subclasses 126+, especially subclass 128 for the structure of a roller, per se, utilized in a roll pack felter, the surface of the roller working the material to be felted by entangling the fibers by rubbing and subclasses 219+ for a roll or other device utilized in a thread finishing operation which rubs the thread, usually with a smooth surface, to effect the finishing operation. (Roll or other rotary body, per se-Roll With Working Surface.)
- 29, Metal Working, subclass 7.3 for a rotary cutter or die for use in making a fence barb, and subclasses 17.1+ for a machine or a method for manufacturing foil or other thin sheet which may include rolling. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 29, Metal Working, subclasses 17.1+ for a roller for treating metal foil. (Roll or other rotary body, per se-Roll With Working Surface.)
- 29, Metal Working, subclass 23.1, for a process of applying and securing metallic teeth to the surface of a substantially cylindrical body, subclasses 402.01+ for a process of repairing a roll, generally, subclasses 895+ for a process of making a roller, and subclasses 898+ for a process of making a bearing or component thereof. (Roll or other rotary body, per se-Method of Making Roll.)
- 29, Metal working, subclass 81.03 for a plurality of roll elements utilized to bend or misshape a workpiece causing scale to break away from the surface thereof. (Roll Pair With Working Surface.)
- 30, Cutlery, subclass 319 for a hand manipulated cutting tool of general utility including a blade

- in the form of a traveling roller and see the notes thereto for other location of a rotary blade cutting tool. (Roll or other rotary body, per se-Roll With Working Surface.)
- 34, Drying and Gas or Vapor Contact With Solids, subclass 95.3 for a rolling cylinder blotting device. (Roll or other rotary body, per se-Roll With Working Surface.)
- 34, Drying and Gas or Vapor Contact With Solids, subclass 240 for a roll used as a work support under the class definition. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 33, Geometrical Instruments, particularly, subclass 449 for a rule or ruler designed for parallel line work which is provided with a roller member to allow advance or movement of the rule from one line to the next while constantly maintaining the direction of the straightedge and subclasses 734+ and 772+ for a distance measuring device of the rolling contact type utilizing a roller. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 37, Excavating, subclass 117.5 for a excavating scraper with a roller. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 37, Excavating, subclass 224 for a cylindrical tool adapted to roll over and compress a layer of snow or ice. (Roll or other rotary body, per se-Roll With Working Surface.)
- 38, Textiles: Ironing or Smoothing, particularly, subclasses 44+ for a roller presser. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 38, Textiles: Ironing or Smoothing, particularly subclasses 63+ for an element of a smoothing machine, and subclass 100 for a smoothing roller implement whose surface irons or smooths textile fabric. (Roll or other rotary body, per se-Roll With Working Surface.)
- 38, Textiles: Ironing or Smoothing, particularly, subclasses 49+ for a roller presser device having plural cooperating rolls wherein there is a single presser roller having contact with two or more pressing rollers, the material passing between and being pressed by the rolls and subclass 101 for a smoothing implement consisting of opposed rollers between which textile material is passed effecting a smoothing thereof. (Roll Pair With Working Surface.)
- 40, Card, Picture, or Sign Exhibiting, subclass 116 for a calendar and a roll about which the calendar may be wound and subclasses 344+ for a copy holder including a roller in continuous engagement with web or sheet of copy to advance the copy therepast and, particularly, subclasses 345+ for one which includes a rotary pinch-pair of such feed rollers. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 43, Fishing, Trapping, and Vermin Destroying, subclass 80 for a fishing net handling roller. (Roll or other rotary body, per se-Roll With Working Surface.)
- 56, Harvesters, subclasses 104+ for a corn picker or husker employing a pair of rotating rollers which act on an ear of corn to pinch or snap the ear from the stalk. (Roll Pair With Working Surface.)
- 57, Textiles: Spinning, Twisting, and Twinning, subclasses 112+ for a textile spinning or twisting roller. (Roll or other rotary body, per se-Roll With Working Surface.)
- 65, Glass Manufacturing, subclasses 253+ for glass sheet or strip forming means including a roller, and subclass 370.1 for a roller, per se, for glassworking. (Roll or other rotary body, per se-Roll With Working Surface.)
- 66, Textiles: Knitting, subclasses 190+ for knit roll padding and covering incorporating unknit materials which materials are usually held by the loops of a main fabric, but are not formed into any knitted loops and are frequently so incorporated as to be readily napped or to constitute pile loops providing a working surface of special characteristics. (Roll or other rotary body, per se-Roll With Working Surface.)
- 65, Glass Manufacturing, subclasses 253+ for apparatus for forming a glass sheet from a plastic mass of glass by a rolling operation and subclass 370.1 for a glass working or treating roll, per se. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 68, Textiles: Fluid Treating Apparatus, particularly, subclasses 84+ for a rotary scrubber employing a roll and subclasses 97+ for a squeezing device of the roll type. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 68, Textiles: Fluid Treating Apparatus, subclasses 244+ for roller type washing wringer. (Roll or other rotary body, per se-Roll With Working Surface.)
- 68, Textiles: Fluid Treating Apparatus, particularly, subclass 99 for a squeezing machine of the roll type having a pair of rolls which effect a squeezing action on textiles passed therebetween while subjected to a liquid, subclasses 100+ for a squeezing machine having a roll and

- a bed made up of rollers which effect a squeezing action on textiles passed therebetween while subjected to a liquid, and subclasses 244+ for a roller type wringer, the surfaces of the opposed rolls of which act on textiles passed therebetween to express excess liquid from the material. (Roll Pair With Working Surface.)
- 68, Textiles: Fluid Treating Apparatus, subclass 231 for a washboard having a rubbing surface of rollers. (Other Plural Rolls or Rollers.)
- 69, Leather Manufactures, subclass 43 for a leather working machine having a rotary tool, generally, with a smooth working periphery and commonly employed as a leather wringer or roller press for leather. (Roll Pair With Working Surface.)
- 69, Leather Manufactures, particularly, subclasses 13+ for a leather skiving and slitting device with a roller feed and subclasses 37+ for a device under the class definition utilizing a rotary tool in the treatment of leather. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 72, Metal Deforming, subclasses 91+ for deforming of a rotating metallic workpiece by a rotating tool and a cooperating tool presenting an opposing concave surface. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 72, Metal Deforming, subclasses 67+ and 184+ for a roller-like tool having a shaped work-engaging surface. (Roll or other rotary body, per se-Roll With Working Surface.)
- 72, Metal Deforming, subclass 236 for metal rolling with roller reconditioning or lubricating. (Roll or other rotary body, per se-Method of Making Roll.)
- 76, Metal Tools and Implements, Making, subclasses 107.1+ for a process of making a die roll. (Roll or other rotary body, per se-Method of Making Roll.)
- 72, Metal Deforming, subclasses 199+ for a roller couple or a rolling mill. (Roll Pair With Working Surface.)
- 76, Metal Tools, and Implements, Making, particularly, subclass 27 for a saw-blade stretching and straightening machine comprising a pair of rollers or a roller and bed which effect a straightening and stretching of the blade when passed therebetween and subclass 89.2 for a swaging device employing a roller which act on metal causing it to flow to sharpen an edge thereof. (Roll Pair With Working Surface.)
- 73, Measuring and Testing, subclass 824 for compressional testing by applying a load to a specimen with a roller. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 74, Machine Element or Mechanism, particularly, subclass 214 for a friction wheel used in a friction transmission, the surface of the wheel frequently having a covering of friction material to enhance its frictional qualities and subclass 572.2 for a flywheel, such device being distinguished by features residing in and pertaining to inertia or momentum characteristics. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 83, Cutting, subclasses 824+ for a cutting tool guide employing roller elements. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 83, Cutting, subclasses 401+ for feeding and, in particular, subclass 436 for roller feed to a cutting machine. (Other Plural Rolls or Rollers.)
- 84, Music, subclass 94.1 for a cylinder provided with projecting pins used to pick the tuned sounding teeth of the combs of certain type musical instruments; e.g., Swiss music boxes. (Roll Pair With Working Surface.)
- 99, Foods and Beverages: Apparatus, subclasses 462+ and 464+ for a rolling surface treating dairy food: subclasses 521, 522, and 605+ for a rotating conical or cylindrical surface used to remove the hulls from grain: subclasses 557+ for a seeder having a belt or roller which cooperates with another member to press out and remove the seeds; subclasses 574 and 575 for a roller type means for removing shells; and subclasses 585 and 640 for a roller that pulls off the skin of the food. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 100, Presses, subclass 153 for a concurrent pressing and conveying press, not elsewhere provided for, in which an endless conveyor coacts with a roll. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 100, Presses, subclass 210 for a roll or platen press not elsewhere provided for. (Other Plural Rolls or Rollers.)
- 100, Presses, subclasses 155+ for a roller type concurrent conveying and pressing press, not elsewhere provided for especially subclass 176 for at least two coating rotary bodies between which material is compacted. (Roll Pair With Working Surface.)

- 101, Printing, particularly subclasses 348+ for an inking roller, having a disclosed function of applying ink to a printing surface. See the search note to subclasses 375+ for a rolling contact printing member, the surface of which is capable of printing by rolling or rocking upon the work and subclass 415.1 for means for attaching to a roller support and stretching a flexible sheets employe in a printing operation, which means is commonly associated with a rotary support. (Roll or other rotary body, per se-Roll With Working Surface.)
- 104, Railways, particularly, subclass 135 for a slide-way having a track surface made up of a series of rollers, subclass 168 for a car propelling means in which the propelling element consists of vertically or transversely extending live rolls, and subclass 245 for a derailment guard comprising nonload carrying guide rollers. (Other Plural Rolls or Rollers.)
- 105, Railway Rolling Stock, subclass 392 for freight cars having a roll in a car doorway or on the floor to facilitate freight handling. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 105, Railway Rolling Stock, particularly, subclass 330 for a passenger carrying car in the form of a ball or cylinder which is adapted to be rolled along a track and subclass 356 for a freight carrying receptacle in the form of a drum or cylinder adapted to be rolled along a track. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 114, Ships, subclass 181 for a hawse pipe wherein a friction roller is utilized. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 114, Ships, subclass 220 for a ship fender provided or formed with a freely rotating roller. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 118, Coating Apparatus, for coating apparatus employing a rotary applicator. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 118, Coating Apparatus, particularly, subclasses 114+ for opposed rolls modifying a coating after application to the work and subclasses 224, 227+, and 249+ for opposed rotary applicators. (Roll Pair With Working Surface.)
- 126, Stoves and Furnaces, subclass 410 for a roll type self-heating tool. (Roll or other rotary body, per se-Roll With Working Surface.)
- 131, Tobacco, subclass 57 for a roller, per se, peculiar to a cigar or a cigarette making device, the roller being so utilized that its surface when rotated acts on the tobacco to form a cigar or cigarette, place a wrapper thereon, or perform an analogous operation. (Roll or other rotary body, per se-Roll With Working Surface.)
- 131, Tobacco, subclasses 300+ for a device for treating tobacco with fluid or fluent material wherein a pair of rollers is employed, the tobacco being conveyed through the rollers after fluid treatment, wherein the rollers express the excess fluid therefrom. (Roll Pair With Working Surface.)
- 138, Pipes and Tubular Conduits, subclass 177 for a pipe structure. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 138, Pipes and Tubular Conduits, for a laminated tubular product. (Roll or other rotary body, per se-Roll With Working Surface.)
- 131, Tobacco, subclass 56 for a cigar or cigarette making machine having cooperating rolling surfaces comprised of a plurality of rollers. (Other Plural Rolls or Rollers.)
- 139, Textiles: Weaving, particularly subclasses 294+ and subclass 296 for a rotary temple carried by the loom for removing the cloth as it is woven and subclasses 383+, particularly, subclasses 384, 408, and 420 for textile fabric disclosed as a pad or cover for an ironer roll surface. (Roll or other rotary body, per se-Roll With Working Surface.)
- 144, Woodworking, particularly, subclass 255 for a woodbending machine with a roller bending member. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 144, Woodworking, subclasses 246.1+ for a roll utilized in woodworking, the surface of which when in contact with the work serves to hold it from springing, lifting, or vibrating. Subclasses 250.1+ include such roll made up of independently-yielding parts to accommodate work irregular in cross section. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 152, Resilient Tires and Wheels, (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, for a method of making a roll by lamination. (Roll or other rotary body, per se-Method of Making Roll.)
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 421 for a tire building stitching device. (Miscellaneous Combinations Including One or More Rolls or Rollers.)

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 421 for a tire body stitching roller. (Roll or other rotary body, per se-Roll With Working Surface.)
- 159, Concentrating Evaporators, subclass 11.1 for an evaporator designed to evaporate a liquid in film or thin layer form, the film being spread or supported on a rotary drum or disc. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 160, Flexible or Portable Closure, Partition, or Panel, subclasses 238+ for a roll type device under the class definition upon which the material is accumulated in the form of a roll; e.g., a window shade roller. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 162, Paper Making and Fiber Liberation, subclasses 309+ for a dandy roll acting on the product on the molding surface to imprint a design or watermark on the wet web. (Roll or other rotary body, per se-Roll With Working Surface.)
- 162, Paper Making and Fiber Liberation, subclass 368 for a roller press and felt combination for squeezing a wet web of fibrous material. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 164, Metal Founding, subclass 428 for metal casting apparatus employing a roll pair, the surfaces of which shape the cross section of molten metal and support it until firm enough to retain said cross section, the shaped metal subsequently being continuously or substantially continuously withdrawn. (Roll Pair With Working Surface.)
- 165, Heat Exchange, subclasses 89+ for a moveable roller provided with heat transfer means. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 165, Heat Exchange, subclasses 89+ for a hollow roll with a heat transfer device comprising a rotary drum. (Roll or other rotary body, per se-Roll With Working Surface.)
- 171, Unearthing Plants or Buried Objects, subclass 4 for a plant or clod crushing roller combined with an unearthing device, subclass 13 for a toothed pick-off roller, subclass 58 for an opposed plant extracting roller, subclasses 93, 95+, and 128 for a toothed rotary digger which combs through earth material to recover desired objects therefrom, subclasses 112 and 129, for a rolling screen or drum separator, and subclass 116 for a clod-breaking roller for extractor or separator. (Roll or other rotary body, per se-Roll With Working Surface.)
- 172, Earth Working, subclasses 133+ and see the subclasses there noted for an earth working implement utilizing diverse tools, wherein one of the tools comprises a roller. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 172, Earth Working, subclasses 518+ for a roller which has features relating to earth working other than or in addition to earth compacting. (Roll or other rotary body, per se-Roll With Working Surface.)
- 173, Tool Driving or Impacting, subclass 131 for a lifting roller for a drop hammer. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 175, Boring or Penetrating the Earth, subclasses 331+ for an earth boring bit or bit element including a cutting or crushing roller or disc. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 180, Motor Vehicles, subclass 20 for a motor vehicle provided with one or more rollers for supporting it. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 184, Lubrication, particularly, subclass 23 for a roller constituting a lubricating device intended to be placed upon an elevator car and in a position to lubricate the slideways of the same, and subclass 101 for a roller for applying lubricant to a bearing, the roller usually being covered with felt to bear and transmit the lubricant to bearings in contact with the roller surface. (Roll or other rotary body, per se-Roll With Working Surface.)
- 188, Brakes, particularly subclass 25 for a velocipede brake wherein the brake shoe is a cylinder or other rotating body, subclass 37 for a wheel and rail brake applied between the wheel and rail by a shoe-chock in the form of a roller, and subclass 39 for brakes applied to the track, and not to the rail upon which the wheels run, wherein the brake shoe is a wheel or cylinder. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 188, Brakes, subclass 218 for a rotor, drum, or disc attached to or revolving with a wheel and to which a brake is applied. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 191, Electricity: Transmission to Vehicles, subclass 56 for a trolley collector contact element of the roller type, the peripheral surface of the contact element providing rolling contact with the trol-

- ley wire. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 193, Conveyors, Chutes, Skids, Guides, and Ways, subclass 37, for a roller particularly designed for use in a roller way. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 198, Conveyors: Power-Driven, particularly, subclasses 780+ for a conveyor utilizing a series of rolls attached to an endless moving member and subclasses 804+ for a belt trough wherein the troughing means is a series of rollers. (Other Plural Rolls or Rollers.)
- 198, Conveyors: Power-Driven, subclasses 385+, 387, 501, 604+ 608, 611+, 624+, 765, 779, 780+, 806+, 824+, 835, 842+, and 845 for a roller constituting the load moving element of a power-driven conveyor or constituting a guide, support, or other element of such conveyor and subclasses 359+ and 539 for a nondriven roller conveyor combined with a power-driven conveyor. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 205, Electrolysis: Processes, Compositions Used Therein, and Methods of Preparing the Compositions, subclasses 25+ for a process of electrolytically coating a cylinder, a roll, or hollow article, and subclass 73 for a process of reproducing or forming a hollow body, roll, or ring by electrodeposition in which the final product bears a definite predetermined conformation dependent upon the particular shape of the deposition base, but does not remain with the base upon which the deposition is made. (Roll or other rotary body, per se-Method of Making Roll.)
- 209, Classifying, Separating, and Assorting Solids, subclasses 606+ for an automatic assorting device which employs spaced rollers forming gauging slots which pass articles whose maximum dimensions are less than the slot dimensions. (Roll Pair With Working Surface.)
- 211, Supports: Racks, subclass 151 for a shelf whose article supporting parts include a roller. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 219, Electric Heating, especially, subclass 244 for an electric heater, electric heating metal-working apparatus, electrically heated tool or instrument provided with a special radiating plate, including such a device known as a radiator, rotating cylinder, such as used in a ironing machine, etc., or other devices equipped with electric heating means not elsewhere classifi-
- able. (Roll or other rotary body, per se-Roll With Working Surface.)
- 223, Apparel Apparatus, especially subclasses 12+ for a hat-shaping roller. (Roll or other rotary body, per se-Roll With Working Surface.)
- 223, Apparel Apparatus, subclasses 52.1+ for a special machine for ironing a collar, cuff, or neckband which may have a roller as an ironing element. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 226, Advancing Material of Indeterminate Length, for a method of or apparatus for feeding material without utilizing both the leading and trailing ends to effect movement of the material. (Roll Pair With Working Surface.)
- 226, Advancing Material of Indeterminate Length, subclasses 190+ for a roller or mount details therefor for feeding material without utilizing the leading or trailing ends to effect movement of the material. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 228, Metal Fusion Bonding, subclasses 144+ for a process of bending a sheet or plate into a tubular shape and edge joining the meeting edges together by metallurgical means. (Roll or other rotary body, per se-Method of Making Roll.)
- 238, Railways: Surface Track, subclass 16 for a rail provided with rollers for engagement with a vehicle wheel to hold the wheel to rail, particularly on a curve. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 241, Solid Material Comminution or Disintegration, subclasses 293+ for a cylindrically shaped article or roller used as a comminuting element and which presents a peripheral comminuting surface to the material. (Roll or other rotary body, per se-Roll With Working Surface.)
- 242, Winding, Tensioning, or Guiding, subclass 155 for a tension device under the class definition in which a rotary pulley, wheel, or disc is employed. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 242, Winding, Tensioning, or Guiding, subclasses 570+ for a coil holder about which elongated material is wound or unwound, and subclasses 118+ for a spool about which strand material is wound or unwound. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 254, Implements or Apparatus for Applying Pushing or Pulling Force, for a roller especially adapted for pushing or pulling under the class definition. (Roll or other rotary body, per se-Other Rotary Body, per se.)

- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, for molding and shaping of plastic materials within the class definition. (Roll or other rotary body, per se-Method of Making Roll.)
- 271, Sheet Feeding or Delivering, particularly subclass 275 for a roller particularly designed to serve as a rotary sheet feeding means and function to present a sheet to a desired position or remove it from a pack. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 280, Land Vehicles, subclass 162 for a protective chafe iron for a vehicle having a roller member. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 293, Vehicle Fenders, subclasses 17+ for a rotary drum or roller employed as a vehicle fender. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 295, Railway Wheels and Axles, subclasses 1+ for a railway wheel. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 301, Land Vehicles: Wheels and Axles, subclasses 5+ for a wheel for a land vehicle. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 312, Supports: Cabinet Structure, subclasses 50+ for a stacked card dispensing cabinet utilizing a friction roller type ejector. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 346, Recorders, subclass 138 for a record receiver in the form of a drum. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 355, Photocopying, subclass 133 for a roll or roller especially adapted for use in contact printing. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 361, Electricity: Electrical Systems and Devices, subclass 221 for a roller adapted for discharging or preventing accumulation of electricity or electric charge. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 366, Agitating, subclasses 69+ for a rubber mixing or kneading mill including a roll. (Roll Pair With Working Surface.)
- 369, Dynamic Information Storage or Retrieval, subclass 272.1 for a recording tablet having a cylindrical record-bearing surface. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 384, Bearings, subclasses 565+ and 619 for a roller, per se, designed for use as a bearing element. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 384, Bearings, subclasses 428+ for a rotary bearing mounting or support. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 396, Photography, for a roller especially adapted for photograph processing. (Roll or other rotary body, per se-Roll With Working Surface.)
- 399, Electrophotography, subclasses 279+ for development rollers, subclass 313 for transfer rollers, subclasses 330+ for heat and pressure rollers providing fixing, subclass 357 for cleaning an image surface by rollers, and subclasses 361+ for document handling. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 400, Typewriting Machines, particularly subclasses 636+ for a feed roller and its support which feeds and holds paper directly in contact with the platen in a typewriting machine and subclasses 659+ includes a typewriter platen roll, usually in the form of a rotatable cylinder, the surface of which supports and carries the paper to a position to receive successive lines of printing and which receives the blow or impact of the type during the printing operation. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 401, Coating, Implements With Material Supply, subclass 197 for hollow porous roller in which the coating material flows therethrough. (Roll or other rotary body, per se-Roll With Working Surface.)
- 404, Road Structure, Process, or Apparatus, subclasses 122+ for a roller used as a compacting device in the production or repair of a road. (Roll or other rotary body, per se-Roll With Working Surface.)
- 407, Cutters, for Shaping, subclasses 30+ for a rotary cutter to be used in a shaping machine. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 409, Gear Cutting, Milling, or Planing, subclass 305 for a machine for planing a groove in the curved surface of a roll to provide a scored surface; e.g., for forming the surface of a grinding roll, a crushing roll, etc. (Roll or other rotary body, per se-Method of Making Roll.)
- 412, Bookbinding: Process and Apparatus, for a roller especially adopted for bookbinding. (Roll or other rotary body, per se-Roll With Working Surface.)
- 413, Sheet Metal Container Making, subclasses 1+ for a method of fabricating a sheet metal can. (Miscellaneous Combinations Including One or More Rolls or Rollers.)

- 413, Sheet Metal Container Making, appropriate subclass, for a roller especially adopted for metal can making. (Roll or other rotary body, per se-Roll With Working Surface.)
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 363+ for a press forming or reshaping means including a roll, and subclass 471 for a roller having a significant shaping surface for non-metallic material. Also see the search notes therein. (Roll or other rotary body, per se-Roll With Working Surface.)
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 363+ for a roll pair press forming or reshaping means; see the search notes thereunder. (Roll Pair With Working Surface.)
- 427, Coating Processes, subclasses 230+ for a process of coating the interior of a hollow article, including a roll, by other than immersion. (Roll or other rotary body, per se-Method of Making Roll.)
- 428, Stock Material or Miscellaneous Articles, for a stock material product in the form of a single or plural layer web or sheet and, especially, subclasses 34.1+ for a conduit, a cylinder, or a tube type article and subclasses 364+ for a coated or a structurally defined rod or strand which may take the form of a roll or a roller. (Roll or other rotary body, per se-Roll With Working Surface.)
- 432, Heating, subclass 246 for a feeding or conveying roller especially adapted for use in a high temperature environment. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 451, Abrading, subclasses 484+ and 490+ for a rotary cylindrical tool having a flexible or yielding work-contacting abrading periphery and subclasses 541+ for a rotary cylindrical tool used in an abrading machine, the tool being in the nature of a roller having a peripheral working surface for effecting abrading. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 451, Abrading, appropriate subclasses for a grinding or abrading roller. (Roll or other rotary body, per se-Roll With Working Surface.)
- 451, Abrading, subclasses 49+ for a process of grinding a roll, roller, shaft, ball, sphere, or piston. (Roll or other rotary body, per se-Method of Making Roll.)
- 452, Butchering, subclass 145 for a hand roll especially adapted for tenderizing meat. (Roll or other rotary body, per se-Roll With Working Surface.)
- 452, Butchering, subclass 142 for coating rollers especially adapted for tenderizing meat. (Roll Pair With Working Surface.)
- 460, Crop Threshing or Separating, subclass 130 for a pair of closely spaced rolls which snap the crop material and separates the product. (Roll Pair With Working Surface.)
- 460, Crop Threshing or Separating, subclasses 25+ for a corn husking roller used in a corn husking machine, the surface of the roll acting on the corn to catch and hold the husks and pull them off, and subclass 130 for a roll which snaps the crop material and separates the product. (Roll or other rotary body, per se-Roll With Working Surface.)
- 464, Rotary Shafts, Gudgeons, Housings, and Flexible Couplings for Rotary Shafts, subclass 184 for a gudgeon, per se, and the manner of attaching a gudgeon to a shaft, roll, or the like. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 470, Threaded, Headed Fastener, or Washer Making: Process and Apparatus, particularly, subclasses 117+ for roll forging means for making a horse shoe nails and subclass 133 for a spike machine partly forming a spike by means of a dies set in the periphery of a roll. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 470, Threaded, Headed Fastener, or Washer Making: Process and Apparatus, subclass 133 for a roller die for making a and subclasses 185+ for a screw threading die, per se. (Roll or other rotary body, per se-Roll With Working Surface.)
- 474, Endless Belt Power Transmission Systems or Components, particularly, subclasses 152+ for a positive drive pulley or guide roll and subclasses 166+ for a friction drive pulley or guide roll. (Roll or other rotary body, per se-Other Rotary Body, per se.)
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, particularly, subclasses 160+ for a box-making machine utilizing a rotary element for form scoring a fold line on a box blank and subclasses 257+ for a machine with a roll carried opener for opening one end of a tube of bag length for further operation. (Miscellaneous Combinations Including One or More Rolls or Rollers.)

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 463 for a corrugating roller; subclass 467 for a surface treatment roller under the class definition; and subclass 471 for a roller tool or tool support under the class definition. (Roll or other rotary body, per se-Roll With Working Surface.)
- 601, Surgery: Kinesitherapy, subclasses 115+, 118+, 122+, 128, 129+, and 131+ for a massage device provided with a roller and designed to be rolled over the body. (Miscellaneous Combinations Including One or More Rolls or Rollers.)
- 720, Dynamic Optical Information Storage or Retrieval, subclasses 718 through 746 for optical storage medium structure.

for a roller for shaping nonmetallic material.

**2****Antideflection means:**

This subclass is indented under subclass 1. Roll including means for minimizing the distortion or deviation produced in the roll by the force or energy associated with the metal deforming.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 5, for a roller including an inflatable chamber, not elsewhere provided for, having antideflection means.
- 6+, for a roller, not elsewhere provided for, having antideflection means.

**3****Specific composition:**

This subclass is indented under subclass 1. Roll which is made of a specific metallic material, nonmetallic material, or composite thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 53+, for a concentric layered annular roll of specific composition, not elsewhere provided for.
- 58, for a single annular member of specific metallic composition.
- 59, for a single annular member of specific nonmetallic composition.

**4****WITH INFLATABLE CHAMBER:**

This subclass is indented under the class definition. Roll which includes a sealed cavity filled with fluid under pressure or with hydrostatically incompressible fluid.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 165 for a brush or broom which is collapsible for entrance through a narrow mouth of hollowware and expansible after entrance and subclass 213 for a rotary wiper or polisher of like nature.
- 152, Resilient Tires and Wheels, for inflatable wheel or tire structure.
- 295, Railway Wheels and Axles, subclass 12 for a wheel under the class definition having a pneumatic device for supporting the wheel tread portion.

## SUBCLASSES

**1****METAL DEFORMING ROLL:**

This subclass is indented under the class definition. Roll especially adapted for mechanically treating metallic work by changing the shape or size of the work.

- (1) Note. A metal deforming roll which treats a single side of the metal workpiece during a single pass are found in this subclass. These devices may have more than a single roll. Opposed roll pairs and rollers which treat both sides of the metal during a single pass are found in Class 72, Metal Deforming, subclasses 199+.
- (2) Note. A roll classified herein may be made of any material-metallic, nonmetallic, or composite thereof.

SEE OR SEARCH CLASS:

- 72, Metal Deforming, subclasses 199+ for a process or apparatus for metal deforming by use of a roller or roller-like tool, also see (1) Note above.
- 164, Metal Founding, subclasses 418+ for a roller especially adapted for continuous or semicontinuous casting.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 78+ for a roller for shaping powdered metal and subclasses 363+

- 451, Abrading, subclass 505 for a rotary cylindrical abrading tool with a flexible or yielding periphery tensioned by inflation.
- 5 Antideflection means:**  
This subclass is indented under subclass 4. Roll which includes means for minimizing the distortion or deviation produced in the roll by the force or energy associated with its usage.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
2, for a metal deforming roll with antideflection means.  
6+, for a roll, not elsewhere provided for, with antideflection means.
- 6 WITH ANTIDEFLECTION MEANS:**  
This subclass is indented under the class definition. Roll which includes means for minimizing the distortion or deviation produced in the roll by the force or energy associated with its usage.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
2, for a metal deforming roll with antideflection means.  
5, for a roll, with an inflatable chamber and having antideflection means.
- 7 Rotatable relative to support shaft:**  
This subclass is indented under subclass 6. Roll wherein the outer surface of the roll or roller turns or spins independently.
- 8 WITH MAGNETIC MEANS, PER SE:**  
This subclass is indented under the class definition. Roll which includes specific magnet or electromagnetic structure.
- SEE OR SEARCH CLASS:  
355, Photocopying, subclass 133 for a roll or roller especially adapted for use in contact printing.  
399, Electrophotography, subclasses 279+ for development rollers, particularly subclass 282 for magnetic brush; subclass 313 for transfer rollers; subclasses 330+ for heat and pressure rollers providing fixing; subclass 356 for magnetic cleaning of imaging surface; subclass 357 for cleaning image surface by rollers; and subclasses 361+ for document handling.
- 9 WITH MEASURING, TESTING, OR INDICATING MEANS:**  
This subclass is indented under the class definition. Roll having means (a) for sensing or detecting, (b) for analyzing some condition of the roll or roller, or (c) for signaling the existence or degree of a specific parameter.
- (1) Note. A roll under this subclass is in nearly every instance a treating or shaping roller since there are numerous measuring, testing, or indicating classes.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
30+, for a roll having surface indentations, projections, or slits.
- SEE OR SEARCH CLASS:  
116, Signals and Indicators, subclasses 200+ for an indicator of the fact and of the direction of rotation of an element or mechanism, shaft, etc.
- 10 Including signal or control means:**  
This subclass is indented under subclass 9. Roll having means (a) for communicating or transmitting information or (b) for regulating operation of the roll.
- (1) Note. This subclass includes a roll having a variegated surface.
- 11 Including gauge:**  
This subclass is indented under subclass 9. Roll having a standard or scale of measurement.
- SEE OR SEARCH CLASS:  
33, Geometrical Instruments, subclasses 501+ for a gauge including a roller and subclasses 700+ for a distance measuring roll.  
172, Earth Working, subclasses 669+ and see the subclasses there noted for an earth working tool, including a rolling tool, whose position with respect to the earth is determined by a wheel or wheel substitute.

**12 WITH IMPELLOR; E.G., FAN, PUMP:**

This subclass is indented under the class definition. Roll which has a rotating device used to force a fluid or fluid-like material in a given direction under pressure.

**SEE OR SEARCH CLASS:**

- 99, Foods and Beverages: Apparatus, subclasses 518+ for a grain hulling means having a fluid applying means associated therewith.
- 241, Solid Material Comminution or Disintegration, subclasses 38+ for a comminuting means associated with a fluid means.
- 416, Fluid Reaction Surfaces (i.e., Impellers), for fan structure, per se.

**13 WITH HANDLE:**

This subclass is indented under the class definition. Roll having means adapted to be accommodated in the hand of the user to facilitate manipulation of the roll during working.

**SEE OR SEARCH CLASS:**

- 15, Brushing, Scrubbing, and General Cleaning, for a hand manipulated roll with a working surface and see general class definition of this class (492), section A2, "SEARCH CLASS", for the line as to what is provided for in Class 15.

**14 Rolling pin or pastry roller:**

This subclass is indented under subclass 13. Roll especially adapted for rolling out or shaping dough.

- (1) Note. The features in combination with the roll which are here included are limited to such features as are supported by the roll or its shaft and rotate with the roll.

**SEE OR SEARCH CLASS:**

- 7, Compound Tools, subclass 111 for a pastry-type rolling pin with a combined or convertible feature not provided for in Class 492.

**15 COMBINED; E.G., WITH DRIVING GEAR, WITH VIBRATING MEANS:**

This subclass is indented under the class definition. Roll claimed in combination with features other than the roll and its supporting shaft extension, such as work support extension, driving gears, locking means, vibrating means, damping means etc.

- (1) Note. The features in combination with the roll which are here included are limited to such features as are supported by the roll or its shaft and rotate with the roll.

**16 ROTATABLE RELATIVE TO SUPPORTING SHAFT:**

This subclass is indented under the class definition. Roll wherein the outer surface of the roll revolves around a center shaft which supports the roll.

- (1) Note. Class 384, Bearings, provides for a bearing or guide for a roll, or roll element supporting member and such bearing or guide combined with a support for the bearing or guide, the member supported by the bearing or guide may be included by name as a type of roll where no significant structure of the roll is claimed.

**SEE OR SEARCH CLASS:**

- 26, Textiles: Cloth Finishing, subclass 103 for a roller made up of a plurality of spindles so as to be (each) rotatable on a bowed supporting shaft for fabric web spreading.
- 384, Bearings, subclass 418 for a bearing and support for a roller conveyor.

**17 Coating treatment or applicator:**

This subclass is indented under subclass 16. Roll which is especially adapted (a) for shaping or modifying a coating or (b) for applying a coating.

- (1) Note. Class 15, Brushing, Scrubbing, and General Cleaning, specifically provides for a coating device having a roll for transferring coating material from a source of supply to the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

24+, for a roll having a sheet edge holder, which roll is especially adapted for coating treatment or as an applicator.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, especially subclasses 104.93+ for a roll or roller coated or impregnated with material supply and subclasses 230+ for a rotary implement under the class definition having a working force composed of some sort of simple or compound fabric and adapted to act as a wiper, dauber, or polisher, or for applying a coating of fluid or powdered material.
- 26, Textiles: Cloth Finishing, subclass 103 for a roller made up of a plurality of spindles so as to be each rotatable on a bowed supporting shaft for fabric spreading.
- 118, Coating Apparatus, especially subclasses 224, 227+, and 249+ for opposed rotary applicators.
- 399, Electrophotography, subclasses 279+ for development rollers, subclass 313 for transfer rollers, subclasses 330+ for heat and pressure rollers providing fixing, subclass 357 for cleaning image surface by rollers, and subclasses 361+ for document handling.
- 401, Coating Implements With Material Supply, subclass 197 for an hollow porous roller in which the coating material flows therethrough.

**18 Printing or copying:**

This subclass is indented under subclass 17. Roll especially adapted for (a) producing readable matter or like communication of information of (b) reproducing or duplicating such matter or information.

- (1) Note. See the search notes under subclass 17.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

25, for a roll having a sheet edge holder, which roll is especially adapted for printing or copying.

SEE OR SEARCH CLASS:

- 355, Photocopying, subclass 133 for a roll or roller especially adapted for use in contact printing.
- 399, Electrophotography, subclasses 279+ for development rollers, subclass 313 for transfer rollers, subclasses 330+ for heat and pressure rollers providing fixing, subclass 357 for cleaning image surface by rollers, and subclasses 361+ for document handling.

**19 Hand held or guided:**

This subclass is indented under subclass 17. Roll which is manually manipulated by a human operator.

- (1) Note. Class 15, Brushing, Scrubbing, and General Cleaning, specifically provides for a coating device having a roll or roller for transferring coating material from a source of supply to the work.

- (2) Note. See the search notes under subclass 17.

**20 Paper treatment:**

This subclass is indented under subclass 16. Roll especially adapted for working or shaping sheet material made of cellulose pulp or similar material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

26, for a roll having a sheet edge holder, which roll is especially adapted for treating paper or skin.

SEE OR SEARCH CLASS:

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, for a roll especially adapted for assembling, bending, or surface treating sheet or web material or some article previously made from sheet or web material.

**21 WITH INTERNAL WEDGING EXPANDER:**

This subclass is indented under the class definition. Roll wherein the internal support for the working surface of the roll includes a tapering element and means enlargeable in circumfer-

ence by the movement of such element relative thereto.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 4+, for a roll expansible by fluid pressure.
- 42, for a roll the working surface of which is sprung urged outwardly.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 165 for a brush or broom which is collapsible for entrance through a narrow mouth of hollow ware and expansible after entrance and subclass 213 for a rotary wiper or polisher of like nature.
- 451, Abrading, subclasses 463+ and 504+ for an abrading tool under the class which is expansible.

## 22 WITH SHEET EDGE HOLDER:

This subclass is indented under the class definition. Roll which includes a sheet, strip, or tube element and means to grip or impale a marginal or edge portion of such element to hold it in the roll assembly.

- (1) Note. This subclass includes means to tension a roll cover axially of the roll by moving the edge holding ring axially of the roll.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 45, for a roll having an internal anchor for an annular member.
- 47, for a roll having an end ring or reinforcement.

SEE OR SEARCH CLASS:

- 38, Textiles: Ironing or Smoothing, subclass 66 for a platen for a textile smoothing machine and a cover therefor, and subclass 140 for an ironing table cover securing means.
- 101, Printing, subclass 415.1 for a device to secure a flexible sheet employed in a printing operation to its support.
- 160, Flexible or Portable Closure, Partition, or Panel, subclasses 383+ for a device under the class definition claiming an elongated element and means to fasten one edge only of a

fabric thereto and see the notes thereto for other devices for fastening fabrics to elongated elements.

- 242, Winding, Tensioning, or Guiding, subclasses 579+ for a device to secure an elongated material to a spool or other coil holder.
- 451, Abrading, subclasses 496+ for a flexible rotary cylindrical abrading tool with abrading material covering sheet securing means.

## 23 Wringer:

This subclass is indented under subclass 22. Roll especially adapted for mechanical pressing or otherwise removing liquid from treated material.

SEE OR SEARCH CLASS:

- 68, Textiles: Fluid Treating Apparatus, subclasses 241+ for a wringer especially adapted for use in fluid treatment, moistening, washing, mercerizing, mordenting, or otherwise chemically treating textile fibers or products.

## 24 Coating treatment or applicator:

This subclass is indented under subclass 22. Roll which is especially adapted for (a) shaping or modifying a coating or (b) applying a coating.

- (1) Note. Class 15, Brushing, Scrubbing, and General Cleaning, specifically provides for a coating device having a roll for transferring coating material from a source of supply to the work.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 17+, for a roll which is rotatable relative to its supporting shaft, which roll is especially adapted for coating treatment or as an applicator.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, especially subclasses 104.93+ for a roll or roller coated or impregnated with material supply and subclasses 230+ for a rotary implement under the class definition having a working face composed of some sort

- of simple or compound fabric and adapted to act as a wiper, dauber, polisher, or for applying a coating of fluid or powdered material.
- 26, Textiles: Cloth Finishing, subclass 103 for a roller made up of a plurality of spindles so as to be each rotatable on a bowed supporting shaft for fabric spreading.
- 118, Coating Apparatus, especially subclasses 224, 227+, and 249+ for an opposed rotary applicator.
- 401, Coating Implements With Material Supply, subclass 197 for a hollow porous roller in which the coating material flows therethrough.
- 25 Printing or copying:**  
This subclass is indented under subclass 24. Roll especially adapted for (a) producing readable matter or like communication of information or (b) reproducing or duplicating such matter or information.
- (1) Note. See the search notes under subclass 24.
- SEE OR SEARCH CLASS:  
355, Photocopying, subclass 133 for a roll or roller especially adapted for use in photocopying when claimed in combination with other photographic or electrostatic copying structure.
- 26 Skin or paper treating:**  
This subclass is indented under subclass 22. Roll especially adapted for working or shaping animal hide, sheet material made of cellulosic pulp, or similar material.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
20, for a roll which is rotatable relative to its supporting shaft, which roll is especially adapted for treating skin or paper.
- SEE OR SEARCH CLASS:  
69, Leather Manufactures, especially subclass 20 for a leather working or processing tool and subclasses 37+ for a leather working or processing machine having a rotary tool.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, for a roll especially adapted for assembling, bending, or surface treating sheet or web material or some article previously made from sheet or web material.
- 27 TAPERED OR BEVELED:**  
This subclass is indented under the class definition. Roll which has a shaped, slanted, or inclined peripheral surface and the roll diameter diminishes or increases toward an end.
- 28 WITH SPECIFIC ROLLER EXTERIOR SURFACE STRUCTURE:**  
This subclass is indented under the class definition. Roll wherein the peripheral portion has raised, lowered, or irregular localized areas especially adapted for a purpose.
- SEE OR SEARCH CLASS:  
72, Metal Deforming, subclasses 103+ for a noncylindrical rotating tool deforming a rotating metallic workpiece and subclasses 191+ for a "roller" having surface irregularities (e.g., a rotary forging die).
- 29 Pile or nap surface:**  
This subclass is indented under subclass 28. Roll in which the outer surface of the roll has externally exposed filament ends or loops of filament.
- SEE OR SEARCH CLASS:  
15, Brushing, Scrubbing, and General Cleaning, subclasses 179+ for a rotary brush or broom and subclasses 228+ for a wiper or polisher having working portions constituted by a fabric capable of acting as a mop.
- 428, Stock Material or Miscellaneous Articles, subclasses 85+ for a stock material product in the form of a web or sheet and including a component with a pile or nap-type surface.
- 30 Surface projections, indentations, or slits:**  
This subclass is indented under subclass 28. Roll in which the roll has a continuous outer surface which is generally cylindrical but has recesses or projections in or on it.

- (1) Note. This subclass includes a roll with a grained, serrated, or roughened surface or a roll of which the surface has successive flats and arches.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 224 for a wiper, dauber, or polisher with a working face made up of fabric in layers spaced apart to form channels or depressions between pairs of layers.
- 19, Textiles: Fiber Preparation, subclass 54 for a gin roller, subclass 97 for a picking roller, subclass 112 for a carding cylinder, and subclass 128 for a combining cylinder.
- 72, Metal Deforming, subclasses 221+ for a metal deforming roller having axially separated grooves each providing a distinct work engaging "pass".
- 84, Music, subclass 96, for a cylindrical comb with tuned teeth.
- 119, Animal Husbandry, subclass 627 for a currycomb that moves during use.
- 171, Unearthing Plants or Buried Objects, subclasses 13, 93, 95+, 116, and 128 for a toothed rotary cylinder used to separate desired objects from the earth or break up earth material.
- 172, Earth Working, subclass 122 for an earth working apparatus comprising a driven drum with teeth or blades, subclass 537 for a corrugated surface roller, and subclasses 540+ for a rolling earth working tool with circumferentially spaced teeth, tines, or blades.
- 301, Land Vehicles: Wheels and Axles, subclass 41 for a wheel with a traction increasing device on the wheel-tread portion.

**31 Plural direction alignment of sets:**

This subclass is indented under subclass 30. Roll whose surface has at least two sets of recesses or projections of substantially equal value with the dominant alignment of the sets being angularly related to each other to form a regular pattern on the surface of the roll similar to a checkerboard or the like.

**32 Outer screenlike layer over skeleton or perforate core; e.g., Dandy roll:**

This subclass is indented under subclass 31. Roll in which the outer surface is a wire or other screenlike layer which overlies the main roll body which has perforations in its outer surface or is skeleton-like construction.

- (1) Note. The art term for these rolls is "Dandy Roll".

**33 Radially aligned:**

This subclass is indented under subclass 30. Roll in which the recesses, projections, or slits have a dominant nonhelical alignment that lies in a plane perpendicular to the axis of the roll.

**34 With minor interruptions:**

This subclass is indented under subclass 33. Roll in which the dominant recesses, projections, or slits are interrupted by minor projections or recesses whose alignment is at an angle to that of the major recesses or projections.

**35 Helically aligned:**

This subclass is indented under subclass 30. Roll in which the recesses or projections have a dominant alignment that forms a helix about the axis of the roll.

**36 Longitudinally aligned:**

This subclass is indented under subclass 30. Roll in which the recesses, projections, or slits have dominant alignment that is parallel to the axis of the roll.

**37 Irregular or uneven arrangement; e.g., etched, shot blasted:**

This subclass is indented under subclass 30. Roll in which the recesses or projections have no dominant alignment but are irregular in arrangement and/or depth such as would be formed by sandblasting or etching the surface.

**38 CIRCUMFERENTIAL SECTORS OR SEGMENTS:**

This subclass is indented under the class definition. Roll which includes a series of members arranged circumferentially around the axis of rotation with the radially outwardly facing surfaces of the members substantially parallel to or forming the cylindrical outer surface of the roll.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 21, for this subject matter where the roll also includes relatively movable mechanical elements for moving the segments radially inwardly and outwardly.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 181 for a rotary brush or broom head formed of material arranged in layers.
- 144, Woodworking, subclass 250.1 for a roll under the class definition made up of independently yielding parts.
- 241, Solid Material Comminution or Disintegration, subclass 294 for a comminuting member with sectional or separable surface elements.
- 451, Abrading, subclasses 542+ for a rotary cylindrical abrading tool comprised of a plurality of preformed blocks, the blocks being of the shape of circular segments.

**39 SPACED PLURAL ANNULARS ALONG COMMON SHAFT:**

This subclass is indented under the class definition. Roll in which the roll includes at least two separated and nonabutting annular treating members with nontreating spacers therebetween along the axis of rotation of the roll with the inner peripheries of the annuli surrounding such axis.

- (1) Note. In a roll of this subclass, generally the annulus is of substantially the same material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 40+, for a roll having axially stacked annular members and see the search notes thereunder.

**40 AXIALLY STACKED ANNULAR MEMBERS:**

This subclass is indented under the class definition. Roll in which the roll includes at least two abutting annular elements axially of one another along the axis of rotation of the roll

with the inner peripheries of the annuli surrounding such axis.

- (1) Note. In the roll of this subclass, generally the annulus is of substantially the same material. See subclasses 22+ for the subject matter of this subclass in which annulus is located adjacent the ends of a roll body and serves to hold a sheet thereon and subclass 47 for the subject matter of this subclass in which an annulus differing in material from a roll body portion between them is located adjacent the ends of the roll.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 22+, see (1) Note, above.
- 47, see (1) Note, above.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 181 for a rotary brush or broom head formed of material arranged in layers and subclass 223 for a wiper, dauber, or polisher made up of layers of fabric, the laminae being exposed at the work face.
- 144, Woodworking, subclass 250.1 for a roll under the class made up of independently yielding parts.
- 241, Solid Material Comminution or Disintegration, subclass 295 for a comminuting member with sectional or separable annular ring surface elements.

**41 Cloth or fabric member:**

This subclass is indented under subclass 40. Roll in which the abutting annular elements are composed of textile materials.

- (1) Note. Felt material is excluded from this subclass and is found in the outdent-subclass 40.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 22+, for a roll with means to grip or impale the margin or edge of a sheet to hold it in the roll assembly.
- 43, for a roll having plural annular layers one of which is a spiral of cloth.

**42 WITH LEAF OR COIL SPRING MEMBER:**

This subclass is indented under the class definition. Roll in which the outer surface of the roll is supported radially by a mechanical spring or springs.

- (1) Note. This subclass includes a coil spring acting radially, the axis of the spring being disposed either radially or axially of the roll. It also includes a leaf spring acting radially of the roll and the cantilever being disposed either circumferentially or axially of the roll. It also includes a coil spring which is wound around the core so that the axis of the spring is helical axially of the roll.
- (2) Note. The spring layer is usually intermediate a central shaft and a surface cover so that the cover is resiliently or yieldingly supported. For a cover yieldingly supported, see this class, subclasses 4+ for a roll in which resilience is afforded by a fluid under pressure and subclasses 49+ for a roll in which a solid resilient layer as of rubber underlies a cover layer.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 4+, see (2) Note, above.  
49+, see (2) Note, above.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 165 for a brush or broom which is collapsible for entrance through a narrow mouth of hollow ware and expansible after entrance and subclass 213 for a rotary wiper or polisher of like nature.
- 152, Resilient Tires and Wheels, for pertinent subclass(es) as determined by schedule review.
- 295, Railway Wheels and Axles, subclass 14 for a wheel of cooperation with a rail, which wheel includes a metallic spring tire cushion.
- 451, Abrading, subclasses 484+ for a spring expanded abrading tool.

**43 WITH SPIRAL MEMBER:**

This subclass is indented under the class definition. Roll which includes an element wrapped around the longitudinal axis of the roll in a conical helix.

- (1) Note. For successive separate layers covering one another radially of the roll, see this class, subclasses 49+ and the notes thereto.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 49+, see (1) Note, above.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 182 for a rotary brush or broom implement in which a brushing element is mounted in spiral arrangement.
- 428, Stock Material or Miscellaneous Articles, subclass 592 for metallic stock material which is spiral or has a spiral component.

**44 WITH HELICAL MEMBER:**

This subclass is indented under the class definition. Roll which includes an element wrapped around the longitudinal axis of the roll in a cylindrical helix.

- (1) Note. This subclass includes a cylindrical roll having a helically wound surface layer, the successive turns of which abut one another. See this class, subclass 35, for a roll having a helically wound surface layer the successive turns of which are spaced from one another.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 4+, for an inflatable roll which has a helical inflatable chamber such as a piece of tubing.
- 35, see (1) Note, above.
- 42, for this subject matter where the helical member is a strip spring or coil spring.

## SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 182 for a rotary brush or broom or for a broom with a head having spirally mounted bristles or other brushing or sweeping elements and subclass 225 for a wiper, dauber, or polisher having as a working face the edge of a strip of fabric coiled upon itself.
- 228, Metal Fusion Bonding, subclasses 145+ for a process of making a tube by helically winding a ribbon and bonding the melting side edges together.

**45 WITH INTERNAL ANCHOR FOR ANNULAR MEMBER:**

This subclass is indented under the class definition. Roll in which an annular member is secured to another roll element internally of the outer surface of the roll.

- (1) Note. This subclass requires that a specific securing means be claimed.
- (2) Note. This subclass includes roll shafts or spindles which are contoured so as to interlock with a roll body molded around them.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 22+, for a roll which includes a sheet strip or tube element and means to grip or impale the margin or edge portion of such element to hold it in the roll assembly.
- 40+, for a roll with means to secure together abutting annular members.
- 47, for a roll having an end ring or reinforcement.

**46 WITH HEATING, COOLING, OR HEAT TRANSFER MEANS:**

This subclass is indented under the class definition. Roll which includes means especially adapted for (a) generating thermal energy, (b) dissipating or removing thermal energy, or (c) exchanging thermal energy.

## SEE OR SEARCH CLASS:

- 165, Heat Exchange, especially subclasses 89+ for a rotary drum with a movable heating or cooling surface.

**47 WITH END RING OR REINFORCEMENT:**

This subclass is indented under the class definition. Roll, which (a) includes annular member adjacent the ends, which members surrounding the axis of rotation, (b) includes specific structure for strengthening the roll, or (c) has support for the working surface of the roll which is of greater rigidity near the roll ends than it is between them.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 22+, for a roll which includes a sheet, strip, or tube element and means including a ring surrounding the shaft to grip or impale a marginal or edge portion of such element to hold it in the roll assembly.
- 40+, for a roll with at least two abutting annular elements of substantially the same material axially of one another along the axis of rotation.
- 45, for a roll with internal anchor for an annular member.

## SEE OR SEARCH CLASS:

- 301, Land Vehicles: Wheels and Axles, subclass 23 for a wheel with a demountable rim or detachable wheel section having fastening means for the section in the form of a removable side ring.
- 403, Joints and Connections, for means connecting a roll to a shaft and subclass 26 for a means connecting two rolls which means is rotatably journalled independently of the connection between the rolls.

**48 ROLL COVER, PER SE:**

This subclass is indented under the class definition. Roll, a cover or pad, per se, which is disclosed solely for a roll or claimed in combination with the roll.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 38, for a roll whose surface is made up or circumferential sectors or segments.  
57+, for a roll which is a single annular member, per se.

SEE OR SEARCH CLASS:

- 38, Textiles: Ironing or Smoothing, especially subclasses 63+ for a cover of a smoothing machine and subclasses 141+ for a cover or cover-securing means for an ironing table.  
57, Textiles: Spinning, Twisting, and Twinning, subclasses 112+ for a cover under the class definition.

**49 CONCENTRIC LAYERED ANNULUS:**

This subclass is indented under the class definition. Roll, which roll is made up of superposed rings having a common center.

- (1) Note. Generally the layers or rings are joined or bonded together into a composite structure.
- (2) Note. A patent claiming a roll merely by the composition of which it is made; i.e., with the roll being mentioned by name only, is classified in the composition classes where a composition class provides for such composition even though there is no claim to the composition, per se. See Class 106, Compositions: Coating or Plastic, main class definition for the classification of various compositions.
- (3) Note. In this subclass, the annuli are radially of one another. For plural annuli axially of one another, see this class, subclasses 40+, and the notes thereto.
- (4) Note. Many of the preceding subclasses include the subject matter of this subclass where one of the annular elements is of the nature indicated in the titles of these subclasses.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 40+, see (3) Note, above.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclass 181 for a rotary head brush or broom implement with the material forming the head arranged in layers.  
106, Compositions: Coating or Plastic, see (2) Note, above.  
138, Pipes and Tubular Conduits, for a laminated tubular project.  
228, Metal Fusion Bonding, subclasses 145+ for a process of making a tube by helically winding a ribbon and bonding the melting edges together.  
400, Typewriting Machines, subclasses 661+ for type impact-receiving platens composed of sound deadening materials, and subclass 662 for a platen having a particular surface characteristic.  
428, Stock Material or Miscellaneous Articles, subclasses 364+ for a structurally defined or coated rod or strand that may be disclosed as a roll or roller, per se.

**50 Fiber or wire reinforced:**

This subclass is indented under subclass 49. Roll, which roll is structurally strengthened by means of elongated strand or rod material introduced as individual elements.

- (1) Note. Generally the reinforcement material is of a different composition than that of the bulk of the roll body.
- (2) Note. The elongated material need not have an especially long length but only have a length which is many times its width or thickness.

SEE OR SEARCH CLASS:

- 428, Stock Material or Miscellaneous Articles, for a similar structure.

**51 Mat or fabric internal layer:**

This subclass is indented under subclass 49. Roll, which roll has an inside stratum of tangled, woven, or braided fiber.

- (1) Note. Generally the mat or fabric layer is intended to strengthen or protect the structure.

- SEE OR SEARCH CLASS:  
428, Stock Material or Miscellaneous Articles, for a similar structure.
- 52 Adhesive bonded or resin impregnated:**  
This subclass is indented under subclass 51. Roll, which is joined together by nonmetallic paste, cement, or viscous polymerized synthetic material.
- (1) Note. The resin may be thermoplastic or thermosetting.
- SEE OR SEARCH CLASS:  
428, Stock Material or Miscellaneous Articles, for a similar structure.
- 53 Specific composition:**  
This subclass is indented under subclass 49. Roll, which includes particular material or chemical composition.
- (1) Note. A patent claiming a roll merely by the composition of which it is made; i.e., with the roll being mentioned by name only, is classified in the composition classes where a composition class provides for such composition even though there is no claim to the composition, per se. See Class 106, Compositions: Coating or Plastic, main class definition for the classification of various compositions.
- SEE OR SEARCH CLASS:  
106, Compositions: Coating or Plastic, see (1) Note, above.  
400, Typewriting Machines, subclasses 661+ for type impact-receiving platens composed of sound deadening materials, and subclass 662 for a platen having particular surface characteristics.
- 54 Specific metallic composition:**  
This subclass is indented under subclass 53. Roll, which includes a particular metal alloy or composition containing metal.
- SEE OR SEARCH CLASS:  
420, Alloys or Metallic Compositions, for similar metallic material.
- 55 With leather or fabric cover:**  
This subclass is indented under subclass 53. Roll which includes an outermost layer of (a) dressed or tanned animal hide or (b) textile material.
- 56 With rubber or elastomer cover:**  
This subclass is indented under subclass 53. Roll which includes an outermost layer of an elastic solid polymer similar to natural rubber.
- 57 SINGLE ANNULAR MEMBER, PER SE:**  
This subclass is indented under the class definition. Roll in which the roll structure includes only one ring or layer.
- SEE OR SEARCH THIS CLASS, SUBCLASS:  
48, for a roll cover, per se, and see the search notes thereunder.
- 58 Specific metallic composition:**  
This subclass is indented under subclass 57. Roll which is made of a particular metal alloy or metal base material.
- (1) Note. This subclass is not intended to include intermetallic compounds or other metal compositions which are devoid of free metals such as oxides, sulfide, nitrides etc. Those patents may be found in subclasses 57 and 59.
- (2) Note. A patent claiming a roll merely by the composition of which it is made; i.e., with the roll being mentioned by name only, is classified in the composition classes where a composition class provides for such composition even though there is no claim to the composition, per se.
- SEE OR SEARCH CLASS:  
400, Typewriting Machines, subclasses 661+ for type impact-receiving platens composed of sound deadening materials, and subclass 662 for a platen having particular surface characteristic.  
420, Alloys or Metallic Compositions, for similar metallic material.

**59 Specific nonmetallic composition:**

This subclass is indented under subclass 57. Roll, which is made of material devoid of free metal and which does not exhibit any substantive metallic properties.

- (1) Note. A patent claiming a roll merely by the composition of which it is made; i.e., with the roll being mentioned by name only, is classified in the composition classes where a composition provides for such composition even though there is no claim to the composition, per se. See Class 106, Compositions: Coating or Plastic, main class definition for the classification of various compositions.

**SEE OR SEARCH CLASS:**

- 106, Compositions: Coating or Plastic, see (1) Note, above.
- 400, Typewriting Machines, subclasses 661+ for type impact-receiving platens composed of sound deadening materials, and subclass 662 for a platen having particular surface characteristic.

**60 MISCELLANEOUS:**

This subclass is indented under the class definition. Roll not elsewhere provided for.

END