

CLASS 193, CONVEYORS, CHUTES, SKIDS, GUIDES, AND WAYS**SECTION I - CLASS DEFINITION**

Includes devices limited to guiding material either vertically, horizontally, or at an inclination.

- (1) Note. The material may be either individual articles or fluent. It may be guided and acted on by the force of gravity or may be acted on by power applied either by hand or machinery to move the material up an inclined way or horizontally. The devices classified, here, however, do not include the combination of the chute, skid or way with the power mechanism, neither does this class include guides connected to a specific hopper for delivering articles to machines or for dispensing them.
- (2) Note. For chutes combined with means utilizable by a person (e.g., handrail or ladder) or with means to sustain life (e.g. ventilation means), see References to Other Classes, below.
- (3) Note. Mere tubes and pipes are classified elsewhere. See References to Other Classes, below.

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

- 4, Baths, Closets, Sinks, and Spittoons, subclasses 464+.
- 14, Bridges, subclass 69.5
- 34, Drying and Gas or Vapor Contact With Solids, subclasses 165+.
- 48, Gas: Heating and Illuminating, subclass 86.
- 56, Harvesters, subclasses 328.1 through 340.
- 65, Glass Manufacturing, subclass 304 for chute means combined with glassworking means, and see the "Search Notes" thereunder.
- 73, Measuring and Testing, subclasses 863+ for samplers and tollers.
- 86, Ammunition and Explosive-Charge Making, subclasses 45 and 46.
- 100, Presses, subclass 167 for plural stage roll-type mills not elsewhere provided for and having a chute between stages.

- 104, Railways, subclasses 56, 69, 70, 134, 135, and 164.
- 105, Railway Rolling Stock, subclasses 158.1, 239, 247, 252, 254, 256, 279, 301, and 436.
- 110, Furnaces, subclasses 102, 116, 117, and 118.
- 111, Planting, generally.
- 112, Sewing, subclasses 106 and 113.
- 114, Ships, subclass 375.
- 119, Animal Husbandry, subclasses 51.011+, 52.1 to 56.1, 402, 408+, 449, 456+, 464, 475+, 515, 521, and 843+.
- 126, Stoves and Furnaces, subclass 242.
- 137, Fluid Handling, for fluid handling not otherwise provided for.
- 138, Pipes and Tubular Conduits, for mere tubes and pipes.
- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means.
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate apparatus subclasses.
- 182, Fire Escape, Ladder, or Scaffold, subclasses 48+ for chutes combined with means utilizable by a person (e.g., handrail or ladder) or with means to sustain life (e.g., ventilation means).
- 186, Merchandising, subclasses 2, 19 and 34.
- 198, Conveyors: Power-Driven, subclasses 311, 359+ and 523+.
- 209, Classifying, Separating, and Assorting Solids, subclasses 233+ and 509+.
- 211, Supports: Racks, subclass 14.
- 220, Receptacles, subclasses 476+.
- 221, Article Dispensing, appropriate subclasses and see Lines With Other Classes and Within This Class in the class definition of Class 221 for a statement of the line between the classes.
- 222, Dispensing, subclasses 526+ and 566+, and see the notes thereto for dispenser outlets.
- 226, Advancing Material of Indeterminate Length, in general, for methods or apparatus to move material using other than its leading or trailing ends, especially subclass 196.1 for a passive guide combined with a material feeder that may include a nominal recitation of a supply or take-up coil (e.g., less than a support for such a coil or a cooperative relationship between a tension or exhaust detector and reel driving or reel stopping means, etc.).
- 227, Elongated-Member-Driving Apparatus, subclasses 39+, 99+ and 107+.

SUBCLASSES

- 1 MISCELLANEOUS:**
This subclass is indented under the class definition. Devices not otherwise classifiable.
- 2 CHUTES:**
This subclass is indented under the class definition. Apparatus having either pipes or troughs through which material may pass under the influence of gravity.
- (1) Note. See Class 104, Railways, subclasses 53 and 69.
- (2) Note. See Class 182, Fire Escape, Ladder, or Scaffold, subclasses 48+ for a chute with a handrail or ladder, or with means to sustain life.
- 3 Loading or trimming:**
This subclass is indented under subclass 2. Apparatus for loading vehicles, generally including distributors or “trimmers.”
- (1) Note. See Classes 14, Bridges, subclass 69.5, 119, Animal Husbandry, subclass 82; 296, Land Vehicles: Bodies and Tops, subclass 61.
- 4 Unloading:**
This subclass is indented under subclass 2. Apparatus for unloading vehicles.
- (1) Note. See Classes 105, Railway Rolling Stock, subclasses 252 and 256; 280, Land Vehicles, subclass 32; 296, Land Vehicles: Bodies and Tops, subclass 61; 298, Land Vehicles: Dumping, subclass 7, and 414, Material or Article Handling, subclasses 529+ and 537.
- 5 Vehicle wall supported:**
This subclass is indented under subclass 4. Chute wholly supported by the vehicle wall.
- SEE OR SEARCH CLASS:
414, Material or Article Handling, subclasses 537+ for a self-loading or unloading vehicle having a skidway.
- 6 Extensible trough:**
This subclass is indented under subclass 4. The chute consists of an open trough made in sections relatively slidable longitudinally.
- SEE OR SEARCH CLASS:
280, Land Vehicles, subclass 32.
296, Land Vehicles: Bodies and Tops, subclass 61.
298, Land Vehicles: Dumping, subclass 7.
- 7 Fruit:**
This subclass is indented under subclass 2. Apparatus especially adapted for preventing fruit from injury.
- (1) Note. See this class, subclass 25.
- (2) Note. See Class 56, Harvesters, subclass 328.1, and indented subclasses.
- 8 Mail:**
This subclass is indented under subclass 2. Apparatus for mailable letters or packages.
- (1) Note. See Class 232, Deposit and Collection Receptacles, subclass 44, and indented subclasses.
- 9 Grain drill:**
This subclass is indented under subclass 2. Apparatus for grain-drilling machines.
- (1) Note. See Classes 111, Planting, and 222, Dispensing, generally especially subclasses 526+ and 566+.
- 10 For rotary drum:**
This subclass is indented under subclass 2. Chutes for a rotary drum agitator or mixer.
- (1) Note. For chutes combined with significant agitating means, see Class 366, Agitating, subclasses 68 and 187.
- 11 With sprayer:**
This subclass is indented under subclass 2. Apparatus provided with a liquid or steam nozzle for wetting or washing down material or preventing dust.
- (1) Note. See Class 202, Distillation: Apparatus, subclasses 253 and 262 and indented subclasses.
- 12 Spiral:**
This subclass is indented under subclass 2. Apparatus wherein the chute is a spiral.

- (1) Note. See this class, subclasses 35 and 36, for spiral rollerways.
- (2) Note. See Class 182, Fire Escape, Ladder, or Scaffold, subclass 48, and indented subclasses.
- SEE OR SEARCH CLASS:
34, Drying and Gas or Vapor Contact With Solids, subclass 147.
- 13 Switch:**
This subclass is indented under subclass 12. Spiral chutes with means for directing material in different directions.
- (1) Note. See this class, subclasses 28, 31, 36, and 39.
- 14 Sectional, multiple-point discharge:**
This subclass is indented under subclass 2. Wherein the chute is made in sections, some of which may be moved out of alignment for discharging material at different points.
- (1) Note. See this class, subclasses 23 and 29.
- 15 Vertically adjustable, bodily:**
This subclass is indented under subclass 2. Wherein the chute is mounted for vertical movement of the entire chute.
- 16 Horizontal and vertical swing:**
This subclass is indented under subclass 2. Wherein the chute may be swung in both a horizontal and a vertical direction.
- (1) Note. See this class, subclass 25.
- (2) Note. See Classes 209, Classifying, Separating, and Assorting Solids, subclasses 233+; 138, Pipes and Tubular Conduits, subclass 120, and 414, Material or Article Handling, subclass 592.
- 17 Vertical swing:**
This subclass is indented under subclass 2. Wherein the chute is capable of being swung upwardly only.
- (1) Note. See Class 209, Classifying, Separating, and Assorting Solids, subclass 233, and indented subclasses.
- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 533+.
- 18 Counterweight:**
This subclass is indented under subclass 17. Wherein the chute is counterbalanced.
- SEE OR SEARCH CLASS:
198, Conveyors: Power-Driven, subclasses 535+ for a power-driven conveyor combined with a chute that swings to a discharging position.
- 19 Varied:**
This subclass is indented under subclass 18. Wherein the effective counterbalance is varied for different positions of the chute.
- 20 Valved:**
This subclass is indented under subclass 18. Wherein the chute has a controlling gate or valve.
- 21 Valved:**
This subclass is indented under subclass 17. Wherein chutes are provided with gates or valves.
- (1) Note. See this class, subclass 20.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 536.
- 22 Swiveled sections:**
This subclass is indented under the unnumbered subclass, Horizontal swing. The horizontally-swinging chute is composed of a plurality of sections swiveled together.
- (1) Note. Compare this class, subclass 23.
- (2) Note. See Class 414, Material or Article Handling, subclass 592.
- 23 Multiple-point discharge:**
This subclass is indented under the unnumbered subclass, Horizontal swing. The swinging chute delivers to different chutes or receptacles.

- (1) Note. See this class, subclasses 14, 22, and 29.
- 24 Counterweight:**
This subclass is indented under subclass 2. Wherein miscellaneous movable chutes are provided with a counter-balance.
- (1) Note. See this class, subclasses 18 and 19.
- SEE OR SEARCH CLASS:
198, Conveyors: Power-Driven, subclasses 535+ for a power-driven conveyor combined with a chute that swings to a discharging position when a load accumulating on the chute reaches a predetermined weight.
- 25 Flexible wall:**
This subclass is indented under subclass 2. The chute is made flexible throughout its length, generally of flexible material.
- (1) Note. See this class, subclass 7.
- (2) Note. See Class 56, Harvesters, subclass 328.1, and indented subclasses.
- 27 Zigzag:**
This subclass is indented under subclass 2. Apparatus wherein the material passes through zigzag passages, or the sections of the chute are connected to form a zigzag passage.
- (1) Note. See this class, subclass 32.
- 28 Switch:**
This subclass is indented under subclass 27. Means provided for taking off material at different points.
- (1) Note. See this class, subclass 32.
- 29 Multiple-point discharge:**
This subclass is indented under the unnumbered subclass, Vertical pipe. The chute consists of a vertical pipe with means for discharging material at different elevations.
- 30 Telescopic:**
This subclass is indented under the unnumbered subclass, Vertical pipe. The vertical-pipe chute consists of telescopic sections.
- (1) Note. See Class 138, Pipes and Tubular Conduits, subclass 120 for telescopic, jointed, short sections of pipe.
- 31 Switch:**
This subclass is indented under subclass 2. The general miscellaneous subclass for chutes provided with gates or valves for directing material in different directions.
- (1) Note. See this class, subclasses 13, 23, 28, and 36.
- SEE OR SEARCH CLASS:
137, Fluid Handling, appropriate subclasses, particularly subclasses 119.01+ and 861+ for fluid handling apparatus including means for directing fluid in different directions.
- 32 Retarder:**
This subclass is indented under subclass 2. The chute has means for retarding the velocity of material therein.
- (1) Note. See this class, subclasses 7, 27 and 28.
- SEE OR SEARCH CLASS:
221, Article Dispensing, subclass 312 for article dispensers not otherwise provided for having interior article guiding means.
- 33 Wall:**
This subclass is indented under subclass 2. The chute is secured to or built into the wall of an inclosure or building.
- (1) Note. See this class, subclasses 5 and 6.
- 34 Vertical:**
This subclass is indented under subclass 33. The chute is secured to or passes through the vertical wall of some structure or building.
- (1) Note. See this class, subclasses 3, 5, 6, 8, and 11.

- 35 ROLLERWAYS:**
This subclass is indented under the class definition. Apparatus which consists of a series of rollers over which things may be conveyed.
- (1) Note. See this class, subclass 42.
- 36 Switch:**
This subclass is indented under subclass 35. Apparatus provided with means for changing the direction of things conveyed.
- (1) Note. See this class, subclasses 13, 28, 31, and 39.
- 37 Rollers:**
This subclass is indented under subclass 35. Wherein the structure is of the roller itself.
- (1) Note. See Class 384, Bearings, subclass 549 for a roller bearing on a fixed support.
- (2) Note. See Class 474, Endless Belt Power Transmission Systems or Components, particularly subclasses 166+ for friction drive pulleys or guide rolls.
- (3) Note. See Class 198, Conveyors: Power-Driven, subclasses 501, 824+ and 842 for support rollers for endless belt conveyors.
- (4) Note. See Class 492, Roll or Roller, for a roll, per se, not elsewhere provided for, and see the notes thereunder.
- 38 SKIDWAYS:**
This subclass is indented under the class definition. Ways for guiding articles but not suitable for fine material.
- (1) Note. See Class 280, Land Vehicles, subclass 32.
- 39 Switch:**
This subclass is indented under subclass 38. Apparatus provided with means for changing the direction of articles.
- (1) Note. See this class, subclasses 13, 28, 31, and 39.
- SEE OR SEARCH CLASS:**
- 211, Supports: Racks, subclasses 59.2+ for stacked article type of rack having a dispensing means therein.
- 221, Article Dispensing, appropriate subclasses for article dispensing or feeding devices many of which include a chute type structure as the supply receptacle or as a passageway from a source of supply to an outlet. See particularly subclasses 261, 280 and 312.
- 312, Supports: Cabinet Structure, subclasses 35+ for article containing magazine structures having means to facilitate the removal of the articles therefrom.
- 40 Retarder:**
This subclass is indented under subclass 38. Apparatus having means for retarding the velocity of articles on the way.
- (1) Note. See this class, subclass 32, and see the SEARCH CLASS notes thereto.
- 41 SKIDS:**
This subclass is indented under the class definition. Unitary structures for guiding articles from a higher to a lower level or the reverse, but incapable of use with fine material.
- (1) Note. See Classes 14, Bridges, subclass 69.5, 280, Land Vehicles, subclass 32.
- 42 ROLLER JACKS:**
This subclass is indented under the class definition. Unitary devices provided with a roller over which articles may be supported in loading, unloading, or stacking them.
- 44 ORIENTER:**
This subclass is indented under the class definition. Apparatus, having means whereby (1) a conveyed article is turned to have its posture* or its heading* or its leaning* intentionally or significantly varied with relation to said path, or (2) a conveyed article which is not in a predetermined posture relative to its conveyed path is caused to be removed from or to abandon the path determined for those articles being conveyed in the predetermined posture. (The terms having asterisks are discussed in (2) Note below.)

- (1) Note. In this and indented subclasses the disclosed intent of the claimed apparatus is important. Therefore, although the structure of two devices may be similar, a patent disclosing such structure will be placed into this portion of the schedule only if its claimed disclosure is clearly for accomplishing one of the functions set forth in the definition by asterisk (*) and further discussed in (2) Note that follows. The similar structure that is disclosed as having a different function or that is disclosed in terms of its structure and not disclosing such a function will be found elsewhere in accordance with its claimed function or its claimed structure that is provided for in other subclasses of this schedule.
- (2) Note. For the purpose of helping to visualize the terms to be discussed herein, assume a three-dimensional line figure consisting of three axes (i.e., an “X-axis”, a “Y-axis” and a “Z-axis”) that intersect at a mutual point, each axis being perpendicular to the plane in which both of the other two axes lie. Assume further that said mutual point lies within the article to be conveyed and that (a) the conveyor moves the article in the direction of the “X-axis”, (b) the conveyor has a major article support surface that extends transversely (i.e., athwart) of said direction along the “Z-axis” and (c) the remaining axis that extends perpendicularly of the plane formed by both of the previously-mentioned axes is the “Y-axis”. With these assumptions in mind, variation in “posture” will refer only to a turning of an article about a “Z-axis”, variation in “heading” will refer only to a turning of an article about a “Y-axis”, and variation in “leading” will refer only to a turning of an article about an “X-axis”. It is understood that any or all of these turnings may occur sequentially or simultaneously, and that if there is a major dimension of the article being conveyed, such major dimension may coincide with any or none of the axes mentioned.
- (3) Note. This note is in amplification of preceding notes regarding intent of disclosure and attitude of article relative to its conveyed direction. The predetermined path of an article may be straight or arcuate or crooked, but whatever the path, if the conveyed article is at a first point on the path with a particular dimension in a particular relationship to the path (e.g., its length is parallel to the path), and is thereafter at a second point with the same dimension in a different relationship to the path (e.g., its length is perpendicular to the path), its attitude relative to the path has been changed. For proper placement of a patent into this or an indented subclass the claim thereof must recite the change in attitude of the article in significant terms; that is, the recitation must be clear, and the change must be intentional. A patent that discloses a change in attitude that is incidental to the movement of an article on a conveyor system (e.g., an article on a nonrectilinear system could change its attitude relative to a particular compass direction, but not necessarily change relative to conveyed direction) will not be placed herein, but will be placed on the basis of the claimed function or structure of the conveyor.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 373+ for conveyors which are power-driven or for conveyor systems having at least one power-driven section wherein the claimed disclosure of the conveyor or conveyor system is to change the posture of a conveyed article relative to its conveyed path.

45 Manual or mechanical means moves article to upset:

This subclass is indented under subclass 44. Apparatus wherein said means is mechanically or manually activated to cause a change in the posture of the conveyed article, the posture changing function of said means being nonconveying even though said means may otherwise also function as a chute, skid, guide or way.

- (1) Note. A linkage or other device which is driven by the article to be oriented is not included in this subclass. See, for example, subclass 48 for article engaging pivots which are moved upon engagement by the conveyed article.

46 Grooved or twisted chute:

This subclass is indented under subclass 44. Apparatus wherein the posture of the conveyed article is changed relative to its conveyed path because of its engagement with a particular configuration of the article engaging surface of the conveyor, said configuration acting on said article continuously as it moves over a portion or the entire extent of said surface.

47 Article upset about fixed point:

This subclass is indented under subclass 44. Apparatus wherein the posture of the conveyed article is changed relative to its path because of its engagement with, or because under the influence of gravity it rotates about, immovable means associated with said conveyor.

48 Article upset about movable point:

This subclass is indented under subclass 44. Apparatus wherein the posture of the conveyed article is changed relative to its path because of its engagement with, or because under the influence of gravity it rotates about, means associated with the conveyor which may be variously positioned relative to the conveyor or which is movable upon being contacted by the moving article.

END