

CLASS 406, CONVEYORS: FLUID CURRENT**SECTION I - CLASS DEFINITION**

Apparatus and methods for conveying solid material or articles which are guided or supported to travel along a path by means of or with the assistance of a fluid current.

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

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| <p>15, Brushing, Scrubbing, and General Cleaning, subclasses 3.5+ for means to pass a solid cleaning agent and a fluid carrier through tubular work; and subclasses 300.1+ for means to remove foreign material by air blast or suction. Class 406 takes devices which are specifically adapted to transport material from a pile or stack on a surface or in a receptacle to another location.</p> <p>19, Textiles: Fiber Preparation, subclass 97.5, 105, and 205 for fiber preparation apparatus combined with a fluid current conveyor for feeding the fiber.</p> <p>34, Drying and Gas or Vapor Contact With Solids, appropriate subclasses for subject matter relating to the removal of liquids from solids by drying and for contacting of solids with gases or vapors for purposes other than or in addition to conveying. See particularly subclass 359 and 576+ for fluid current conveyors for conveying the treated solids.</p> <p>37, Excavating, subclass 202, 209+, 242+, and 244+ for snow blowers; and subclasses 307+ for dredgers.</p> <p>43, Fishing, Trapping, and Vermin Destroying, subclass 6.5 for a fish gathering or catching apparatus combined with a fluid current conveyor to the boat.</p> <p>56, Harvesters, subclasses 12.8+ and 30+ for harvesters having pneumatic conveyors. Claims reciting only the conveying structure with no additional treatment are properly classified in Class 406.</p> <p>75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, appropriate subclasses for processes of treating ores wherein the ore undergoing treatment is conveyed by or suspended in a gaseous medium.</p> | <p>83, Cutting, subclass 402 for cutting apparatus having fluid current means to convey work relative to the cutting station.</p> <p>89, Ordnance, subclass 46 for an ordnance loader including a fluid lift.</p> <p>95, Gas Separation: Processes, for processes of gas separation involving steps resulting in separation of a gas and solid particles entrained therein. Fluid current conveyor methods which include a step for separating the solids from the fluid at the point of delivery are classified in Class 406.</p> <p>96, Gas Separation: Apparatus, for apparatus used in separation of a gas and solid particles entrained therein. Fluid current conveyors which include a device for separating the solids from the fluid at the point of delivery are classified in Class 406.</p> <p>99, Food and Beverages: Apparatus, subclass 406 for apparatus which convey food by a current of cooling liquid.</p> <p>104, Railways, subclass 138.1 for tubular conduits having tracks adapted to be engaged by wheels on a carrier; and subclasses 154 and 155+ for hydraulic and pneumatic car propulsion systems, respectively, which comprise structure located along the trackway.</p> <p>105, Railway Rolling Stock, appropriate subclasses for carriers having wheels with grooves or similar structure adapted to cooperate with track to guide the carrier.</p> <p>110, Furnaces, subclasses 104+ for furnace structure combined with means for feeding solid fuel to a furnace using an entraining fluid current. Class 406 provides for the feeding device, per se, or the feeding device and a nominally recited furnace (no structure recited).</p> <p>114, Ships, subclasses 183+ for a device for expelling ash or other refuse from a ship by entraining the ash or refuse in a fluid current.</p> <p>118, Coating Apparatus, subclasses 308+ for coating apparatus which propel a solid particulate material by fluid current to apply the material to a base.</p> <p>119, Animal Husbandry, subclass 844 for fluid current conveyors specifically adapted to convey livestock.</p> <p>123, Internal-Combustion Engines, subclass 23 and 24 for engines having means for feeding solid fuel by means of a fluid current.</p> <p>124, Mechanical Guns and Projectors, subclasses 56+ for projectile throwing or propelling apparatus which utilize a working fluid to transmit force to the projectile.</p> |
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- 131, Tobacco, subclass 110 for a cigar or cigarette machine provided with a suction device to assist the feeding operation.
- 134, Cleaning and Liquid Contact With Solids, appropriate subclasses for subject matter relating to the contact of solids with liquids for various purposes other than conveying (e.g., cleaning).
- 137, Fluid Handling, appropriate subclasses for apparatus and processes relating to fluid handling (Class 137 is residual). See especially subclass 268 for fluid handling devices which include a member for holding and bringing a fluid and a material to be dissolved or entrained into contact (no conveying involved).
- 138, Pipes and Tubular Conduits, appropriate subclasses for conduits in general and conveyor conduits having no claimed structure peculiar to fluid current conveying of solids.
- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 67+ for a fluid current conveyor claimed in combination with a separable receiver or structure associated with a separable receiver (e.g., means to feed bags past the conveyor outlet).
- 144, Woodworking, subclass 252 for a woodworking machine having a dust conveyor.
- 164, Metal Founding, subclasses 200+ for apparatus having a fluid current conveyor for projecting mold forming material against a shaping surface.
- 175, Boring or Penetrating the Earth, appropriate subclasses for a method or apparatus for forming or enlarging an elongated hole in the earth and including a step or means for conveying material from the hole by a fluid current.
- 198, Conveyors: Power-Driven, subclass 380 for power-driven conveyors having pressurized fluid means for changing the attitude of the load articles; subclass 434 for air blast or suction diverters for arranging or rearranging streams of load articles on a conveyor; and subclass 493 for conveyors utilizing impinging fluid to feed, shift, or discharge the load, or to clean, sterilize, or lubricate the conveyor. Class 406 takes all other combinations of a fluid current conveyor and a power-driven conveyor.
- 208, Mineral Oils: Processes and Products, subclasses 46+, 146+, and 400+ for a method or apparatus for recovering or treating naturally occurring mineral oil wherein a solid material is elevated by a gaseous fluid current. Patents claiming such solids elevating structure and only nominally reciting the chemical process or apparatus (e.g., "a catalytic converter comprising...") have been classified in Class 406.
- 209, Classifying, Separating, and Assorting Solids, appropriate subclasses for a method or apparatus for separating solid materials and assorting or segregating them in grades or classes according to physical characteristics. Class 406 takes subject matter relating to the control of the destination of the load in a fluid current conveyor having a plurality of paths, where the controlling code or characteristic is placed or formed on the load specifically for the purpose of controlling the destination thereof.
- 210, Liquid Purification or Separation, appropriate subclasses for processes and apparatus for separating a solid from a solid-liquid mixture. Fluid current conveyors which include means for separating the solids from a liquid carrier at the point of delivery are classified in Class 406.
- 221, Article Dispensing, subclass 278 for an apparatus which separates a discrete article from a source of supply of such articles and utilizes a fluid under pressure to separate or to move each article from the supply source toward a point of egress.
- 222, Dispensing, subclasses 61+ for automatically controlled dispensers with fluid pressure discharge assistance; subclass 617 for ambulant dispensers utilizing a fluid flow to discharge a material; subclass 630+ for other dispensers utilizing a fluid flow to discharge a material from a supply; and subclass 195 for dispensers having means to agitate the contents by gas. Class 222 takes the following: separating and dispensing a predetermined quantity or charge of material from a supply on demand (e.g., those devices wherein flow of discharging fluid is created by a reciprocating hand pump, squeezable bulb, etc.); pressurized aerosol containers having a discharge-controlling valve; discharging material from a receptacle by pressurized fluid acting on the top of the material to force the same through a discharge outlet (with no fluid current conveying claimed after the outlet); discharging material from a receptacle by a stream of fluid which entrains the material and carries the same through a discharge outlet (no conduit or other guiding or supporting structure subsequent to the outlet being disclosed); gas agitation of material in a receptacle to allow the material to flow through a discharge outlet (Class 406 will take a well-defined fluid current conveyor inside of a

- receptacle, and which may move material through a discharge outlet (e.g., an inclined permeable member at the bottom of a receptacle); dispensing of a nonsolid substance.
- 226, Advancing Material of Indeterminate Length, subclass 7 for a method of or subclasses 97.1+ for an apparatus to advance material of indeterminate length by means of a fluid current.
- 239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 77+ for orchard-type mobile distributors which discharge material by means of a gaseous fluid current; and subclasses 654+ for apparatus for scattering solid material which include means generating a gaseous mixing current. Patents claiming specific nozzle structure or orientation whereby the material is sprayed or scattered in the air or over an extended surface area are properly classified in Class 239, except when discharge is to a localized pile or a receptacle. See the class definition for Class 239 for further distinctions between that class and Class 406.
- 241, Solid Material Comminution or Disintegration, subclasses 15+ and 38+ for method or apparatus including a step or means for comminuting solid material combined with fluid current conveying of the material. See the Class 241 main definition, Lines With Other Classes and Within This Class, for statement of the line between Classes 241 and 406.
- 242, Winding, Tensioning, or Guiding, for more than a nominal supply or take-up coil structure (e.g., a support for such a coil, a cooperative relationship between a tension or exhaust detector and reel driving or reel stopping means, etc.); subclasses 615.11+ a residual locus for a material fluid suspension guide or guard.
- 251, Valves and Valve Actuation, appropriate subclasses for a valve in general. Class 406 provides for valves when claimed structure is recited which is specific to fluid current conveying of solids.
- 254, Implements or Apparatus for Applying Pushing or Pulling Force, subclass 134.4 for a device for placing a wire or strand in a conduit by connecting a vane or similar fixture to the wire or strand and moving it through the conduit by a fluid current therein.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclass 121 for conveying and projecting particulate material by means of a fluid current onto a collecting surface to form an article.
- 266, Metallurgical Apparatus, subclass 182 for apparatus which employ a fluid current to move solid material through a heating zone.
- 271, Sheet Feeding or Delivering, subclasses 194+ for a pneumatic conveyor for individual flexible sheets.
- 291, Track Sanders, subclasses 3+ for fluid current conveying of sand or like material to vehicle wheel treads or vehicle tracks.
- 299, Mining or In Situ Disintegration of Hard Material, subclass 18 and 64+ for fluid current conveying of mined material.
- 366, Agitating, subclasses 3+, 10+, and 101+ for agitation of material in a receptacle by the introduction of a gas under pressure, with no discharge outlet being claimed. See also the search note to Class 222, Dispensing, for the distinction between agitating of that class and this class (406).
- 405, Hydraulic and Earth Engineering, subclasses 80+ for a method or structure for modifying or directing the flow of a river, stream, etc., to transport articles or vessels thereon. See specifically subclasses 119+ for flumes without specific structure which recognizes the conveying of solids.
- 414, Material or Article Handling, subclass 795.5 for removing articles from a stack by fluid blast; subclass 221 for apparatus for moving material between zones of different pressure separated by an air lock; subclasses 288+ for a static receptacle and means for charging or discharging or facilitating the charging or discharging of the receptacle; and subclass 676 for supporting an article by air or moving the article by mechanical or manual means. Class 406 takes ambulant fluid current conveyors which would otherwise be classifiable in Class 414.
- 415, Rotary Kinetic Fluid Motors or Pumps, appropriate subclasses for rotary kinetic fluid pumps in general. Class 406 provides for similar pumps which include structure which recognizes a solid material entrained in the fluid (e.g., an attached solids receptacle or a separate opening in the casing for entry of the solid material)
- 416, Fluid Reaction Surfaces (i.e., Impellers), appropriate subclasses for specific impeller structure for a fluid pump.
- 417, Pumps, appropriate subclasses for general subject matter relating to the pumping of fluids. Class 417 provides for subject matter relating to the pumping of slurries, fluent solids, and the like if handled in a manner not inconsistent

- with the handling of fluids. Patents claiming specific structure or steps indicating conveying of solids in a fluid current (e.g., “means for controlling the input of solids into a fluid stream in response to pump speed...”) should be considered for Class 406.
- 418, Rotary Expansible Chamber Devices, appropriate subclasses for rotary expansible chamber pumps in general.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 80.1+ for apparatus including means for depositing particles on a shaping surface from a gaseous suspension.
- 432, Heating, subclasses 14+ and 58+ for a method or apparatus, respectively, which includes a step or means for conveying or agitating solid material with a heating gas.
- 451, Abrading, subclasses 38+ and 75+ for a sandblasting process or machine. Mere conveying of sand by fluid current with an incidental disclosure of sandblasting is properly classified in this class (406).
- 604, Surgery, subclass 58 for powder dispensers.

SECTION III - GLOSSARY

CARRIER

An auxiliary device for use in a fluid current conveyor comprising a container for carrying material or articles while being conveyed through the fluid current conveyor.

FLUID CURRENT CONVEYOR

Structure which guides or supports the load from the fluid conveyor inlet* to the fluid conveyor outlet* and wherein the fluid current acts upon the load from the inlet* to the outlet*.

FLUID CONVEYOR INLET

The point at which the load is first guided or supported and is acted upon by the fluid current. The inlet must also be subsequent to any structure (e.g., terminal, receptacle) for statically supporting the load at the entrance to the conveyor.

FLUID CONVEYOR OUTLET

The point at which the load is either no longer guided or supported, or is no longer acted upon by the fluid cur-

rent. The outlet must also be prior to any structure (e.g., terminal, receptacle) for statically supporting the load at the exit from the conveyor.

RECEPTACLE

A hopper or similar container for holding a quantity of load material or articles and having a discharge or intake opening therein.

TERMINAL

Structure at or adjacent the outlet or inlet of a fluid current conveyor for either (a) effecting intake or discharge of load articles individually into or from the conveyor, or (b) for accepting load articles as they are discharged individually from the conveyor.

SUBCLASSES

1 **SELECTIVE DELIVERY:**

This subclass is indented under the class definition. Subject matter wherein either (a) a load path is optionally communicable via a flow diverter to any one of a plurality of specified conveyor outlets*, or (b) a flow diverter is controlled in response to destination information carried by the load.

(1) Note. A switching means or load diverter, per se, is excluded.

SEE OR SEARCH THIS CLASS, SUBCLASS:

155+, for a conveyor having plural outlets.

181+, for a load flow diverter, divider, or combiner, per se.

SEE OR SEARCH CLASS:

104, Railways, subclasses 88.01+ for selective delivery of a railway rolling stock.

2 **Destination controlled by operator at remote site:**

This subclass is indented under subclass 1. Subject matter wherein means are provided to enable a person at a location removed from the flow diverter to select the particular outlet*.

3 **Destination controlled by sensed condition:**

This subclass is indented under subclass 1. Subject matter wherein the flow diverter is operated in response to the occurrence of a pre-

- determined event, or a change in a state or property in any of the following: the fluid conveyor* or an associated device, the conveying fluid, load, or the immediate environment of the conveyor affecting the operation thereof.
- 4 Controlled by coded load:**
This subclass is indented under subclass 3. Subject matter wherein the flow diverter is actuated in response to information carried by the load.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
37, for a coded carrier, per se.
- SEE OR SEARCH CLASS:
209, Classifying, Separating, and Assorting Solids, appropriate subclasses for separation of loads having different inherent physical characteristics.
- 5 Magnetic material on load:**
This subclass is indented under subclass 4. Subject matter wherein the flow diverter is actuated in response to a magnetic inscription carried by the load.
- 6 Electrical contact on load:**
This subclass is indented under subclass 4. Subject matter wherein the destination information carried by the load is in the form of electrically conductive material adapted to complete a circuit which operates the flow diverter.
- 7 Adjustable or changeable code on load:**
This subclass is indented under subclass 4. Subject matter wherein the destination information carried by the load may be readily changed whereby the load may be sent to any one of a plurality of destinations.
- 8 Presence or size of recess or protrusion on front of load:**
This subclass is indented under subclass 4. Subject matter wherein the destination information carried by the load is in the form of either a concave or convex leading surface, or an indentation or protrusion on the foremost surface of the load that is perpendicular to its direction of travel.
- 9 Protrusion:**
This subclass is indented under subclass 8. Subject matter where the destination information is in the form of a convex leading surface, or a protrusion formed on the foremost surface of the load that is perpendicular to its direction of travel.
- 10 WITH MEANS TO CONTROL CONVEYING FLUID OR MOVEMENT OF LOAD IN RESPONSE TO SENSED CONDITION:**
This subclass is indented under the class definition. Subject matter wherein a step or means is provided for: (a) detecting any of the following characteristics: a state or property or change therein, or the random occurrence of a predetermined event in any of the following: the fluid conveyor* or a device associated therewith, the conveying fluid, load, or the immediate environment of the conveyor* affecting the operation thereof; and (b) regulating a (a result of such detection) the movement of the load or conveying fluid.
- (1) Note. This definition requires a patent to claim at least 3 discrete instrumentalities for original placement herein. One of these must be a fluid conveyor*. The other 2 are: (a) a sensor (e.g., thermocouple, photocell system, etc.) to detect a condition as stated in (a) of the definition, and (b) a controller (e.g., pump motor, valve, solenoid, etc.) to regulate movement of the load or conveying fluid.
- (2) Note. "Regulating" as used above includes initiating or terminating.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
34, for devices having a sensor which initiates a signal, but no claimed controller.
- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 61+ for automatically controlled dispensers having fluid pressure discharge assistance.

- 11 Responsive to obstacle in system:**
This subclass is indented under subclass 10. Subject matter wherein the sensor detects the presence of an article or quantity of material which is lodged in the conveyor*.
- 12 Control of conveying fluid:**
This subclass is indented under subclass 10. Subject matter wherein the controller regulates the conveying fluid current or pressure.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
177+, for a gate which opens in response to the arrival of a load article, but does not alter the movement of the load or conveying fluid.
- 13 Reversing of fluid current in single tube system:**
This subclass is indented under subclass 12. Subject matter wherein the controller causes the conveying fluid current to reverse its direction of flow through the conveyor*.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
111, and 112, for other reversible single tube conveyors.
- 14 Responsive to velocity or pressure change of conveying fluid:**
This subclass is indented under subclass 12. Subject matter wherein the controller is regulated by a sensor which either detects changes in the speed of the conveying fluid current or detects variations in conveying fluid pressure.
- (1) Note. Sensors which detect the presence or absence of the load by detecting changes in conveying fluid velocity or pressure are included in this subclass.
- 15 To initiate or terminate fluid current:**
This subclass is indented under subclass 14. Subject matter wherein the fluid current conveyor* assumes a dormant condition in which the fluid current is stopped or is substantially reduced, and wherein the controller either starts the conveying current or stops the conveying current and returns the conveyor* to its dormant state.
- 16 In response to introduction or discharge of load:**
This subclass is indented under subclass 15. Subject matter wherein the sensor detects a change in pressure or velocity of a fluid current as the load is introduced into or discharged from the conveyor* to start or stop the conveying current.
- 17 Discharge and introduction:**
This subclass is indented under subclass 16. Subject matter wherein the sensor detects a change in pressure or velocity of the conveying fluid current as the load is introduced into and when it is discharged from the conveyor* to start and stop the fluid current, respectively.
- 18 With timer to terminate fluid current:**
This subclass is indented under subclass 16. Subject matter wherein the sensor detects a change in pressure or velocity of the fluid current as the load is introduced into the conveyor* and activates a controller to start the conveying current, and wherein a timing mechanism is also activated to stop the conveying current after a predetermined time interval.
- 19 Responsive to presence or absence or quantity of load:**
This subclass is indented under subclass 12. Subject matter wherein the controller which regulates the flow or pressure of the conveying fluid is regulated by a sensor which detects either the amount of the load or whether or not the load is at a particular location.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
14+, for devices wherein the presence or absence of the load is determined by a pressure sensor.
- 20 With stepped reset for each load article introduced at intake:**
This subclass is indented under subclass 19. Subject matter including load article sensors at the inlet* and outlet* of the fluid current conveyor*, wherein the conveying fluid controller is activated or deactivated by a mechanism which is incrementally advanced toward a conveyor deactivating position each time a load article is detected at the outlet*, and is incrementally retracted from the deactivating position.

- tion each time a load article is detected at the inlet*.
- 21 With load detector at outlet to terminate fluid current:**
This subclass is indented under subclass 19. Subject matter wherein a sensor is provided at the conveyor outlet* to detect the discharge of the load and activate or deactivate a controller which stops the conveying fluid current.
- 22 With timer to terminate current:**
This subclass is indented under subclass 19. Subject matter wherein a sensor which detects the presence or absence of the load activates a timing mechanism which in turn causes a controller to stop the conveying fluid current after a predetermined time interval.
- 23 Level or weight of load in receptacle:**
This subclass is indented under subclass 19. Subject matter wherein a sensor detects the height or the amount of the load in a hopper or other container associated with the fluid current conveyor*.
- SEE OR SEARCH CLASS:
177, Weighing Scales, appropriate subclass for patents claiming details of the weighing scale, or a weigher combined with a conveyor for moving material only as much material as in necessary to the weighing operation.
- 24 At intake:**
This subclass is indented under subclass 23. Subject matter wherein the load container discharges directly into the inlet* of the fluid current conveyor*.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 58 for a dispenser controlled automatically by the weight of the material in a supply container.
- 25 And control of load input to receptacle:**
This subclass is indented under subclass 24. Subject matter wherein an additional controller which regulates the load supply to the container is operated in response to the height or the amount of the load in the container.
- 26 Responsive to movement of gate to initiate or terminate fluid current:**
This subclass is indented under subclass 12. Subject matter wherein a closure is provided at the inlet* or outlet* of the fluid current conveyor past which the load is introduced into or discharged from the conveyor*, and wherein the sensor detects movement of the gate to activate or deactivate the fluid current controller.
- 27 To closure of intake gate to initiate fluid current:**
This subclass is indented under subclass 26. Subject matter wherein the sensor detects movement of a gate at the inlet* to its closed position and activates the controller to start the conveying fluid current.
- 28 Control of load input or output:**
This subclass is indented under subclass 10. Subject matter wherein the controller either regulates the introduction of the load through the inlet* of the fluid current conveyor*, or regulates the discharge of the load from the outlet*.
- (1) Note. The term “regulates” as used herein includes preventing or permitting the introduction or discharge of the load (e.g., control of a gate locking device at the intake is proper for this subclass).
- 29 Input:**
This subclass is indented under subclass 28. Subject matter wherein the controller regulates the introduction of the load through the inlet* of the fluid current conveyor*.
- 30 Responsive to pressure or velocity change of conveying fluid:**
This subclass is indented under subclass 29. Subject matter wherein the load input controller is regulated by a sensor which either detects changes in the speed of the conveying fluid current or detects variation in conveying fluid pressure.
- 31 Responsive to presence, absence, or quantity of load:**
This subclass is indented under subclass 29. Subject matter wherein the load input controller is regulated by a sensor which detects either

the amount of the load or whether or not the load is at a particular location.

32 Level or weight of load in receptacle:

This subclass is indented under subclass 31. Subject matter wherein the sensor detects the height or the quantity of the load in a hopper or other container associated with the fluid current conveyor*.

SEE OR SEARCH CLASS:

- 177, Weighing Scales, appropriate subclass for patents claiming details of the weighing scale, or a weigher combined with a conveyor which merely perfects the weighing operation.
- 222, Dispensing, subclass 58 for a dispenser controlled automatically by the weight of the material in a supply container.

33 In receptacle at discharge:

This subclass is indented under subclass 32. Subject matter wherein the hopper or container receives the load directly from the outlet* of the fluid current conveyor*.

34 WITH SIGNAL, INDICATOR, OR INSPECTION MEANS:

This subclass is indented under the class definition. Subject matter including means to produce or to observe a perceptible manifestation of or transmit intelligence regarding the load, the conveyor* or device associated therewith, or of a characteristic of any of the above.

35 Audible:

This subclass is indented under subclass 34. Subject matter wherein a signal is transmitted in the form of sound waves.

36 With load motion observing means:

This subclass is indented under subclass 34. Subject matter wherein means are provided by which a person may view the load over at least a portion of its travel through the conveyor* or a device associated therewith.

37 Coded carrier:

This subclass is indented under subclass 34. Subject matter wherein a carrier* is provided with coded information to control its destination and includes means providing a visual cue

indicating the particular terminal to which the carrier will be transmitted.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 4+, for coded carriers claimed in combination with a flow diverter which is controlled in response to the code.

38 AMBULANT OR PORTABLE:

This subclass is indented under the class definition. Subject matter wherein the fluid current conveyor* is either (a) provided with means to facilitate movement of the conveyor* from one location to another (e.g., wheels, skids), or (b) is specifically adapted to be carried by an operator to the location of use or during use of the conveyor*.

39 Vehicle mounted:

This subclass is indented under subclass 38. Subject matter wherein the fluid current conveyor* has attached thereto or is supported on a transport means having means (e.g., wheels, skids, etc.) to facilitate movement of the conveyor* over the surface upon which it is supported.

SEE OR SEARCH CLASS:

- 37, Excavating, appropriate subclasses for vehicle mounted excavating means.
- 56, Harvesters, appropriate subclasses for harvesters having pneumatic conveyors combined with means for severing the crops.
- 239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses for vehicle mounted pneumatic conveyors having means for scattering or spraying a fluent material over an extended surface area.
- 299, Mining or In Situ Disintegration of Hard Material, appropriate subclasses for a vehicle mounted fluid current conveyor combined with means for disintegrating hard material in situ.

40 Plural vehicles:

This subclass is indented under subclass 39. Subject matter wherein the fluid current conveyor* or a portion thereof, is supported on two or more discrete transport means each hav-

- ing means to facilitate movement of the conveyor* over the surface.
- 41 Towed vehicle:**
This subclass is indented under subclass 39. Subject matter wherein the conveyor* or transport means is provided with means by which it can be connected to a device (e.g., a motor vehicle, line, etc.) to pull the conveyor* over the surface on which it is supported.
- 42 Power takeoff:**
This subclass is indented under subclass 39. Subject matter wherein the fluid current conveyor* is carried on, pulled by, or pushed by a motor vehicle, and wherein the motor propelling the vehicle operates the conveyor* or device associated therewith via a power transmission.
- 43 With storage means on vehicle for fluid conveyor components:**
This subclass is indented under subclass 39. Subject matter wherein the fluid current conveyor* includes means whereby the same may be assembled or disassembled, and wherein the transport means includes a specified portion where the disassembled conveyor parts are stowed.
- 44 With auxiliary supporting means:**
This subclass is indented under subclass 39. Subject matter wherein means in addition to the movement facilitating means is provided which is deployed at the location of intended use to stabilize the conveyor*.
- 45 WITH MEANS TO PREVENT PIPELINE SLUMPING:**
This subclass is indented under the class definition. Subject matter wherein means are provided to prevent settling of the load from the fluid when the fluid current conveyor* is shut down.
- 46 WITH ADJUNCTIVE SUBSTANCE ADDED:**
This subclass is indented under the class definition. Subject matter wherein a substance in addition to and different than the load and conveying fluid is introduced prior to, or during conveying, or at discharge.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
45, if the adjunctive substance added prevents pipeline slumping.
- 47 Liquid:**
This subclass is indented under subclass 46. Subject matter wherein the substance added is in a liquid state.
- 48 Water:**
This subclass is indented under subclass 47. Subject matter wherein the substance added is water.
- 49 Solid:**
This subclass is indented under subclass 46. Subject matter wherein the substance added is neither fluid nor gaseous.
- 50 SLUG CONVEYING:**
This subclass is indented under the class definition. Subject matter wherein the load in the fluid current conveyor* is conveyed in groups or batches, with the space between consecutive groups or batches containing fluid only.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
63+, for a rotary conveyor having material carrying pockets which successively feed material through the inlet of a fluid current conveyor.
85, for a pulsing fluid current.
- 51 WITH DIVERSE POWER-DRIVEN CONVEYOR:**
This subclass is indented under the class definition. Subject matter including a driven load moving means in addition to the fluid current conveyor*.
- (1) Note. Pumps, per se, are excluded from the above definition.
- SEE OR SEARCH CLASS:
198, Conveyors: Power-Driven, appropriate subclasses for power-driven conveyors, per se.

- 52 Rotary:**
This subclass is indented under subclass 51. Subject matter wherein the additional conveyor includes a load moving surface, each point of which moves in a circular path through 360 degrees about a central axis.
- SEE OR SEARCH CLASS:
198, Conveyors: Power-Driven, subclass 803.16 for rotary conveyors, per se.
- 53 Screw:**
This subclass is indented under subclass 52. Subject matter wherein the load moving surfaces is in the shape of a helix.
- SEE OR SEARCH CLASS:
198, Conveyors: Power-Driven, subclass 467.1, 550.1, 550.6 for screw conveyors, per se.
- 54 With material recirculating screw:**
This subclass is indented under subclass 53. Subject matter wherein a second load moving helical surface is provided which serves to return at least a portion of the load from the discharge end of the first helix to the intake of the same.
- SEE OR SEARCH CLASS:
366, Agitating, subclasses 84+ for subject matter relating to the working of rubber or heavy plastic in parallel screw conveyors.
- 55 Including means to fluidize material:**
This subclass is indented under subclass 53. Subject matter wherein means are provided to cause the load to assume a flowable state while being moved by the helical surface.
- 56 Feeding to fluid conveyor inlet:**
This subclass is indented under subclass 53. Subject matter wherein the screw conveyor discharges the load at or adjacent to the inlet* of the fluid current conveyor.
- 57 Feeds to inlet of blower or pump:**
This subclass is indented under subclass 56. Subject matter wherein the screw conveyor discharges directly into a driven device which propels the conveying fluid through the fluid current conveyor*.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
80, for an endless conveyor which feeds the load through the intake of a blower or pump.
96+, for a blower or pump, per se, having a load intake opening in its housing.
- 58 Screw axis coaxial with axis of rotary blower or pump:**
This subclass is indented under subclass 57. Subject matter wherein the fluid propelling device includes a fluid propelling surface, each point of which moves in a circular path about a central axis, which axis lies on a common line with the rotary axis of the screw conveyor.
- 59 Plural screw:**
This subclass is indented under subclass 57. Subject matter wherein the screw conveyor comprises two or more discrete helical load moving surfaces.
- (1) Note. This subclass includes screw conveyors having two or more discrete helices on a common shaft.
- 60 With check valve between screw and fluid current conveyor:**
This subclass is indented under subclass 56. Subject matter wherein means are provided along the load path between the screw conveyor and fluid current conveyor* which allows the load to pass in only one direction.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
127+, for a check valve between a receptacle and a fluid current conveyor.
- 61 Fluid jet at conveyor inlet:**
This subclass is indented under subclass 56. Subject matter wherein a concentrated stream of conveying fluid is directed downstream in the fluid current conveyor* at the discharge end of the screw conveyor.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
93+, for booster fluid jets.
144, for a fluid jet at a conveyor inlet being fed by a receptacle.

- 153, for a fluid jet downstream of the inlet for inducing suction at the inlet.
- 194, for a conduit having a fluid nozzle associated therewith.
- 62 Successively registering pockets:**
This subclass is indented under subclass 52. Subject matter wherein the load moving surface comprises a plurality of circumferentially spaced members or depressions, each of which defines by itself or along with a surrounding housing a chamber or cavity which rotates about a central axis, and isolates a quantity of the load from a supply.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
71, for rotary throwers.
74, for reciprocating trap chambers.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 636 for fluid flow discharged dispensers having rotary trap chambers; and subclasses 367+ for other dispensers employing rotary trap chambers.
- 63 Input to fluid conveyor:**
This subclass is indented under subclass 62. Subject matter wherein the rotating chambers or cavities discharge the load at or adjacent to the inlet* of the fluid current conveyor*.
- 64 With venting of pockets:**
This subclass is indented under subclass 63. Subject matter wherein a pressure or vacuum condition in the chamber or cavities is neutralized prior to or after the point when each chamber or cavity communicates with a load supply.
- 65 Having radial blades:**
This subclass is indented under subclass 63. Subject matter wherein the load moving surface comprises a series of radially extending members distributed circumferentially about the central axis, the cavities or chambers being defined by adjacent members and a surrounding housing.
- 66 Rotatable about vertical axis:**
This subclass is indented under subclass 65. Subject matter wherein the central axis is substantially perpendicular to the earth's surface.
- 67 Fluid flow discharges pockets:**
This subclass is indented under subclass 65. Subject matter wherein the load is discharged from the rotating chambers or cavities by a fluid stream which may be the fluid conveyor current, or may emanate from a nozzle in the rotating cavities or chambers or located adjacent to the path thereof.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 636 for fluid flow discharged dispenser having rotary trap chambers.
- 68 Peripheral pockets formed on rotating member:**
This subclass is indented under subclass 63. Subject matter wherein the load moving surface comprises a plurality of load-receiving cavities on the surface of a rotating member.
- 69 Brush:**
This subclass is indented under subclass 52. Subject matter wherein a plurality of flexible bristles are provided to advance the load.
- 70 Roller:**
This subclass is indented under subclass 52. Subject matter wherein the load moving surface comprises the periphery of a rotating annular or cylindrical member.
- SEE OR SEARCH CLASS:
198, Conveyors: Power-Driven, subclasses 780+ for live roller conveyors.
- 71 Thrower:**
This subclass is indented under subclass 52. Subject matter wherein the rotary load moving surface is adapted to contact the load with sufficient force and speed to propel the load through the air or along a path solely by said contact.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
62+, for similar rotary conveyors having or forming rotating material pockets.
96+, for impellers that additionally generate a fluid current to propel the load after it passes therethrough.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 638+ for rotary throwers, per se.

72

Magazine:

This subclass is indented under subclass 51. Subject matter wherein the additional conveyor comprises a rack having a series of stations therein for load articles which are received on or discharged from the rack as each station is indexed to an outlet* or inlet* of the fluid current conveyor*.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 69+ for cellular magazine-type dispensers.

73

Reciprocating or oscillating:

This subclass is indented under subclass 51. Subject matter wherein the additional conveyor comprises a load moving surface which is movable to-and-fro along the same path.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 750.1+ for a reciprocating conveyor, per se.

74

With pocket:

This subclass is indented under subclass 73. Subject matter wherein the load moving surface either (a) comprises a depression formed on a reciprocating or oscillating member, or (b) is enclosed by and defines a chamber within a stationary housing.

75

Vibrating:

This subclass is indented under subclass 73. Subject matter wherein the load moving surface moves to-and-fro in reciprocations or oscillations of small amplitude and high frequency.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclass 752.1 for a vibrating conveyor, per se.

76

Pusher:

This subclass is indented under subclass 73. Subject matter wherein the load moving surface contacts and moves the load along a supporting surface.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 736+ for a reciprocating pusher conveyor, per se.

77

Endless:

This subclass is indented under subclass 51. Subject matter wherein the additional conveyor comprises a driven load moving means which is carried by or comprises a surface of continuous belt or band.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 804+ for an endless conveyor, per se.

78

Permeable belt:

This subclass is indented under subclass 77. Subject matter wherein the load moving means comprises an endless belt or band formed of a material that is previous to fluids and not to the load.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclass 471.1 and 689.1 for endless conveyors having permeable belts which utilize suction to hold the load on the belt.

79

At inlet to fluid conveyor:

This subclass is indented under subclass 77. Subject matter wherein the endless conveyor discharges the load at or adjacent to the inlet* of the fluid current conveyor*.

80

Feeds to intake of blower or pump:

This subclass is indented under subclass 79. Subject matter wherein the endless conveyor discharges directly into a driven device which propels the conveying fluid through the fluid current conveyor*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

57+, for a screw conveyor feeding to the intake of a blower or pump.

96+, for a blower or pump having a load intake opening in its housing.

81 Pushers, buckets, or tines:

This subclass is indented under subclass 79. Subject matter the load moving surface comprises either, (a) a plurality of discrete members carried by the belt or band and which contact and move the load along a supporting surface, (b) a plurality of containers carried by the belt or band, or (c) a plurality of elongated members protruding outwardly from the surface of the belt or band.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 692+ for conveyors having load impalers; subclasses 701+ for conveyors having buckets; and subclasses 725+ for endless conveyors having pushers.

82 At outlet of fluid conveyor:

This subclass is indented under subclass 77. Subject matter wherein the endless conveyor receives the load as it is discharged from the outlet* of the fluid current conveyor*.

83 WITH LOAD BRAKING OR RETARDING MEANS:

This subclass is indented under the class definition. Subject matter wherein means are provided which act on the load to decelerate the load.

- (1) Note. A barrier (e.g., valve), per se, that is manipulated to retard or block passage of the load is excluded.

SEE OR SEARCH THIS CLASS, SUBCLASS:

28, for gate at the conveyor outlet which causes the load to be decelerated by the compressed or rarefied air between the gate and a load article moving respectively toward or away from the gate.

84 Utilizing a fluid:

This subclass is indented under subclass 83. Subject matter wherein the load is stopped or slowed by means which directs or alters the flow of a fluid at or adjacent the load.

- (1) Note. The fluid may or may not be the conveying fluid.

85 PULSING FLUID CURRENT:

This subclass is indented under the class definition. Subject matter wherein means are provided to cause the conveying fluid to be forced intermittently in the fluid current conveyor* in successive bursts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

50, for slug conveyors using a pulsing fluid current for conveying the load at spaced intervals.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 404 for vacuum cleaners which employ a pulsing air flow.
34, Drying and Gas or Vapor Contact With Solids, subclass 191 for a pulsating treating gas or vapor flow.

86 HAVING MEANS FOR MAINTAINING LOAD IN SUSPENSION ALONG FLOW PATH:

Subject matter under the definition wherein the fluid current conveyor* is provided with means along a substantial portion of the load path to continuously direct fluid against the load as it is being conveyed to insure that a substantial portion of the load is surrounded and supported by fluid.

- (1) Note. The above fluid may or may not be the conveying fluid.

SEE OR SEARCH THIS CLASS, SUBCLASS:

136+, for fluid agitation of the load in a receptacle at the intake of a fluid current conveyor.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclass 359 and 576+ for a method or apparatus for conveying or suspending material by means of a fluid current while drying or treating a solid material with the fluid.
414, Material or Article Handling, subclass 676 for means for pneumatically supporting an article while the article

is being moved by mechanical or manual means.

- 87 With load orienting means:**
This subclass is indented under subclass 86. Subject matter wherein load articles are conveyed along a predetermined path and means are provided to turn a load article to change its attitude with respect to said path.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 373+ for load orienting means.

- 88 By load supporting jets:**
This subclass is indented under subclass 86. Subject matter wherein the fluid is continuously directed against the load by a series of closely spaced nozzles along a conduit or other means defining the load path, and wherein the load is moved and supported by the fluid issuing from the nozzles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

94+, for a conveyor* having plural spaced inputs along a conduit for introducing a booster fluid to compensate for decreasing pressure downstream.
137, for load agitating fluid jets in a receptacle.

SEE OR SEARCH CLASS:

222, Dispensing, subclass 195 for agitation of material in a receptacle by fluid jets, but with no conveying within the receptacle by fluid.

- 89 Including permeable member:**
This subclass is indented under subclass 86. Subject matter wherein the fluid is continuously directed against the load through a section of foraminous material.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclass 174 for similar subject matter wherein the gas passing through the permeable member heats or otherwise treats the material.

90 In receptacle:

This subclass is indented under subclass 89. Subject matter wherein the load path is located within a hopper or similar container.

- (1) Note. The load must be conveyed along a path defining surface within the receptacle for placement in this and indented subclasses. If the fluid moves the material in a random manner to stir or dislodge the same, then the fluid is considered to be agitating fluid.

SEE OR SEARCH THIS CLASS, SUBCLASS:

138, for a receptacle at the intake of a fluid current conveyor and having a permeable member therein through which agitating fluid is passed.

SEE OR SEARCH CLASS:

222, Dispensing, subclass 195 for fluid agitation of material in a receptacle.

91 Permeable member surrounding discharge opening or conduit:

This subclass is indented under subclass 90. Subject matter wherein the container has a conduit or opening therein through which the load is discharged, and the foraminous material is distributed through substantially 360 degrees about the conduit or opening to cause the load to flow along the material toward the conduit or opening.

92 By fluid whirling action:

This subclass is indented under subclass 86. Subject matter wherein means are provided to cause the conveying fluid to eddy or form a vortex along the load path.

93 HAVING MEANS TO INTRODUCE BOOSTER FLUID INTO CONVEYOR:

Subject matter under the definition wherein means are provided downstream of the inlet* of the fluid conveyor at which additional conveying fluid is forced or drawn into the conveyor*.

- (1) Note. A fluid introduced into a receptacle* having plural fluid inputs is not a booster fluid. A booster fluid must be introduced into the conveyor* after the

load and primary fluid have left the receptacle*.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 61, for a fluid jet at a fluid current conveyor inlet being fed by a screw conveyor.
- 86+, for conveyors having means for directing fluid at the load along a substantial portion of the load path thereof.
- 142+, for a receptacle at the inlet of a fluid current conveyor and having a conduit therein through which the material is lifted out of the receptacle by lifting fluid entering the conduit at a plurality of spaced locations.
- 144, for a fluid jet at a fluid current conveyor inlet fed by a load receptacle.
- 153, for a fluid nozzle downstream of an inlet for inducing suction at the inlet.
- 194, for a conduit having a fluid nozzle associated therewith.

94 Plural booster inputs:

This subclass is indented under subclass 93. Subject matter wherein the additional conveying fluid is supplied at two or more points spaced along the load path.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 88, for a fluid current conveyor having means for directing fluid jets against the load to support the same.

SEE OR SEARCH CLASS:

- 241, Solid Material Comminution or Disintegration, subclass 41 for means for applying fluid to the same material at a plurality of spaced points in the apparatus.

95 With parallel fluid supply conduit:

This subclass is indented under subclass 94. Subject matter wherein the additional conveying fluid is supplied at spaced points along the load path by a pipe or duct, wherein a substantial portion of the pipe or duct and the load path are an equal distance apart at every point.

96 BLOWER OR PUMP HAVING LOAD INTAKE OPENING IN HOUSING:

This subclass is indented under the class definition. Subject matter wherein a driven device is provided to propel the conveying fluid through the conveyor, which device includes a surrounding casing having a load inlet whereby the load passes directly through the fluid propelling device.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 57+, for a similar pump combined with a screw conveyor which feeds the load to the pump.
- 80, for similar pump combined with an endless conveyor for feeding the load to the same.

SEE OR SEARCH CLASS:

- 415, Rotary Kinetic Fluid Motors or Pumps, appropriate subclasses for rotary fluid pumps.
- 416, Fluid Reaction Surfaces (i.e., Impellers), appropriate subclasses for specific features of fluid pump impellers.
- 417, Pumps, appropriate subclasses for subject matter relating to the pumping of fluids. Class 417 takes subject matter relating to the pumping of slurries, fluent material and the like if handled in a manner not inconsistent with the handling of fluids.
- 418, Rotary Expansible Chamber Devices, appropriate subclasses for fluid pumps including a working member which moves as defined in the class definition.

97 Including load or blower protecting means:

This subclass is indented under subclass 96. Subject matter wherein the fluid propelling device is provided with means to prevent damage to either itself or the load.

98 Having separate opening in housing for conveying fluid input:

This subclass is indented under subclass 96. Subject matter wherein the surrounding casing is provided with a second inlet for conveying fluid only.

- 99 Rotary:**
This subclass is indented under subclass 96. Subject matter wherein the fluid propelling device includes a fluid impelling surface each point of which moves in a circular path about a central axis.
- 100 Having radially extending blades:**
This subclass is indented under subclass 99. Subject matter wherein the fluid impelling surface comprises a plurality of elongated members extending perpendicularly from said central axis.
- 101 Mounted on axial face of a disc:**
This subclass is indented under subclass 100. Subject matter including a flat circular member which carries the radially extending elongated members on a circular face.
- 102 With load receptacle feeding to intake of blower or pump:**
This subclass is indented under subclass 100. Subject matter wherein a container discharges the load directly through the load inlet into the casing of the fluid propelling device.
- 103 Blower or pump housing movably mounted relative to receptacle:**
This subclass is indented under subclass 102. Subject matter wherein the casing of the fluid propelling device is adjustable or movable with respect to the container.
- SEE OR SEARCH CLASS:
415, Rotary Kinetic Fluid Motors or Pumps, subclass 126 for a pump having a casing part selectively movable relative to fixed support.
- 104 Plural blowers or pumps:**
This subclass is indented under subclass 102. Subject matter wherein two or more fluid propelling devices are provided.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
140, for a receptacle located at the intake of a fluid current conveyor and carrying a plurality of blowers or pumps.
- 105 HAVING LOAD BY-PASS AROUND BLOWER OR PUMP:**
This subclass is indented under the class definition. Subject matter wherein a driven device is provided for propelling the fluid current through the conveyor* and means is provided for shunting the load around the fluid propelling device.
- (1) Note. The shunt path must consist of a single fluid current conveyor section for placement in this subclass.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
109+, for a shunt path which comprises a fluid current conveyor feeding to a second fluid current conveyor.
- 106 ENDLESS FLUID CURRENT PATH:**
This subclass is indented under the class definition. Subject matter wherein a closed fluid path is provided and wherein the conveying fluid is propelled by a fluid current generating means (i.e., blower or pump) which is located along the path.
- 107 MATERIAL-BACKFLOW DISCHARGE:**
This subclass is indented under the class definition. Subject matter wherein means are provided to discharge from the load path any portion of the load that moves backward by gravity against the intended flow.
- (1) Note. This subclass does not include devices in which separation of heavier particles is effected by subjecting the material to a blast of such strength that only the lighter particles are conveyed away. For such devices, see Class 55, Gas Separation, subclass 434 and indented subclasses; and Class 209, Classifying, Separating, and Assorting Solids, subclass 21 and indented subclasses; and subclass 133 and indented subclasses.
- 108 INTAKE TO FLUID CURRENT CONVEYOR:**
This subclass is indented under the class definition. Subject matter relating to structure prior to or at the point along the load path at which

the load is first guided or supported and is acted upon by the fluid current.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

51+, for fluid current conveyors having a driven load moving surface associated therewith for feeding the load to or through the inlet.

109 Combined intake and discharge:

This subclass is indented under subclass 108. Subject matter wherein either (a) the inlet* of a fluid current conveyor can also serve as the outlet*, or (b) means are provided at the inlet* of a fluid current conveyor to feed the load through the inlet*, which means also receives the load from the outlet* of a fluid conveyor.

110 With terminal:

This subclass is indented under subclass 109. Subject matter wherein the means to receive and feed the load comprises structure which effects the intake or discharge of load articles individually into or from the fluid current conveyor.

111 Captive carrier:

This subclass is indented under subclass 110. Subject matter wherein the load article is a carrier* which is not readily removable from the fluid current conveyor*.

112 Single inlet-outlet:

This subclass is indented under subclass 110. Subject matter wherein the load article is fed from and discharged into the terminal* via the same opening.

113 Movable inlet:

This subclass is indented under subclass 108. Subject matter wherein the inlet* to the fluid current conveyor* is movably mounted relative to some supporting structure of the conveyor such that the inlet* either is adjustable or may be moved to the load to be conveyed.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

38+, for apparatus wherein the entire conveyor is mounted for movement from one location to another.

164+, for a fluid current conveyor having a movable outlet.

114 Follows load level:

This subclass is indented under subclass 113. Subject matter wherein the load is drawn into the inlet* from a receptacle* or open pile of load material and means are provided to move or allow movement of the inlet* to follow the boundary of a column or pile of load material.

115 Reciprocating or swinging:

This subclass is indented under subclass 113. Subject matter wherein the inlet* is mounted for movement back and forth along a straight or arcuate path.

(1) Note. An intake conduit which is carried by a receptacle and is moved relative to cooperating structure to control the amount of material entering the conveyor is considered to be a valve and is excluded from this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

128+, for an intake conduit which is carried by a receptacle and serves as a valve.

164+, for a reciprocating or swinging outlet.

116 Having telescoping intake:

This subclass is indented under subclass 115. Subject matter wherein the inlet* and structure contiguous therewith comprises a plurality of interconnected nested segments movable axially relative to each other.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

158, for a telescoping deflector at the outlet of a fluid current conveyor.

167, for a telescoping outlet conduit of a fluid current conveyor.

195, for miscellaneous telescoping conveyor conduits.

117 Conveyor having plural intakes:

This subclass is indented under subclass 108. Subject matter wherein a fluid current conveyor* is provided with two or more distinct inlets* which feed to a common load path.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

181+, for a load combiner, per se.

- 118 From receptacle:**
This subclass is indented under subclass 117. Subject matter wherein a hopper or similar container for holding a quantity of load material or articles is provided at or adjacent to at least one of the inlets* to feed the load therethrough.
- 119 Having plural compartments:**
This subclass is indented under subclass 118. Subject matter wherein the hopper or similar container is divided into two or more distinct spaces, each holding a quantity of load and feeding the same through a different inlet*.
- 120 Plural receptacles:**
This subclass is indented under subclass 118. Subject matter wherein a plurality of discrete containers are provided, each of which feeds to a different one of said plurality of inlets*.
- 121 With sifter:**
This subclass is indented under subclass 108. Subject matter wherein a sieve is provided at or adjacent the inlet* to separate or reduce coarse lumps of load material.
- SEE OR SEARCH CLASS:
209, Classifying, Separating, and Assorting Solids, subclasses 21+ for operations of separating and grading or sorting solids employing both sifting and gaseous suspension; and subclasses 233+ for sifters in general. See especially subclasses 243+ for sifters combined with means for feeding solids to the same.
- 122 Load receptacle type:**
This subclass is indented under subclass 108. Subject matter wherein a hopper or similar container for holding a quantity of load material or articles is provided at or adjacent to the inlet* to feed the load therethrough.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
86+, for a fluid current conveyor with a receptacle at the intake which includes means for maintaining the load in suspension along a flow path inside the receptacle.
- 89+, especially, for a receptacle that both receives the load from the outlet of a first fluid current conveyor and feeds the load to the inlet of a second fluid current conveyor.
- SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 268 for a device having a holder for solid material to be entrained in a fluid current.
- 123 Having inlets to separate conveyors:**
This subclass is indented under subclass 122. Subject matter wherein the receptacle* feeds the load to the inlets* of two or more distinct fluid current conveyors*.
- 124 Plural receptacles in series:**
This subclass is indented under subclass 122. Subject matter wherein the receptacle* at the fluid conveyor inlet* is fed by a second receptacle*.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
25, and 29+, for means to control the load input to a receptacle in response to a sensed condition.
- 125 With gate valve between receptacles:**
This subclass is indented under subclass 124. Subject matter wherein a plate like member is provided in the flow path between the receptacles* to regulate the load flow therebetween.
- 126 With conical plug valve between receptacles:**
This subclass is indented under subclass 124. Subject matter wherein a load flow regulator is provided between the receptacles* which includes a conical or frustoconical member to vary the cross-sectional area of the load flow path.
- 127 With valve between receptacle and fluid conveyor:**
This subclass is indented under subclass 122. Subject matter wherein means are provided in the flow path of the load between the receptacle* and fluid conveyor inlet whereby the flow of load entering the conveyor* can be controlled.

SEE OR SEARCH CLASS:

- 137, Fluid Handling, appropriate subclasses for a valve combined with a fluid handling system, or a valve, per se, which is automatic in operation.
- 251, Valves and Valve Actuation, appropriate subclasses for valve structure, per se.

128 Reciprocating, rotating, or swinging:

This subclass is indented under subclass 127. Subject matter wherein the means to control the flow of the load comprises a member having a surface mounted for movement across or along the flow path in either a back and forth manner or in a revolving movement about an axis.

129 Rotatable hollow cylinder type:

This subclass is indented under subclass 128. Subject matter wherein the movable flow controlling member is a hollow cylinder having an opening in its side and which is rotated about its central axis to control the flow of the load from the receptacle* to the interior of the cylinder.

130 Gate type:

This subclass is indented under subclass 128. Subject matter wherein the movable flow controlling member comprises a platelike member.

131 Pivotal:

This subclass is indented under subclass 130. Subject matter wherein the platelike member is swingably mounted.

132 Vertically movable:

This subclass is indented under subclass 128. Subject matter wherein the movable flow controlling member is mounted for movement in a direction perpendicular to the earth's surface.

133 Sleeve or conduit:

This subclass is indented under subclass 132. Subject matter wherein the vertically movable flow controlling member is in the form of a hollow cylinder or tube.

- (1) Note. The hollow cylinder or tube may be the intake conduit.

134 With means to agitate load in receptacle:

This subclass is indented under subclass 122. Subject matter wherein means are provided to stir or dislodge the load in the receptacle*.

SEE OR SEARCH CLASS:

- 222, Dispensing, appropriate subclasses for a receptacle having an agitator and a discharge outlet.
- 366, Agitating, appropriate subclasses for agitating in a receptacle which is not feeding to a fluid current conveyor (406) and has no claimed discharge outlet (222). Class 366 provides for fluid current conveying to or from an agitating receptacle when the conveying is ancillary to the material agitation. See subclasses 150.1+ and 184+ for the above combinations.

135 Rotary:

This subclass is indented under subclass 134. Subject matter wherein the means to stir or dislodge the load comprises a load contacting surface inside the receptacle* which rotates about an axis through at least 360 degrees.

136 Fluid:

This subclass is indented under subclass 134. Subject matter wherein the load is stirred or dislodged by directing a fluid against the load inside the receptacle*.

SEE OR SEARCH CLASS:

- 222, Dispensing, subclass 195 for a receptacle that employs gas agitation to assist in dispensing the same.

137 Jet:

This subclass is indented under subclass 136. Subject matter wherein a nozzle is provided to direct the fluid against the load in the receptacle* in a localized stream.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 88, for serially arranged fluid jets along a load path inside a receptacle, wherein the fluid jets maintain the load in suspension to travel along the load path.

- 138 Passed through permeable member:**
This subclass is indented under subclass 136. Subject matter wherein the agitating fluid is directed against the load in the receptacle* through a foraminous material.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
90+, for a receptacle having fluid current conveyor therein comprising a fluid permeable member which defines the load flow path.
- 139 Blower or pump carried by receptacle:**
This subclass is indented under subclass 122. Method or apparatus wherein a driven fluid propelling device is supported by the receptacle*.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
96+, for a blower or pump through which the load and conveying fluid pass.
- 140 Plural blowers or pumps:**
This subclass is indented under subclass 139. Method or apparatus wherein two or more driven fluid propelling devices are supported by the receptacle*.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
104, for a receptacle which feeds the load through a plurality of associated blowers or pumps.
- 141 Inlet conduit extending downwardly inside receptacle:**
This subclass is indented under subclass 122. Subject matter wherein the inlet* is formed by a conduit protruding interiorly of the receptacle* and through which the load is lifted as it is conveyed out of the receptacle*.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
133, for an inlet conduit in a receptacle which is reciprocated to control the quantity of the load passing there-through.
- 142 With conduit supplying lifting fluid to interior of receptacle:**
This subclass is indented under subclass 141. Subject matter wherein the load is propelled upwardly through the inlet* defining conduit by pressure fluid entering the receptacle* through a pipe or duct.
- 143 Fluid supplying conduit extends to inlet conduit:**
This subclass is indented under subclass 142. Subject matter wherein the pipe or duct supplying pressure fluid to the interior of the receptacle* terminates at or inside the inlet* defining conduit.
- 144 Conveying fluid velocity altered at load input:**
This subclass is indented under subclass 122. Subject matter wherein means are provided at or adjacent the inlet* to accelerate or decelerate the conveying fluid as it flows by the inlet*.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
61, for apparatus employing a fluid jet at a fluid current conveyor inlet which receives the load from a screw conveyor.
93, for fluid current conveyors in which one or more fluid jets supply additional fluid downstream of the inlet.
153, for a fluid jet which induces suction at an inlet that is not fed by a receptacle.
194, for a conveyor conduit having a nozzle.
195, for a length of conduit having a varying cross section.
- 145 Having connection for external suction or pressure source:**
This subclass is indented under subclass 122. Subject matter wherein the receptacle* includes means specifically adapted to be detachably connected to a suction or pressure device to remove the load from the receptacle*.
- 146 Conveying fluid introduced under pressure to interior of receptacle:**
This subclass is indented under subclass 122. Subject matter wherein the load is propelled through the inlet* by either a pressure fluid in a closed receptacle*, or a fluid stream which

moves through and entrains the load in the receptacle*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

124, for a plurality of pressurized receptacles in series.

136+, for a receptacle and means to introduce agitating fluid under pressure into the interior thereof.

142+, for a pressurized receptacle at intake from which the material enters the conveyor through an inlet conduit extending downwardly inside the receptacle.

147 **Terminal type:**

This subclass is indented under subclass 108. Subject matter wherein structure is provided at or adjacent to the inlet* for the feed of load articles individually therethrough.

SEE OR SEARCH THIS CLASS, SUBCLASS:

110+, for a terminal which serves as an inlet and an outlet.

148 **Intake gate:**

This subclass is indented under subclass 147. Subject matter wherein the terminal* is provided with a movable closure member past which a load article to be transmitted is inserted.

SEE OR SEARCH THIS CLASS, SUBCLASS:

26+, for an intake gate whose position controls the conveying fluid.

149 **Gate lock:**

This subclass is indented under subclass 148. Subject matter wherein means are provided to prevent insertion of a load article past said closure until a previously inserted load article has been transmitted.

150 **Serially arranged gates:**

This subclass is indented under subclass 148. Subject matter wherein the terminal* is provided with a second movable closure downstream of the first closure and past which a load article must move before being transmitted through the conveyor*.

(1) Note. An air lock is typically formed by the two gates.

151 **Upstream of suction source:**

This subclass is indented under subclass 108. Subject matter wherein the load is drawn into the conveyor* by creating a vacuum at the inlet* by forcing or withdrawing conveying fluid into or from the fluid flow path at a point subsequent to the inlet*.

152 **Including specific intake nozzle structure:**

This subclass is indented under subclass 151. Subject matter wherein significance is attributed to a particular feature (e.g., shape) of the inlet*.

(1) Note. A constant cross-sectional conduit at the inlet* is excluded from this subclass.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclasses 415.1+ for vacuum cleaner nozzles.

37, Excavating, subclasses 317+ for suction dredgers.

153 **Suction induced by pressure stream:**

This subclass is indented under subclass 151. Subject matter wherein the vacuum at the inlet* is created by forcing conveying fluid into the fluid flow path at a point subsequent to the inlet*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

61, for devices employing a fluid jet as a fluid current conveyor inlet which receives the load from a screw conveyor.

93, for a suction inducing fluid jet downstream of an inlet supplying additional fluid to the conveyor.

194, for a conveyor conduit with a nozzle.

154 **FLUID CURRENT CONVEYOR OUTLET MEANS:**

This subclass is indented under the class definition. Subject matter relating to structure at or subsequent to the point along a fluid current conveyor* at which the load is either no longer

guided or supported, or is no longer acted upon by the fluid current.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

109+, for structure which serves as an outlet and an inlet of flow current conveyor.

SEE OR SEARCH CLASS:

96, Gas Separation: Apparatus, for apparatus used in separation of a gas and solid particles entrained therein, per se.

210, Liquid Purification or Separation, appropriate subclasses for subject matter relating to the separation of liquids and solids.

155 **Conveyor having plural outlets:**

This subclass is indented under subclass 154. Subject matter wherein the fluid current conveyor* is provided with two or more distinct outlets* which are fed from a common load path.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

1+, for a conveyor having a load path selectively communicable to any of a plurality of downstream paths.

106, for conveyors having an endless fluid current path and plural outlets along the load flow path.

181+, for a load flow diverter or divider, per se.

156 **Feeding plural receptacles:**

This subclass is indented under subclass 155. Subject matter wherein at least two outlets* discharge the load into different receptacles*.

157 **Deflector:**

This subclass is indented under subclass 154. Subject matter wherein means in addition to a conveying conduit is provided at or adjacent to the outlet* to alter the loads direction as it is discharged.

(1) Note. Patents relating to outlets which are movable with respect to a supporting conduit have been placed as originals in subclasses 164+.

(2) Note. This and indented subclasses include baffles located in a conduit prior to the outlet* to direct the load toward the outlet*.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

164, for a movable conveyor outlet.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses for subject matter relating to the scattering of fluids, or fluent solids in slurry or dry form, over an extended area on a surface or plant. See particularly subclasses 8+ and 654+ for a method or apparatus for scattering a nonfluid material which includes a step or means for mixing the material with a gas or liquid.

158 **Telescoping:**

This subclass is indented under subclass 157. Subject matter wherein the deflector comprises a plurality of relatively movable interconnected nested segments.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

116, for a telescoping intake conduit.

167, for a telescoping outlet conduit.

195, for a telescoping conveyor conduit in general.

159 **Pivoted:**

This subclass is indented under subclass 157. Subject matter wherein the deflector is mounted for swinging movement about an axis through less than 360 degrees.

160 **Adjustable:**

This subclass is indented under subclass 159. Subject matter wherein the deflector can be positioned by an operative in any of a plurality of selected positions about the pivot axis.

161 **From remote location:**

This subclass is indented under subclass 160. Subject matter wherein means are provided to enable an operator at a location beyond reach of the deflector to position the same remotely.

162 Rotatable:

This subclass is indented under subclass 157. Subject matter wherein the deflector at the outlet* revolves about an axis through 360 degrees.

163 Carried by receptacle:

This subclass is indented under subclass 157. Subject matter wherein the deflector is located within a receptacle*.

- (1) Note. The deflector must comprise means other than an interior wall or a filter in a receptacle*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 168+, for a load deflecting wall or filter in a receptacle.
174, especially for baffles or guides which act on the load as it falls through a receptacle after being discharged upwardly into the same.

SEE OR SEARCH CLASS:

- 55, Gas Separation, subclass 434 for solids-gases separating deflectors, per se.

164 Movable outlet:

This subclass is indented under subclass 154. Subject matter wherein the outlet* is movably mounted relative to the remainder of the fluid conveyor*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 113+, for a movable inlet.
157+, for deflecting means at the outlet other than the conduit itself.

165 Horizontally swinging:

This subclass is indented under subclass 164. Subject matter wherein the outlet* is mounted for curvilinear movement about a substantially vertical axis.

166 And vertically swinging:

This subclass is indented under subclass 165. Subject matter wherein the outlet* is additionally mounted for curvilinear movement about a substantially horizontal axis.

167 Telescoping:

This subclass is indented under subclass 164. Subject matter wherein the outlet* and structure contiguous therewith comprises a plurality of interconnected nested segments movable axially relative to each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 116, for a telescoping intake conduit.
158, for a telescoping deflector at the outlet.
195, for miscellaneous telescoping conduits.

168 With material separating receptacle:

This subclass is indented under subclass 154. Subject matter wherein a receptacle* is provided with means to remove particulate load material from the conveying fluid at the outlet* of the fluid current conveyor*.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 109, for a load separating receptacle that feeds the load received to another fluid current conveyor.
163, for a receptacle having a load deflector carried thereby which does not comprise a receptacle wall or a filter.

169 Having air lock:

This subclass is indented under subclass 168. Subject matter wherein the load passes through a chamber which is alternately communicated, through appropriate valving, with the conveyor* and the discharge environment.

- (1) Note. The chamber can be the receptacle itself.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 62+, for driven rotary air locks.

170 Having plural inputs:

This subclass is indented under subclass 168. Subject matter wherein the load is fed into the receptacle* from two or more distinct fluid current conveyors*.

171 Having filter:

This subclass is indented under subclass 168. Subject matter wherein the receptacle* is provided with means to remove load material from the conveying fluid at the outlet* comprising a member which is previous to the conveying fluid and impervious to load material.

SEE OR SEARCH CLASS:

55, Gas Separation, for a filter, per se.
210, Liquid Purification or Separation, subclasses 348+ for a filter, per se.

172 And means to clean filter:

This subclass is indented under subclass 171. Subject matter wherein means are provided to remove load material collected on or inside the filter.

SEE OR SEARCH CLASS:

55, Gas Separation, subclasses 301+ for filter cleaning.
210, Liquid Purification or Separation, subclasses 407+ for filter cleaning.

173 Cyclone separator:

This subclass is indented under subclass 168. Subject matter wherein a vessel is provided at the outlet* to remove particulate load material from the conveying fluid by accelerating the load material in a spiral path.

SEE OR SEARCH CLASS:

55, Gas Separation, subclasses 447+ for a cyclone separation, per se.

174 Conveyor outlet conduit extending upwardly inside receptacle:

This subclass is indented under subclass 168. Subject matter wherein the outlet* is formed by a conduit protruding interiorly of the receptacle* such that the load is projected upwardly inside the receptacle as it is discharged from the conduit.

175 And upstream pressure source:

This subclass is indented under subclass 168. Subject matter wherein conveying fluid is forced into the conveyor* at a point prior to the separating receptacle*.

176 Having terminal:

This subclass is indented under subclass 154. Subject matter wherein structure is provided at or adjacent to the outlet* for effecting discharge of load articles individually from the conveyor, or for accepting load articles as they are discharged individually from the conveyor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

110+, for a terminal which serves as both an inlet and an outlet.

177 With gate and means to open gate prior to article or carrier arrival:

This subclass is indented under subclass 176. Subject matter in which the terminal* is provided with a movable closure at the outlet* past which the load article moves as it exits the conveyor*, wherein means are provided to move the closure from the path of the article or carrier* as it approaches the closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

12+, for a gate which controls the flow of the conveying fluid and is operated in response to a sensed condition.
28+, for a gate at the outlet which controls the movement of the load and is operated in response to a sensed condition.

178 Serially arranged gates:

This subclass is indented under subclass 177. Subject matter wherein the terminal* is provided with a second movable closure subsequent to the first closure and defining a chamber therebetween.

179 Upward delivery:

This subclass is indented under subclass 176. Subject matter wherein the fluid current conveyor* includes a section of conduit just prior to the terminal* which transmits the article or carrier* vertically upward.

- (1) Note. The terminal* usually includes or is preceded by a guide or conduit in which the direction of movement of the article or carrier* is changed 180 degrees so that the article or carrier is assisted by gravity in discharging downwardly past a gate.

180 Discharge gate:

This subclass is indented under subclass 176. Subject matter in which the terminal* includes a movable closure past which an article or carrier* is discharged.

181 LOAD FLOW DIVERTER, DIVIDER, OR COMBINER:

This subclass is indented under the class definition. Subject matter wherein means are provided to either (a) selectively establish communication between a load path and one of a plurality of branched paths, or (b) simultaneously connect a load path with a plurality of paths, or vice versa.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 1+, for a load diverter combined with a fluid current conveyor having a plurality of outlets, or a load diverter which is controlled in response to destination information carried by the load.
- 117+, for a fluid current conveyor having a plurality of distinct inlets to a common load path.
- 155+, for a fluid current conveyor having a plurality of outlets.

SEE OR SEARCH CLASS:

- 111, Planting, subclass 175 for a flow divider head claimed in combination with a planting device.
- 122, Liquid Heaters and Vaporizers, subclasses 305+ for a flow divider or combiner claimed in combination with a liquid heater or vaporizer.

182 Movable conduit section:

This subclass is indented under subclass 181. Subject matter wherein an enclosed load path of limited length is provided which can assume various positions for selectively establishing communication between a load path and one of a plurality of branched paths.

183 Movable valve in conduit:

This subclass is indented under subclass 181. Subject matter wherein a load path is selectively placed in communication with one of a plurality of branched paths by an adjustable

closure member which can be positioned to block one of said branched paths.

184 CARRIER:

This subclass is indented under the class definition. Subject matter relating to an auxiliary device for use in a fluid current conveyor* comprising a container for carrying material or articles while being conveyed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 4+, for a carrier having means for controlling a load diverter.
- 37, for a carrier having a destination indicator.
- 111, for a captive carrier.

185 Wheeled:

This subclass is indented under subclass 184. Subject matter wherein the carrier* is provided with one or more rotatable annular or cylindrical members adapted for rotating contact with the wall of a conveying conduit.

SEE OR SEARCH CLASS:

- 105, Railway Rolling Stock, subclass 138 for a carrier having wheels which cooperate with a rail or guide.

186 Having side opening:

This subclass is indented under subclass 184. Subject matter wherein the carrier* is provided with an access opening in a surface that is generally parallel to the direction of its travel.

187 Having end opening:

This subclass is indented under subclass 184. Subject matter wherein the carrier* is provided with an access opening in a surface that is generally perpendicular to the direction of its travel.

188 With closure of end opening:

This subclass is indented under subclass 187. Subject matter wherein means are provided to selectively cover and uncover the access opening at the end of the carrier.

SEE OR SEARCH CLASS:

- 220, Receptacles, subclass 200 for closures for receptacles.

- 189 Removable:**
This subclass is indented under subclass 188. Subject matter wherein the closure is dissociated from the carrier to uncover the end opening therein.
- 190 With conduit engaging seal or bumper structure:**
This subclass is indented under subclass 184. Subject matter wherein the carrier* is provided with means protruding from its end or periphery adapted either to engage the walls of a conveying conduit to minimize loss of pressure across the carrier as the same travels through the conduit, or to guard against impact damage to the carrier* or other structure with which it comes into contact.
- 191 CONDUIT:**
This subclass is indented under the class definition. Subject matter relating to a pipe, duct, or channel for guiding the load as it travels through the fluid current conveyor*.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
86+, for a conduit having means for maintaining load material traveling there-through in suspension.
- SEE OR SEARCH CLASS:
104, Railways, subclasses 138.1+ for tubular ways; and subclasses 154 and 155+ for fluid current propulsion railways.
138, Pipes and Tubular conduits, appropriate subclasses for conduits in general.
- 192 With fluid valve or load spacer:**
This subclass is indented under subclass 191. Subject matter wherein the conduit is provided with either (a) means to regulate the flow of conveying fluid, or (b) means to ensure a predetermined distance between two or more load articles which are conveyed concurrently.
- 193 With wear protection means:**
This subclass is indented under subclass 191. Subject matter wherein means are provided to reduce the detrimental effect of contact between the load and conduit.
- SEE OR SEARCH CLASS:
55, Gas Separation, subclass 435 for wear liners or surface characteristics of deflectors.
- 194 Having fluid nozzle:**
This subclass is indented under subclass 191. Subject matter wherein means are provided to direct a stream of conveying fluid into the interior of the conduit.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
61, for a fluid nozzle at the inlet of a fluid current conveyor fed by a screw conveyor.
144, for a fluid nozzle at the inlet of a fluid current conveyor fed by a receptacle.
153, for a nozzle downstream of the inlet of a fluid current conveyor for inducing suction at the inlet.
- 195 Having changing cross section:**
This subclass is indented under subclass 191. Subject matter wherein the cross-sectional area of the conduit varies along its length.
- (1) Note. Telescoping conduits, per se, can be found here.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
116, for a telescoping intake conduit.
158, for a telescoping deflector at a conveyor outlet.
167, for a telescoping outlet conduit.
- 196 Flexible:**
This subclass is indented under subclass 191. Subject matter wherein the conduit either (a) is formed from a pliant material, or (b) is comprised of a plurality of flexibly connected rigid segments.
- 197 PROCESSES:**
This subclass is indented under the class definition. Miscellaneous methods and not provided for in the preceding subclasses.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

46+, for processes in which an additional substance is added to the load or conveying fluid.

198 MISCELLANEOUS:

This subclass is indented under the class definition. Apparatus which are not provided for in the preceding subclasses.

END