

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B65 CONVEYING; PACKING; STORING; HANDLING THIN OR FILAMENTARY MATERIAL

B65G TRANSPORT OR STORAGE DEVICES, e.g. CONVEYORS FOR LOADING OR TIPPING; SHOP CONVEYOR SYSTEMS; PNEUMATIC TUBE CONVEYORS
 ({preventing fire in special objects or places [A62C 3/00](#)}; transport or storage devices used in a particular handling or treatment of articles or materials, [see the relevant subclass](#), e.g. in metal-working [B21D 43/00](#), [B23Q 7/00](#), [B23Q 41/02](#); vehicle, railway, sea or aircraft aspects [B60 - B64](#); in packaging [B65B](#); handling thin or filamentary materials [B65H](#); hoisting, lifting, hauling, e.g. truck loaders [B66](#); handling liquids [B67](#); {transport or storage containers for preparing or distributing road building materials [E01C](#); construction or assembling of bulk storage containers employing civil engineering techniques in site or off the site [E04H 7/00](#)}; specially adapted to underground conditions in mines [E21F 13/00](#); storing or distributing gases or liquids [F17](#); in handling radioactive materials [G21C 19/00](#))

WARNING

The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

B65G33/28	covered by	B65G 33/265
B65G 47/10	covered by	B65G 1/1373
B65G 47/86	covered by	B65G 47/842 , B65G 47/847
B65G 49/07	covered by	H01L 21/677
B65G 69/32	covered by	B65G 69/28
B65G 69/34	covered by	B65G 69/28

Storing; Storage devices

1/00 Storing articles, individually or in orderly arrangement, in warehouses or magazines
 (conveyor combinations in warehouses, magazines, or workshops [B65G 37/00](#); stacking of articles [B65G 57/00](#); removing articles from stacks [B65G 59/00](#); loading machines [B65G 65/02](#); arrangements of articles for drying or baking in kilns or ovens [F26](#); [F27](#))

NOTE

group [B65G 1/0442](#) takes precedence over the other groups, except over [B65G 1/08](#)

1/02 . Storage devices (furniture, shop fittings, table equipment [A47B](#), [A47E](#), [A47G](#); mechanical garages [E04H](#); for data record cards in association with machines for making or sensing data [G06K](#); coin changers or sorters [G07D](#); coin-freed apparatus [G07F](#) {pallets [B65D 19/00](#)})

1/023 . . {Arrangements of article supporting rollers on racks}

1/026 . . {Racks equipped with a displaceable load carrying surface to facilitate loading or unloading}

1/04 . . mechanical

1/0407 . . . {using stacker cranes (constructional features of stacker cranes [B66F 9/06](#))}

1/0414 {provided with satellite cars adapted to travel in storage racks}

1/0421 {with control for stacker crane operations}

1/0428 {Transfer means for the stacker crane between the alleys}

1/0435 {with pulling or pushing means on either stacking crane or stacking area}

1/0442 . . . {for elongated articles (drill pipe racking [E21B 19/14](#))}

1/045 . . . {in a circular arrangement, e.g. towers}

1/0457 . . . {with suspended load carriers}

1/0464 . . . {with access from above}

1/0471 . . . {with access from beneath}

1/0478 . . . {for matrix-arrangements}

1/0485 . . . {Check-in, check-out devices}

1/0492 . . . {with cars adapted to travel in storage aisles}

1/06 . . . with means for presenting articles for removal at predetermined position or level ([B65G 1/12](#) takes precedence)

1/065 {with self propelled cars}

1/07 the upper article of a pile being always presented at the same predetermined level

- 1/08 . . . the articles being fed by gravity {[braking arrangements for roller-ways B65G 13/075](#); separating or stopping elements [B65G 47/88](#)}
- 1/10 . . . with relatively movable racks to facilitate insertion or removal of articles {(cabinets with means for moving compartments up and down [A47B 51/00](#); cabinet system, e.g. consisting of cabinets arranged in a row with means to open or close passages between adjacent cabinets [A47B 53/02](#))}
- 1/12 . . . with {separate} article supports or holders movable in a closed circuit to facilitate insertion or removal of articles {[the articles being books, documents, forms or the like](#)}
- 1/127 . . . the circuit being confined in a vertical plane
- 1/133 . . . the circuit being confined in a horizontal plane
- 1/137 . . . with arrangements or automatic control means for selecting which articles are to be removed (devices for feeding articles to conveyors from several groups of articles [B65G 47/04](#))
- 1/1371 . . . {with data records}
- 1/1373 . . . {for fulfilling orders in warehouses}
- 1/1375 . . . {the orders being assembled on a commissioning stacker-crane or truck}
- 1/1376 . . . {the orders being assembled on a commissioning conveyor}
- 1/1378 . . . {the orders being assembled on fixed commissioning areas remote from the storage areas}
- 1/14 . . Stack holders or separators
- 1/16 . . Special arrangements of articles in storage spaces
- 1/18 . . Articles inclined so as to be mutually self-supporting
- 1/20 . . Articles arranged in layers with spaces between articles
- 3/00 Storing bulk material or loose, i.e. disorderly, articles** (filling or emptying storage spaces or containers, spreading out or piling up bulk material or loose articles [B65G 65/28](#), [B65G 65/30](#), [B65G 69/04](#) {[B65G 63/00](#); storing agricultural or horticultural produce [A01F 25/00](#)})
- 3/02 . . in the open air ([B65G 3/04](#) takes precedence)
- 3/04 . . in bunkers, hoppers, or like containers
- 5/00 Storing fluids in natural or artificial cavities or chambers in the earth** (modification of mine passages or chambers for storage purposes, especially for fluids [E21F 17/16](#))
- NOTE**
When the cavity or chamber is lined documents are classified in [F17C 3/005](#)
- 5/005 . . {in porous layers}

Devices assisting manual conveyance of articles over short distances, e.g. in storage depots, warehouses or factories (chutes [B65G 11/00](#); roller-ways [B65G 13/00](#); luggage carriers [A45C 13/38](#); holders or carriers for hand articles or for use while travelling or camping [A45F 5/00](#); vehicles in general, axles, wheels [B60](#); air-cushion vehicles [B60V](#); handcarts, sledges, features of hand-propelled wheeled devices or pedestrian-controlled, power-driven vehicles equally applicable to handcarts [B62B](#); ship-moving devices [B63C](#), [E02C](#); containers, pallets [B65D](#); air-cushions as bearing elements [F16C 29/00](#))

7/00 Devices for moving or tilting heavy loads (for tilting and emptying barrels or casks [B65G 65/24](#))

- 7/02 . . Devices adapted to be interposed between loads and the ground or floor, e.g. crowbars with means for assisting conveyance of loads ([crowbars per se B66F 15/00](#))
- 7/04 . . Rollers
- 7/06 . . using fluid at high pressure supplied from an independent source to provide a cushion between load and ground {(conveying articles over a flat surface by jets located in the surface [B65G 51/00](#))}
- 7/08 . . for tilting the loads
- 7/10 . . for rolling cylindrical loads
- 7/12 . . Load carriers, e.g. hooks, slings, harness, gloves, modified for load carrying

9/00 Apparatus having suspended load carriers movable by hand or gravity (manually-operated endless-rope or chain conveyors [B65G 17/00](#); railway systems [B61B](#))

- 9/002 . . {Load-carriers, rollers therefor}
- 9/004 . . {Loading or unloading arrangements}
- 9/006 . . {Arresting, braking or escapement means}
- 9/008 . . {Rails or switches}

Chutes; Kinds or types of conveyors; Constructional features, details, or auxiliary devices peculiar to conveyors of particular types (feeding or discharging conveyors by devices incorporated in or operatively associated with conveyors [B65G 47/00](#); loading or unloading [B65G 65/00](#); escalators or moving walkways [B66B 21/00](#); drag-line scraper conveyors [E02F 3/46](#))

11/00 Chutes (used as storage devices [B65G 1/02](#), [B65D 88/26](#); for sports, games, or amusements [A63G 21/00](#); for refuse disposal in buildings [E04F 17/12](#))

- 11/02 . . of straight form
- 11/023 . . {for articles}
- 11/026 . . {for bulk}
- 11/04 . . for mail in buildings
- 11/06 . . of helical or spiral form
- 11/063 . . {for articles}
- 11/066 . . {for bulk}
- 11/08 . . with discontinuous guiding surfaces, e.g. arranged in zigzag or cascade formation
- 11/081 . . {for articles ([B65G 11/085](#) takes precedence)}
- 11/083 . . {for bulk ([B65G 11/085](#) takes precedence)}
- 11/085 . . {with zig-zag formations}
- 11/086 . . . {for articles}
- 11/088 . . . {for bulk}
- 11/10 . . flexible
- 11/103 . . {for articles}
- 11/106 . . {for bulk}

- 11/12 pivotable
- 11/123 {for articles}
- 11/126 {for bulk}
- 11/14 extensible, e.g. telescopic
- 11/143 {for articles}
- 11/146 {for bulk}
- 11/16 Interior surfaces; Linings
- 11/163 {for articles}
- 11/166 {for bulk}
- 11/18 Supports or mountings
- 11/183 {for articles}
- 11/186 {for bulk}
- 11/20 Auxiliary devices, e.g. for deflecting, controlling speed of, or agitating articles or solids
- 11/203 {for articles}
- 11/206 {for bulk}
- 13/00** **Roller-ways** (storage devices comprising roller-ways [B65G 1/02](#); endless-chain conveyors comprising load-supporting rollers [B65G 17/00](#); rollers, or arrangements thereof [B65G 39/00](#); feeding or discharging conveyors by devices incorporated in, or operatively associated with, conveyors [B65G 47/00](#), {e.g. by roller-ways as accumulating devices [B65G 47/261](#); } in metal-rolling equipment [B21B 39/00](#), [B21B 41/00](#))
 - 13/02 having driven rollers
 - 13/04 all rollers driven
 - 13/06 Roller driving means
 - 13/065 {with displacement of the roller}
 - 13/07 having endless driving elements
 - 13/071 with frictional engagement
 - 13/073 comprising free-wheel gearing
 - 13/075 Braking means
 - 13/08 of curved form; with branch-offs
 - 13/10 Switching arrangements
 - 13/11 Roller frames
 - 13/12 adjustable
- 15/00** **Conveyors having endless load-conveying surfaces, i.e. belts and like continuous members, to which tractive effort is transmitted by means other than endless driving elements of similar configuration** (having load-conveying surfaces formed by interconnected longitudinal links [B65G 17/06](#))
 - 15/005 {the surface being formed by one rope}
 - 15/02 for conveying in a circular arc
 - 15/04 the load being carried on the lower run of the endless surface
 - 15/06 with oppositely-moving parts of the endless surface located in the same plane and parallel to one another
 - 15/08 the load-carrying surface being formed by a concave or tubular belt, e.g. a belt forming a trough
 - 15/10 comprising two or more co-operating endless surfaces with parallel longitudinal axes, or a multiplicity of parallel elements, e.g. ropes defining an endless surface
 - 15/105 {the surface being formed by two or more ropes}
 - 15/12 with two or more endless belts
 - 15/14 the load being conveyed between the belts {[B65G 15/18](#), [B65G 15/20](#) take precedence}
 - 15/16 between an auxiliary belt and a main belt
- 15/18 the belts being sealed at their edges (endless-surface conveyors having a single belt with sealed edges [B65G 15/08](#))
- 15/20 arranged side-by-side, e.g. for conveyance of flat articles in vertical position (for conveying sheets or like thin flat articles [B65H](#))
- 15/22 comprising a series of co-operating units
- 15/24 in tandem
- 15/26 extensible, e.g. telescopic {[adjustment of length or configuration of load-carrier B65G 21/14](#)}
- 15/28 Conveyors with a load-conveying surface formed by a single flat belt, not otherwise provided for
- 15/30 Belts or like endless load-carriers (co-operating with rails or the like [B65G 21/22](#); with rollers [B65G 39/20](#); belts in general [F16G](#) {belt fastenings [F16G 3/00](#)})
- 15/32 made of rubber or plastics
- 15/34 with reinforcing layers, e.g. of fabric
- 15/36 the layers incorporating ropes, chains, or rolled steel sections
- 15/38 with flame-resistant layers, e.g. of asbestos, glass
- 15/40 troughed or tubular; formed with joints facilitating troughing
- 15/42 having ribs, ridges, or other surface projections
- 15/44 for impelling the loads
- 15/46 formed with guides
- 15/48 metallic
- 15/50 Endless load-carriers consisting of a series of parallel ropes or belt strips
- 15/52 interconnected by transverse slats
- 15/54 Endless load-carriers made of interwoven ropes or wires
- 15/56 with edge-protecting or reinforcing means
- 15/58 with means for holding or retaining the loads in fixed position, e.g. magnetic
- 15/60 Arrangements for supporting or guiding belts, e.g. by fluid jets (constructions of rollers or supports therefor [B65G 39/00](#) {[F16C 13/00](#)})
- 15/62 Guides for sliding belts
- 15/64 for automatically maintaining the position of the belts
- 17/00** **Conveyors having an endless traction element, e.g. a chain, transmitting movement to a continuous or substantially continuous load-carrying surface or to a series of individual load-carriers; Endless-chain conveyors in which the chains form the load-carrying surface** (railway systems, detachable load-carriers on rails [B61B](#); escalators or paternosters neither combined nor associated with loading or unloading apparatus [B66B 9/00](#))
 - 17/002 {comprising load carriers resting on the traction element}
 - 17/005 {comprising individual load carriers which are movably mounted ([B65G 17/16](#) takes precedence)}
 - 17/007 {for conveying the load on the lower run or on both upper and lower runs of the conveyor}
 - 17/02 comprising a load-carrying belt attached to or resting on the traction element
 - 17/04 the belt having loops forming load-receiving pockets

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| <p>17/06 . . . having a load-carrying surface formed by a series of interconnected, e.g. longitudinal, links, plates, or platforms</p> <p>17/061 . . {the load carrying surface being formed by profiles, rods, bars, rollers or the like attached to a single traction element (B65G 17/24 takes precedence)}</p> <p>17/062 . . . {the profiles, rods, bars, rollers or the like being interconnected by a mesh or grid-like structure}</p> <p>17/063 . . {the load carrying surface being formed by profiles, rods, bars, rollers or the like attached to more than one traction element (B65G 17/24 takes precedence)}</p> <p>17/064 . . . {the profiles, rods, bars, rollers or the like being interconnected by a mesh or grid-like structure}</p> <p>17/065 . . {the load carrying surface being formed by plates or platforms attached to a single traction element}</p> <p>17/066 . . . {specially adapted to follow a curved path (for individual load carriers B65G 17/22)}</p> <p>17/067 . . {the load carrying surface being formed by plates or platforms attached to more than one traction element}</p> <p>17/068 . . . {specially adapted to follow a curved path (for individual load carriers B65G 17/22)}</p> <p>17/08 . . the surface being formed by the traction element</p> <p>17/083 . . . {the surface being formed by profiles, rods, bars, rollers or the like}</p> <p>17/086 . . . {specially adapted to follow a curved path (for individual load carriers B65G 17/22)}</p> <p>17/10 . . the surface forming a longitudinal trough</p> <p>17/12 . . comprising a series of individual load-carriers fixed, or normally fixed, relative to traction element</p> <p>17/123 . . {arranged to keep the load-carriers horizontally during at least a part of the conveyor run}</p> <p>17/126 . . {Bucket elevators}</p> <p>17/14 . . with two spaced connections to traction element</p> <p>17/16 . . comprising individual load-carriers which are pivotally mounted, e.g. for free-swinging movement (guides inverting or tilting load-carriers for emptying {B65G 47/38; B65G 17/20 takes precedence})</p> <p>17/18 . . and move in contact with a guiding surface</p> <p>17/20 . . comprising load-carriers suspended from overhead traction chains</p> <p>17/22 . . with oppositely-moving parts of the conveyor located in a common plane {and being formed by individual load carriers only}</p> <p>17/24 . . comprising a series of rollers which are moved {, e.g. over a supporting surface, by the traction element to effect conveyance of loads or load-carriers}</p> <p>17/26 . . comprising a series of co-operating units, e.g. interconnected by pivots</p> <p>17/28 . . extensible, e.g. telescopic {(adjustment of length or configuration of traction element B65G 21/14)}</p> <p>17/30 . . Details; Auxiliary devices (belts B65G 15/30; framework B65G 21/00)</p> <p>17/32 . . Individual load-carriers (control B65G 17/48)</p> <p>17/323 . . . {Grippers, e.g. suction or magnetic}</p> <p>17/326 . . . {Clamps, constituted by articulated chain links}</p> | <p>17/34 . . . having flat surfaces, e.g. platforms, grids, forks</p> <p>17/345 {the surfaces being equipped with a conveyor}</p> <p>17/36 . . . having concave surfaces, e.g. buckets</p> <p>17/365 {having open bottom buckets}</p> <p>17/38 . . Chains or like traction elements (chains in general F16G); Connections between traction elements and load carriers</p> <p>17/385 . . . {adapted to follow three-dimensionally curved paths}</p> <p>17/40 . . . Chains acting as load-carriers</p> <p>17/42 . . . Attaching load carriers to traction elements</p> <p>17/44 by means excluding relative movements</p> <p>17/46 . . Means for holding or retaining the loads in fixed position on the load-carriers, e.g. magnetic</p> <p>17/48 . . Controlling attitudes of load-carriers during movement ({B65G 17/18 takes precedence;} guides B65G 21/20; inverting or tilting load carriers to discharge contents B65G 47/38)</p> <p>17/485 . . . {the load carriers being suspended}</p> <p>19/00 Conveyors comprising an impeller or a series of impellers carried by an endless traction element and arranged to move articles or materials over a supporting surface or underlying material, e.g. endless scraper conveyors</p> <p>19/02 . . for articles, e.g. for containers</p> <p>19/025 . . {for suspended articles}</p> <p>19/04 . . for moving bulk material in open troughs or channels</p> <p>19/06 . . the impellers being scrapers similar in size and shape to the cross-section of the trough or channel</p> <p>19/08 . . . and attached to a single belt, rope or chain</p> <p>19/10 . . . and attached to a pair of belts, ropes or chains</p> <p>19/12 . . the impellers being plates having an area substantially smaller than that of the trough of channel cross-section</p> <p>19/14 . . for moving bulk material in closed conduits, e.g. tubes</p> <p>19/16 . . the impellers being elements having an area substantially smaller than that of the conduit cross-section</p> <p>19/165 . . . {the impellers being endless helical springs}</p> <p>19/18 . . Details</p> <p>19/185 . . {for article conveyors, e.g. for container conveyors (B65G 19/20, B65G 19/22, B65G 19/28 take precedence)}</p> <p>19/20 . . Traction chains, ropes, or cables</p> <p>19/205 . . . {for article conveyors, e.g. for container conveyors}</p> <p>19/22 . . Impellers, e.g. push-plates, scrapers; Guiding means therefor</p> <p>19/225 . . . {for article conveyors, e.g. for container conveyors (B65G 19/24 takes precedence)}</p> <p>19/24 . . . Attachment of impellers to traction element</p> <p>19/245 {for article conveyors, e.g. for container conveyors (B65G 19/26 takes precedence)}</p> <p>19/26 pivotal</p> <p>19/265 {for article conveyors, e.g. for container conveyors}</p> <p>19/28 . . Troughs, channels, or conduits</p> <p>19/282 . . . {for article conveyors, e.g. for container conveyors (B65G 19/30 takes precedence)}</p> |
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| <p>19/285 . . . {with detachable or replaceable parts, e.g. replaceable wear channels (B65G 19/282 takes precedence)}</p> <p>19/287 . . . {Coupling means for trough sections (B65G 19/282 takes precedence)}</p> <p>19/30 . . . with supporting surface modified to facilitate movement of loads, e.g. friction reducing devices</p> <p>19/303 {for article conveyors, e.g. for container conveyors}</p> <p>19/306 {the supporting surface being provided with rollers}</p> <p>21/00 Supporting or protective framework or housings for endless load-carriers or traction elements of belt or chain conveyors (for load-carriers in jiggling conveyors B65G 27/08 ; supporting framework or bases for conveyors as a whole B65G 41/00)</p> <p>21/005 . {for conveyors floating on liquids}</p> <p>21/02 . consisting essentially of struts, ties, or like structural elements</p> <p>21/04 . . the ties being formed by longitudinal cables or ropes</p> <p>21/06 . . constructed to facilitate rapid assembly or dismantling</p> <p>21/08 . Protective roofs or arch supports therefor</p> <p>21/10 . movable, or having interchangeable or relatively movable parts; Devices for moving framework or parts thereof</p> <p>21/105 . . {having demountable driving or return heads}</p> <p>21/12 . . to allow adjustment of position of load-carrier or traction element as a whole</p> <p>21/14 . . to allow adjustment of length or configuration of load-carrier or traction element (varying speed of conveyance by adjusting configuration of load-carrier B65G 23/00; tensioning arrangements for belt or chain B65G 23/44)</p> <p>21/16 . for conveyors having endless load-carriers movable in curved paths</p> <p>21/18 . . in three-dimensionally curved paths</p> <p>21/20 . Means incorporated in, or attached to, framework or housings for guiding {or retaining} load-carriers, traction elements or loads supported on moving surfaces (arrangements for supporting belts B65G 15/60; details of chain conveyors B65G 17/30; } rollers or roller arrangements B65G 39/00; F16G)</p> <p>21/2009 . . {Magnetic retaining means}</p> <p>21/2018 . . . {for retaining the load on the load-carrying surface, (retaining loads by magnetic load-carriers, e.g. belts B65G 15/58, chains B65G 17/46; individual magnetic grippers B65G 17/323)}</p> <p>21/2027 . . {Suction retaining means}</p> <p>21/2036 . . . {for retaining the load on the load-carrying surface (individual suction grippers B65G 17/323)}</p> <p>21/2045 . . {Mechanical means for guiding or retaining the load on the load-carrying surface}</p> <p>21/2054 . . . {comprising elements movable in the direction of load-transport}</p> <p>21/2063 . . . {comprising elements not movable in the direction of load-transport}</p> <p>21/2072 {Lateral guidance means}</p> <p>21/2081 {for bulk material, e.g. skirts}</p> | <p>21/209 {for augmenting or creating a pressure force between the load and the load-carrying surface}</p> <p>21/22 . . Rails or the like engaging sliding elements or rollers attached to load-carriers or traction elements</p> <p>23/00 Driving gear for endless conveyors (control devices for conveyors in general B65G 43/00); Belt or chain tensioning arrangements</p> <p>23/02 . Belt- or chain-engaging elements</p> <p>23/04 . . Drums, rollers, or wheels (B65G 23/18 takes precedence)</p> <p>23/06 . . . with projections engaging abutments on belts or chains, e.g. sprocket wheels</p> <p>23/08 . . . with self-contained driving mechanisms, e.g. motors and associated gearing</p> <p>23/10 . . . arranged intermediate the ends of the conveyors</p> <p>23/12 . . . Arrangements of co-operating drums or rollers to augment tractive effort applied to the belts</p> <p>23/14 . . Endless driving elements extending parallel to belt or chain (B65G 23/18 takes precedence)</p> <p>23/16 . . . with dogs engaging abutments on belts or chains</p> <p>23/18 . . Suction or magnetic elements</p> <p>23/19 . . . Suction elements</p> <p>23/20 . . Screws</p> <p>23/22 . Arrangements or mountings of driving motors (B65G 23/08 takes precedence)</p> <p>23/23 . . of electric linear motors</p> <p>23/24 . Gearing between driving motor and belt- or chain-engaging elements (contained in drums, rollers or wheels B65G 23/08)</p> <p>23/26 . . Applications of clutches or brakes</p> <p>23/28 . . Arrangements for equalising the drive to several elements</p> <p>23/30 . . Variable-speed gearing</p> <p>23/32 . for effecting drive at two or more points spaced along the length of the conveyors</p> <p>23/34 . . comprising a single motor coupled to spaced driving elements</p> <p>23/36 . . comprising two or more driving motors each coupled to a separate driving element, e.g. at either end of the conveyors</p> <p>23/38 . for effecting intermittent movement of belts or chains</p> <p>23/40 . . Applications of pawl and ratchet mechanisms or Geneva wheels</p> <p>23/42 . . Reciprocating members engaging successive abutments on belts or chains</p> <p>23/44 . Belt or chain tensioning arrangements</p> <p>25/00 Conveyors comprising a cyclically-moving, e.g. reciprocating, carrier or impeller which is disengaged from the load during the return part of its movement (jiggling B65G 27/00)</p> <p>25/02 . the carrier or impeller having different forward and return paths of movement, e.g. walking beam conveyors</p> <p>25/04 . the carrier or impeller having identical forward and return paths of movement, e.g. reciprocating conveyors</p> <p>25/06 . . having carriers, e.g. belts</p> <p>25/065 . . . {Reciprocating floor conveyors}</p> |
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25/08	. . having impellers, e.g. pushers	33/04	. . conveyed between a single screw and guiding means
25/10	. . . with impeller pivotally mounted on a reciprocating bar	33/06	. . conveyed and guided by parallel screws
25/12	. . . with impeller fixed to a reciprocating bar and the bar being rotated about its longitudinal axis on its return stroke	33/08	. for fluent solid materials
		33/10	. . with non-enclosed screws
		33/12	. . with screws formed by straight tubes or drums having internal threads, or by spiral or helical tubes
27/00	Jigging conveyors (jigs for wet separation B03B ; generating or transmitting mechanical vibrations B06 ; jiggers for screening, sifting or sorting B07B 1/28)	33/14	. . comprising a screw or screws enclosed in a tubular housing
27/02	. comprising helical or spiral channels or conduits for elevation of materials (helical or spiral chutes in general B65G 11/06 ; {use of such conveyors for arranging or orientating articles during feeding B65G 47/1421 })	33/16	. . . with flexible screws operating in flexible tubes
27/04	. Load carriers other than helical or spiral channels or conduits	33/18	. . . with multiple screws in parallel arrangements {, e.g. concentric}
27/06	. . Joints connecting load-carrier sections	33/20	. . . the housing being rotatable relative to the screw
27/08	. Supports or mountings for load-carriers, e.g. framework, bases, spring arrangements {(spring arrangements as jigging movement transmitting units B65G 27/10)}	33/22	. . . with means for retarding material flow at the delivery end of the housing
27/10	. Applications of devices for generating or transmitting jigging movements	33/24	. Details
27/12	. . of shaking devices, i.e. devices for producing movements of low frequency and large amplitude	33/26	. . Screws (as gearing elements F16H 25/20)
27/14	. . . hydraulic	33/265	. . . {with a continuous helical surface (flexible screws B65G 33/16)}
27/16	. . of vibrators, i.e. devices for producing movements of high frequency and small amplitude	33/30	. . . with a discontinuous helical surface
27/18	. . . Mechanical devices {(B65G 27/26 takes precedence)}	33/32	. . Adaptations of bearings or couplings for supporting and connecting screws (B65G 33/16 takes precedence)
27/20	. . . . rotating unbalanced masses	33/34	. . Applications of driving gear
27/22	. . . Hydraulic or pneumatic devices	33/36	. . . for rotating housing and screw at different speeds
27/24	. . . Electromagnetic devices	33/38	. . . for effecting simultaneous rotation and reciprocation of screw
27/26	. . . with elastic coupling between vibrator and load carrier	35/00	Kinds of mechanical conveyors not otherwise provided for (railway systems B61B)
27/28	. . with provision for dynamic balancing	35/005	. {with peristaltic propulsion along a flexible tube}
27/30	. . . by means of an oppositely-moving mass, e.g. a second conveyor	35/02	. comprising an endless traction element, e.g. a belt, arranged to roll cylindrical articles over a supporting surface
27/32	. . with means for controlling direction, frequency or amplitude of vibration or shaking movement	35/04	. comprising a flexible load carrier, e.g. a belt, which is wound up at one end and paid out at the other (reciprocating belt conveyors B65G 25/06)
27/34	. comprising a series of co-operating units	35/06	. comprising a load-carrier moving along a path, e.g. a closed path, and adapted to be engaged by any one of a series of traction elements spaced along the path
29/00	Rotary conveyors, e.g. rotating discs, arms, starwheels, cones (mechanical projectors B65G 31/00 ; screw or rotary spiral conveyors B65G 33/00 ; {turntables as feeding, transfer or discharging devices B65G 47/80 ; starwheels as feeding, transfer or discharging devices B65G 47/84 })	35/063	. . {the traction element being a rotating bar or tube}
29/02	. for inclined or vertical transit (B65G 15/00 , B65G 17/00 take precedence)	35/066	. . . {the bar or the tube being provided with a helical or annular channel}
31/00	Mechanical projectors for articles or solid materials (distributors for fertilisers A01C ; moulding machines B22C ; sandblasting devices B24C ; projectors for applying plaster to buildings E04F 21/00)	35/08	. comprising trains of unconnected load-carriers, e.g. belt sections, movable in a path, e.g. a closed path, adapted to contact each other and to be propelled by means arranged to engage each load-carrier in turn
31/02	. comprising belts	37/00	Combinations of mechanical conveyors of the same kind, or of different kinds, of interest apart from their application in particular machines or use in particular manufacturing processes (in "live" storage devices B65G 1/04; {series of co-operating belt conveyor units B65G 15/22; series of co-operating chain conveyor units B65G 17/26; sequence control of combined conveyors B65G 43/10}; specially adapted for handling radioactive materials G21)
31/04	. comprising discs, drums, or like rotary impellers		
33/00	Screw or rotary spiral conveyors (screws for extruding, compressing, kneading, mixing, pumping or other special operations, see the relevant classes)	37/005	. {comprising two or more co-operating conveying elements with parallel longitudinal axes (the conveying elements being endless surfaces B65G 15/10)}
33/02	. for articles		

37/02	<ul style="list-style-type: none">Flow-sheets for conveyor combinations in warehouses, magazines or workshops	B65G 2811/0673 B65G 2812/02099 - B65G 2812/02108
Common features or details of, or auxiliary devices applicable to, conveyors of different kinds or types; Feeding or discharging devices incorporated in, or operatively associated with, conveyors		
39/00	Rollers, e.g. drive rollers, or arrangements thereof incorporated in roller-ways or other types of mechanical conveyors (driving gear for rollers of roller-ways B65G 13/06 ; drive rollers of endless conveyors B65G 23/04 ; arrangement of rollers in metal-rolling equipment B21B 39/10 ; friction members F16H 55/32)	
39/02	<ul style="list-style-type: none">Adaptations of individual rollers and supports therefor	43/02 <ul style="list-style-type: none">detecting dangerous physical condition of load carriers, e.g. for interrupting the drive in the event of overheating
39/025	<ul style="list-style-type: none"><ul style="list-style-type: none">{having spherical roller elements}	43/04 <ul style="list-style-type: none">detecting slip between driving element and load-carrier, e.g. for interrupting the drive {(B65G 43/02 takes precedence)}
39/04	<ul style="list-style-type: none"><ul style="list-style-type: none">the rollers comprising a number of roller forming elements mounted on a single axle	43/06 <ul style="list-style-type: none">interrupting the drive in case of driving element breakage; Braking or stopping loose load-carriers
39/06	<ul style="list-style-type: none"><ul style="list-style-type: none">the roller sleeves being shock-absorbing, e.g. formed by helically-wound wires	43/08 <ul style="list-style-type: none">Control devices operated by article or material being fed, conveyed or discharged {(and controlling the discharging devices B65G 47/42)}
39/07	<ul style="list-style-type: none"><ul style="list-style-type: none">Other adaptations of sleeves	43/10 <ul style="list-style-type: none">Sequence control of conveyors operating in combination
39/071	<ul style="list-style-type: none"><ul style="list-style-type: none">for aligning belts or sheets	45/00 Lubricating, cleaning, or clearing devices
39/073	<ul style="list-style-type: none"><ul style="list-style-type: none">for cleaning belts	45/005 <ul style="list-style-type: none">{Cleaning conveyor screws}
39/08	<ul style="list-style-type: none"><ul style="list-style-type: none">the rollers being magnetic (in magnetic belt separators B03C 1/00)	45/02 <ul style="list-style-type: none">Lubricating devices
39/09	<ul style="list-style-type: none"><ul style="list-style-type: none">Arrangements of bearing or sealing means	45/04 <ul style="list-style-type: none"><ul style="list-style-type: none">for rollers
39/10	<ul style="list-style-type: none"><ul style="list-style-type: none">Arrangements of rollers (on a single axle B65G 39/04)	45/06 <ul style="list-style-type: none"><ul style="list-style-type: none">forming belt troughing structure
39/12	<ul style="list-style-type: none"><ul style="list-style-type: none">mounted on framework	45/08 <ul style="list-style-type: none"><ul style="list-style-type: none">for chains
39/125	<ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{for selectively adjusting troughing of the conveying belt}	45/10 <ul style="list-style-type: none">Cleaning devices (adaptations of roller sleeves for cleaning belts B65G 39/073)
39/14	<ul style="list-style-type: none"><ul style="list-style-type: none">Spring-supported sets, e.g. permitting troughing of a load-carrying belt	45/105 <ul style="list-style-type: none"><ul style="list-style-type: none">{comprising vibrating means}
39/145	<ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{attached to ties formed by longitudinal cables or ropes}	45/12 <ul style="list-style-type: none"><ul style="list-style-type: none">comprising scrapers
39/16	<ul style="list-style-type: none"><ul style="list-style-type: none">for aligning belts or chains (for aligning tapes or webs B65H)	45/14 <ul style="list-style-type: none"><ul style="list-style-type: none">Moving scrapers
39/18	<ul style="list-style-type: none"><ul style="list-style-type: none">for guiding loads	45/16 <ul style="list-style-type: none"><ul style="list-style-type: none">with scraper biasing means
39/20	<ul style="list-style-type: none"><ul style="list-style-type: none">attached to moving belts or chains (belts B65G 15/30; chains B65G 17/38)	45/18 <ul style="list-style-type: none"><ul style="list-style-type: none">comprising brushes
41/00	Supporting frames or bases for conveyors as a whole, e.g. transportable conveyor frames	45/20 <ul style="list-style-type: none"><ul style="list-style-type: none">comprising screws
41/001	<ul style="list-style-type: none">{with the conveyor adjustably mounted on the supporting frame or base}	45/22 <ul style="list-style-type: none"><ul style="list-style-type: none">comprising fluid applying means
41/002	<ul style="list-style-type: none"><ul style="list-style-type: none">{Pivotably mounted}	45/24 <ul style="list-style-type: none"><ul style="list-style-type: none">comprising plural diverse cleaning devices
41/003	<ul style="list-style-type: none"><ul style="list-style-type: none">{mounted for linear movement only}	45/26 <ul style="list-style-type: none"><ul style="list-style-type: none">for gathering residue after cleaning
41/005	<ul style="list-style-type: none"><ul style="list-style-type: none">{mounted for both pivotal and linear movement}	47/00 Article or material handling devices associated with conveyors; Methods employing such devices (for sorting, e.g. postal B07C)
41/006	<ul style="list-style-type: none">{with the conveyor not adjustably mounted on the supporting frame or base}	47/02 <ul style="list-style-type: none">Devices for feeding articles or materials to conveyors
41/007	<ul style="list-style-type: none">{Means for moving conveyor frames and control arrangements therefor (B65G 41/02 takes precedence)}	47/04 <ul style="list-style-type: none"><ul style="list-style-type: none">for feeding articles
41/008	<ul style="list-style-type: none"><ul style="list-style-type: none">{frames mounted on wheels or caterpillar (for movement on rail tracks B65G 41/02)}	47/06 <ul style="list-style-type: none"><ul style="list-style-type: none">from a single group of articles arranged in orderly pattern, e.g. workpieces in magazines (de-stacking devices B65G 59/00; picking-up flat workpieces B65H)
41/02	<ul style="list-style-type: none">Frames mounted on wheels for movement on rail tracks	47/08 <ul style="list-style-type: none"><ul style="list-style-type: none">spacing or grouping the articles during feeding (during transit by conveyors B65G 47/26)
43/00	Control, e.g. safety, warning, fault-correcting, devices (for elevators, escalators or moving walkways B66B; in general F16P, G08B)	47/082 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{grouping articles in rows}
NOTE		47/084 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{grouping articles in a predetermined 2-dimensional pattern}
in this group the following indexing codes are used:		47/086 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{cubiform articles}
		47/088 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{cylindrical articles}
		47/12 <ul style="list-style-type: none"><ul style="list-style-type: none">from disorderly-arranged article piles or from loose assemblages of articles
		47/14 <ul style="list-style-type: none"><ul style="list-style-type: none">arranging or orientating the articles by mechanical or pneumatic means during feeding (during transit by conveyor B65G 47/24, B65G 47/26)
		47/1407 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{the articles being fed from a container, e.g. a bowl}
		47/1414 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{by means of movement of at least the whole wall of the container}
		47/1421 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{Vibratory movement}
		47/1428 <ul style="list-style-type: none"><ul style="list-style-type: none"><ul style="list-style-type: none">{rotating movement}

- | | | | |
|---------|--|---------|---|
| 47/1435 | {using the centrifugal effect to arrange or orientate the articles} | 47/34 | . Devices for discharging articles or materials from conveyors (B65G 47/256 takes precedence ; sorting in general B07) |
| 47/1442 | {by means of movement of the bottom or a part of the wall of the container (devices using suction or magnetic forces B65G 47/1485)} | 47/36 | . . by detaching suspended articles |
| 47/145 | {Jigging or reciprocating movement} | 47/38 | . . by dumping, tripping, or releasing load carriers (by flexing or tilting travelling structures B65G 47/94) |
| 47/1457 | {Rotating movement in the plane of the rotating part} | 47/40 | . . . by tilting conveyor buckets |
| 47/1464 | {using the centrifugal effect to arrange or orientate the articles} | 47/42 | . . operated by article or material being conveyed and discharged {(B65G 47/46 takes precedence)} |
| 47/1471 | {Movement in one direction, substantially outwards} | 47/44 | . . Arrangements or applications of hoppers or chutes |
| 47/1478 | {by means of pick-up devices, the container remaining immobile} | 47/46 | . . and distributing, e.g. automatically, to desired points {(pivotable chutes B65G 11/12) ; in tube mail systems B65G 51/36 ; postal or like sorting B07C ; in railway operations B61L ; handling sheets or thin flat articles B65H)} |
| 47/1485 | {using suction or magnetic forces} | 47/48 | . . . according to bodily destination marks on either articles or load carrier (marking data records G06K) |
| 47/1492 | {the articles being fed from a feeding conveyor} | 47/482 | {using exclusively mechanical transmitting means between destination marks and switching means} |
| 47/16 | . . for feeding materials in bulk | 47/485 | {using electric or electronic transmitting means between destination marks and switching means} |
| 47/18 | . . . Arrangements or applications of hoppers or chutes | 47/487 | {the destination marks being mechanically detected} |
| 47/19 | having means for controlling material flow, e.g. to prevent overloading (controlling feed or discharge by weighing a continuous stream of material G01G 11/08) | 47/49 | without bodily contact between article or load carrier and automatic control device {, e.g. the destination marks being electrically or electronically detected} |
| 47/20 | the hoppers or chutes being movable | 47/493 | {by use of light responsive means} |
| 47/22 | . Devices influencing the relative position or the attitude of articles during transit by conveyors (during feeding B65G 47/14) | 47/496 | {by use of magnetic responsive means} |
| 47/24 | . . orientating the articles | 47/50 | . . . according to destination signals stored in separate systems |
| 47/244 | . . . by turning them about an axis substantially perpendicular to the conveying plane | 47/503 | {the system comprising endless moving means} |
| 47/2445 | {by means of at least two co-operating endless conveying elements} | 47/506 | {the system comprising a shift-register} |
| 47/248 | . . . by turning over or inverting them (B65G 47/244 takes precedence) | 47/51 | . . . according to unprogrammed signals, e.g. influenced by supply situation at destination (volume, flow or liquid level meters G01F ; scales or weighing machines G01G ; remote controls G05G) |
| 47/252 | about an axis substantially perpendicular to the conveying direction | 47/5104 | {for articles} |
| 47/256 | . . . removing incorrectly orientated articles | 47/5109 | {first In - First Out systems: FIFO} |
| 47/26 | . . arranging the articles, e.g. varying spacing between individual articles (stacking or destacking {during transit B65G 57/32, B65G 59/12}) | 47/5113 | {using endless conveyors (B65G 47/5145 takes precedence)} |
| 47/261 | . . . {Accumulating articles} | 47/5118 | {with variable accumulation capacity} |
| 47/263 | {the conveyor drive is taken from a longitudinally extending shaft} | 47/5122 | {by displacement of the conveyor-guiding means, e.g. of the loose pulley-type (B65G 47/5127 takes precedence)} |
| 47/265 | {with one or more load advancing units travelling along the entire length of the accumulation line} | 47/5127 | {by relative displacement between conveyor and input or output} |
| 47/266 | {by means of a series of pivotable stop elements} | 47/5131 | {by relative displacement between conveyors or conveyor parts and bridging means therebetween} |
| 47/268 | {by means of belt or chain conveyor} | 47/5136 | {using rotary conveyors} |
| 47/28 | . . . during transit by a single conveyor {(B65G 47/261 takes precedence)} | 47/514 | {using stacking and/or destacking arrangements or stacks of articles or article carriers} |
| 47/29 | by temporarily stopping movement {(stopping elements B65G 47/88)} | 47/5145 | {with recirculation means} |
| 47/295 | {by means of at least two stopping elements} | | |
| 47/30 | . . . during transit by a series of conveyors {(B65G 47/261 takes precedence)} | | |
| 47/31 | by varying the relative speeds of the conveyors forming the series | | |
| 47/32 | Applications of transfer devices {(such devices per se B65G 47/74)} | | |

- 47/515 {First In-Last Out systems [FILO]; Last In-First Out systems [LIFO]}
- 47/5154 {using endless conveyors [\(B65G 47/5186 takes precedence\)](#)}
- 47/5159 {with variable accumulation capacity}
- 47/5163 {by displacement of conveyor-guiding means, e.g. of the loose pulley type [\(B65G 47/5168 takes precedence\)](#)}
- 47/5168 {by relative displacement between conveyor and conveyor in- or output means}
- 47/5172 {by relative displacement between conveyors or conveyor parts and bridging means therebetween}
- 47/5177 {using rotary conveyor(s)}
- 47/5181 {using stacking or destacking arrangements or stacks of articles or article-carriers}
- 47/5186 {with recirculation means}
- 47/519 {collecting tables or bins as end-station}
- 47/5195 {for materials in bulk}
- 47/52 Devices for transferring articles or materials between conveyors {or sections of one conveyor}, i.e. discharging and feeding devices [\(loading or unloading by means not incorporated in, or not operatively associated with, conveyors B65G 65/00; transfer of workpieces during metal rolling B21B 41/00\)](#)
- 47/525 {using fluid jets}
- 47/53 between conveyors which cross one another
- 47/54 at least one of which is a roller-way
- 47/56 to or from inclined or vertical conveyor sections
- 47/57 for articles
- 47/58 for materials in bulk
- 47/60 to or from conveyors of the suspended, e.g. trolley, type
- 47/61 for articles
- 47/62 for materials in bulk
- 47/64 Switching conveyors
- 47/641 {by a linear displacement of the switching conveyor}
- 47/642 {in a horizontal plane}
- 47/643 {in a vertical plane}
- 47/644 {by a pivoting displacement of the switching conveyor}
- 47/645 {about a horizontal axis}
- 47/646 {the axis being parallel to the conveying direction}
- 47/647 {the axis being perpendicular to the conveying direction}
- 47/648 {about a vertical axis}
- 47/66 Fixed platforms or combs, e.g. bridges between conveyors
- 47/68 adapted to receive articles arriving in one layer from one conveyor {lane} and to transfer them in individual layers to more than one conveyor {lane or to one broader conveyor lane}, or *vice versa*, e.g. combining the flows of articles conveyed by more than one conveyor
- 47/681 {from distinct, separate conveyor lanes}
- 47/682 {from a single conveyor lane consisting of one conveyor or several adjacent conveyors}
- 47/683 {with tilting of at least part of the conveyor to make use of gravity}
- 47/684 {with recirculation of articles forming a buffer}
- 2047/685 {Devices for preventing jamming in converging flows}
- 2047/686 {Lane boundaries which reciprocate or oscillate, e.g. vibrating boundaries}
- 2047/687 {Lane boundaries which comprise rotatable elements, e.g. discs, cylinders, endless belts}
- 2047/688 {Lane boundaries which are compliant}
- 2047/689 {Lane boundaries which are of such shape that tight arrays of articles are broken up or prevented from forming}
- 47/69 the articles being accumulated temporarily [{\(accumulating articles during transit B65G 47/261\)}](#)
- 47/70 with precedence controls among incoming article flows
- 47/71 the articles being discharged {or distributed} to several {distinct separate} conveyors {or to a broader conveyor lane}
- 47/715 {to a broader conveyor lane}
- 47/72 transferring materials in bulk from one conveyor to several conveyors, or *vice versa*
- 47/74 Feeding, transfer, or discharging devices of particular kinds or types
- 47/76 Fixed or adjustable ploughs or transverse scrapers
- 47/763 {Fixed ploughs or transverse scrapers}
- 47/766 {Adjustable ploughs or transverse scrapers}
- 47/78 Troughs having discharge openings and closures [{\(in air-slides B65G 53/20\)}](#)
- 47/80 Turntables carrying articles or materials to be transferred, e.g. combined with ploughs or scrapers
- 47/82 Rotary or reciprocating members for direct action on articles or materials, e.g. pushers, rakes, shovels [{\(means for pushing glass articles onto a conveyor C03B 9/453\)}](#)
- 47/84 Star-shaped wheels or devices having endless travelling belts or chains, the wheels or devices being equipped with article-engaging elements [{\(not used, see B65G 47/841, B65G 47/846\)}](#)
- 47/841 {Devices having endless travelling belts or chains equipped with article-engaging elements}
- 47/842 {the article-engaging elements being grippers}
- 47/843 {the article-engaging elements being suction or magnetic means}
- 47/844 {the article-engaging elements being pushers transversally movable on the supporting surface, e.g. pusher-shoes}
- 47/845 {the article engaging elements being pushers moving in parallel and independently from the supporting conveyor}
- 47/846 {Star-shaped wheels or wheels equipped with article-engaging elements}
- 47/847 {the article-engaging elements being grippers}
- 47/848 {the article-engaging elements being suction or magnetic means}
- 47/88 Separating or stopping elements, e.g. fingers [\(attached to star-shaped wheels B65G 47/84\)](#)

Feeding or...

- 47/8807 . . . {with one stop}
- 47/8815 {Reciprocating stop, moving up or down in the path of the article}
- 47/8823 {Pivoting stop, swinging in or out of the path of the article}
- 47/883 {Fixed stop}
- 47/8838 {with a linearly movable pusher element which lifts or releases the article}
- 47/8846 {with a pivoting pusher element which lifts or releases the article}
- 47/8853 {with conveyors, e.g. pivoting or rotating, to transfer the article}
- 47/8861 {Stop in the form of a clamp on one or both sides of the article}
- 47/8869 {stopping or lifting all articles from a conveyor}
- 47/8876 . . . {with at least two stops acting as gates}
- 47/8884 {Stops acting asynchronously, e.g. one stop open, next one closed or the opposite}
- 47/8892 {Stops acting independently of each other}
- 47/90 . . Devices for picking-up and depositing articles or materials
- 47/901 . . . {provided with drive systems with rectilinear movements only}
- 47/902 . . . {provided with drive systems incorporating rotary and rectilinear movements}
- 47/904 . . . {provided with rotary movements only}
- 47/905 . . . {Control arrangements}
- 47/907 . . . {with at least two picking-up heads}
- 47/908 . . . {with inflatable picking-up means ([inflatable gripping members on load engaging elements for cranes B66C 1/46](#))}
- 47/91 . . . incorporating pneumatic, e.g. suction, grippers
- 47/911 {with air blasts producing partial vacuum}
- 47/912 {provided with drive systems with rectilinear movements only}
- 47/914 {provided with drive systems incorporating rotary and rectilinear movements}
- 47/915 {provided with drive systems with rotary movements only}
- 47/917 {control arrangements}
- 47/918 {with at least two picking-up heads}
- 47/92 . . . incorporating electrostatic or magnetic grippers
- 47/94 . . Devices for flexing or tilting travelling structures; Throw-off carriages
- 47/945 . . . {tilting endless surfaces, e.g. belts}
- 47/95 . . . adapted for longitudinal delivery
- 47/96 . . . Devices for tilting links or platform ([releasing load-carriers B65G 47/38](#))}
- 47/962 {tilting about an axis substantially parallel to the conveying direction}
- 47/965 {tilting about a sided-axis, i.e. the axis is not located near the center-line of the load-carrier}
- 47/967 {tilting about an axis perpendicular to the conveying direction}
- 49/00** **Conveying systems characterised by their application for specified purposes not otherwise provided for ([for conveying sheet material B65H](#))**
- 49/02 . . for conveying workpieces through baths of liquid
- 49/025 . . {conveyor feeding and discharging means}
- 49/04 . . the workpieces being immersed and withdrawn by movement in a vertical direction
- 49/0404 {specially adapted for very long workpieces, e.g. chains, cables or belts}
- 49/0409 {specially adapted for workpieces of definite length}
- 49/0413 {arrangements for conveyance through the bath}
- 49/0418 {chain or belt conveyors}
- 49/0422 {screws}
- 49/0427 {jigging conveyors}
- 49/0431 {reciprocating conveying means}
- 49/0436 {arrangements for conveyance from bath to bath}
- 49/044 {along a continuous circuit}
- 49/0445 {the circuit being movable vertically as a whole}
- 49/045 {the circuit being fixed}
- 49/0454 {by means of containers -or workpieces- carriers ([containers or carriers as such see C25D 17/00](#))}
- 49/0459 {movement in a vertical direction is caused by self-contained means}
- 49/0463 {movement in a vertical direction is caused by lifting means or fixed or adjustable guiding means located at the bath area}
- 49/0468 {without container or workpieces carriers}
- 49/0472 {along a non continuous circuit}
- 49/0477 {with lifting means for circuit parts}
- 49/0481 {with lifting means locating at the bath area}
- 49/0486 {provided with rotating or pivoting arms}
- 49/049 {provided with vertical guiding means}
- 49/0495 {conveying by flows of fluids}
- 49/05 . . for fragile or damageable materials or articles
- 49/06 . . for fragile sheets, e.g. glass ([transporting of glass products during their manufacture C03B 35/00](#))
- NOTE**
In group [B65G 49/06](#) and subgroups it is desirable to add indexing codes for specific aspects of conveying systems. The indexing codes are chosen from groups [B65G 2249/00](#) - [B65G 2249/045](#)
- 49/061 . . . {Lifting, gripping, or carrying means, for one or more sheets forming independent means of transport, e.g. suction cups, transport frames ([suction means as load-engaging elements attached to the lifting or lowering gear of cranes B66C 1/02](#); suction cups for attaching purposes [F16B 47/00](#); suction cups on gripping heads [B25J 15/0616](#); suction cups in general [B65G 47/91](#); suction cups combined with cutting means on vertical conveyors [C03B 33/00](#) - [C03B 33/10](#); devices for turning sheets [B65G 49/067](#); suspending devices [B65G 49/066](#))}
- 49/062 . . . {Easels, stands or shelves, e.g. castor-shelves, supporting means on vehicles; ([vehicles adapted to carry glass sheets B60P 3/002](#); storing articles [B65G 1/00](#) or [A47B 53/02](#); packaging for glass sheets [B65D 85/48](#))}

- 49/063 . . . {Transporting devices for sheet glass}
- 49/064 {in a horizontal position ([B65G 49/066](#) takes precedence)}
- 49/065 {supported partially or completely on fluid cushions, e.g. a gas cushion ([in general B65G 51/00](#))}
- 49/066 {being suspended; Suspending devices, e.g. clamps, supporting tongs}
- 49/067 . . . {Sheet handling, means, e.g. manipulators, devices for turning or tilting sheet glass (suction cups [B65G 49/061](#); combined with vertical conveyors [C03B 33/00](#) - [C03B 33/10](#); stacking and destacking [B65G 49/068](#))}
- 49/068 . . . {Stacking or destacking devices; Means for preventing damage to stacked sheets, e.g. spaces (stacking in general [B65G 57/00](#); destacking in general [B65G 59/00](#); spacer sheets in general [B65H](#))}
- 49/069 {Means for avoiding damage to stacked plate glass, e.g. by interposing paper or powder spacers in the stack (maculation [per se B65H 39/00](#))}
- 49/07 . . for semiconductor wafers {Not used, [see H01L 21/677](#)} (specially adapted for conveying of semiconductor wafers during manufacture or treatment of semiconductor or electric solid state devices or components [H01L 21/677](#))
- 49/08 . . for ceramic mouldings (charging, discharging, manipulation with charge in kilns [F27D 3/00](#))
- 49/085 . . . {for loading or unloading racks or similar frames; loading racks therefor}

Non-mechanical conveying through pipes or tubes (pipe-line systems [F17D](#)); Floating in troughs

- 51/00 Conveying articles through pipes or tubes by fluid flow or pressure (pneumatic railways [B61B](#)); Conveying articles over a flat surface, e.g. the base of a trough, by jets located in the surface (pumps [F04](#); fluid dynamics [F15D](#); valves, taps, cocks [F16K](#); pipes, pipe joints, or associated devices [F16L](#))**
- 51/01 . Hydraulic transport of articles ([B65G 51/04](#) takes precedence; water roundabouts [A63G 3/00](#))
- 51/02 . Directly conveying the articles, e.g. slips, sheets, stockings, containers or workpieces, by flowing gases
- 51/025 . . {Conveying ammunition through pipes}
- 51/03 . . over a flat surface or in troughs
- 51/035 . . . {for suspended articles, e.g. bottles}
- 51/04 . Conveying the articles in carriers having a cross-section approximating that of the pipe or tube; Tube mail systems
- 51/06 . . Despatch carriers for tube mail
- 51/08 . . Controlling or conditioning the operating medium (in compressors [F04B](#); air-conditioning, e.g. de-watering, in pneumatic systems [F16L 55/10](#))
- 51/10 . . . at section junctions of pneumatic systems
- 51/12 Pneumatic gates
- 51/14 Pneumatic sluices
- 51/16 . . . varying, e.g. starting or stopping, gas pressure or flow
- 51/18 . . Adaptations of pipes or tubes; Pipe or tube joints
- 51/20 . . Braking arrangements

- 51/22 . . Arrangements for stopping the carriers en route in order to control carrier sequence; Blocking or separating devices
- 51/24 . . Switches
- 51/26 . . Stations
- 51/28 . . . for despatch
- 51/30 . . . for delivery
- 51/32 . . . for despatch, delivery, and transit
- 51/34 . . Two-way operation
- 51/36 . . Other devices for indicating or controlling movements of carriers, e.g. for supervising individual tube sections, for counting carriers, for reporting jams or other operating difficulties
- 51/38 . . . Contact devices on interior of tubes for detecting passage of carriers
- 51/40 . . . Automatically distributing the carriers to desired stations
- 51/42 according to indications on carriers
- 51/44 without mechanical contact between carriers and controllers
- 51/46 according to separate signal systems
- 53/00 Conveying materials in bulk through troughs, pipes, or tubes by floating the materials, or by flows of gas, liquid, or foam (fluidising in connection with loading or unloading [B65G 69/06](#); loaders for hay or cereals [A01D 87/00](#); {discharging means for mixtures containing clay or cementitious material [B28C 7/16](#); } fluidising devices facilitating filling or emptying of large containers [B65D 88/72](#); {combined washing or cutting and conveyance of materials in sugar manufacture [A23N](#); [C13B](#); } dredging [E02F](#); winning materials out of alluvial deposits [E21C 45/00](#); hydraulic or pneumatic mine-filling-up machines [E21F 15/00](#); fluid dynamics [F15D](#) {pumping fluid by direct action of another fluid [F04F](#)})**
- 53/02 . Floating material troughs (air slides [B65G 53/04](#))
- 53/04 . Conveying materials in bulk pneumatically through pipes or tubes; Air slides
- 53/06 . . Gas pressure systems operating without fluidisation of the materials
- 53/08 . . . with mechanical injection of the materials, e.g. by screw
- 53/10 . . . with pneumatic injection of the materials by the propelling gas
- 53/12 the gas flow acting directly on the materials in a reservoir
- 53/14 the gas flow inducing feed of the materials by suction effect
- 53/16 . . Gas pressure systems operating with fluidisation of the materials
- 53/18 . . . through a porous wall
- 53/20 of an air slide, e.g. a trough
- 53/22 the systems comprising a reservoir, e.g. a bunker
- 53/24 . . Gas suction systems
- 53/26 . . . operating with fluidisation of the materials
- 53/28 . . Systems utilising a combination of gas pressure and suction (inducing feed of the materials by suction in gas pressure systems [B65G 53/14](#))
- 53/30 . Conveying materials in bulk through pipes or tubes by liquid pressure

- 53/32 . Conveying concrete, e.g. for distributing same at building sites ([mixing concrete on or by conveyors B28C 5/34](#))
- 53/34 . Details
- 53/36 . . Arrangements of containers ([hoppers B65D 3/06; containers in general B65D](#))
- 53/38 . . Modification of material containing walls to facilitate fluidisation ([hoppers with walls modified for fluidisation of contents B65D 88/72](#))
- 53/40 . . Feeding or discharging devices
- 53/42 . . . Nozzles ([in general B05B](#))
- 53/44 . . . Endless conveyors
- 53/46 . . . Gates or sluices, e.g. rotary wheels
- 53/4608 {Turnable elements, e.g. rotary wheels with pockets or passages for material}
- 53/4616 {with axis of turning parallel to flow}
- 53/4625 {with axis of turning perpendicular to flow}
- 53/4633 {the element having pockets, rotated from charging position to discharging position, i.e. discrete flow}
- 53/4641 {with means for clearing out the pockets}
- 53/465 {with a closable outlet}
- 53/4658 {the element having passages simultaneously connectable to both inlet and outlet ports}
- 53/4666 {with axis of turning neither parallel nor perpendicular to flow, i.e. mixed flow}
- 53/4675 {with flexible wall parts, e.g. peristaltic devices}
- 53/4683 {with a reciprocating mover acting directly on material}
- 53/4691 {of air-lock type, i.e. at least two valves opening asynchronously}
- 53/48 . . . Screws or like rotary conveyors
- 53/50 . . . Pneumatic devices ([incorporated in nozzles B65G 53/42](#))
- 53/52 . . Adaptations of pipes or tubes
- 53/521 . . . {means for preventing the accumulation or for removal of deposits ([preventing accumulation in pipes in general F16L 55/24](#))}
- 53/523 . . . {Wear protection}
- 53/525 . . . {for conveyance in plug-form}
- 53/526 . . . {with means for special treatment to facilitate transport}
- 53/528 . . . {Flux combining or dividing arrangements ([B65G 53/56 takes precedence](#))}
- 53/54 . . . Flexible pipes or tubes
- 53/56 . . . Switches
- 53/58 . . Devices for accelerating or decelerating flow of the materials; Use of pressure generators ([controlling pressure of propelling gas B65G 53/66](#))
- 53/60 . . Devices for separating the materials from propellant gas
- 53/62 . . . using liquid
- 53/64 . . . in discrete amounts
- 53/66 . . Use of indicator or control devices, e.g. for controlling gas pressure, for controlling proportions of material and gas, for indicating or preventing jamming of material ([controlling the flow of coal firing systems C21B 5/003](#))

54/00 Non-mechanical conveyors not otherwise provided for

- 54/02 . electrostatic, electric, or magnetic
- 54/025 . . {the load being magnetically coupled with a piston-like driver moved within a tube}

Stacking or de-stacking; Loading or unloading (by means incorporated in, or operatively associated with, conveyors [B65G 47/00](#); lift trucks [B60P](#); [B66F](#); handling sheet material or flat articles made therefrom [B65H](#); cranes [B66C](#); loading or unloading by soil-shifting or like equipment [E02F](#); stacking or de-stacking data record cards in association with machines for marking or sensing data [G06K](#))

NOTE

In groups [B65G 57/00](#) - [B65G 61/00](#), the following term is used with the meaning indicated:

- "stacking" means disposing articles individually or in layers one above each other

57/00 Stacking of articles ([B65G 60/00](#) takes precedence; stacking of jumbo rolls [B41F](#); stackable containers [B65D](#); feeding, piling, or stacking sheets [B65H](#); stacked delivery of machined products, [see the relevant classes for the machines](#))

- 57/005 . {by using insertions or spacers between the stacked layers}
- 57/02 . by adding to the top of the stack
- 57/03 . . from above
- 57/035 . . . {with a stepwise downward movement of the stack}
- 57/04 . . . by suction or magnetic devices
- 57/06 . . . Gates for releasing articles
- 57/08 . . articles being tilted or inverted prior to depositing
- 57/081 . . . alternate articles being inverted
- 57/09 . . from alongside
- 57/10 . . . by devices, e.g. reciprocating, acting directly on articles for horizontal transport to the top of stack
- 57/11 . . the articles being stacked by direct action of the feeding conveyor
- 57/112 . . . the conveyor being adjustable in height
- 57/14 . . . the articles being transferred from carriers moving in an endless path adjacent to the stacks ([conveyor constructions B65G 15/00 - B65G 35/00; combinations of conveyors B65G 37/00](#))
- 57/16 . . Stacking of articles of particular shape
- 57/165 . . . {nested}
- 57/18 . . . elongated, e.g. sticks, rods, bars
- 57/183 {Angle irons}
- 57/186 {Cylindrical articles, e.g. tubes, rods, etc.}
- 57/20 . . . three-dimensional, e.g. cubiform, cylindrical
- 57/22 in layers each of predetermined arrangement
- 57/24 the layers being transferred as a whole, e.g. on pallets
- 57/245 {with a stepwise downward movement of the stack}
- 57/26 the arrangement providing for spaces between the articles
- 57/28 . by assembling the articles and tilting the assembled articles to a stacked position
- 57/30 . by adding to the bottom of the stack

- 57/301 . . {by means of reciprocatory or oscillatory lifting and holding or gripping devices}
- 57/302 . . . {added articles being lifted to substantially stationary grippers or holders}
- 57/303 . . . {the stack being lowered by mobile grippers or holders onto added articles}
- 57/305 . . {by means of rotary devices or endless elements}
- 57/306 . . . {the rotary devices being wheels}
- 57/307 . . . {the rotary devices being screws}
- 57/308 . . . {by means of endless elements}
- 57/32 . characterised by stacking during transit
- 59/00 De-stacking of articles ([B65G 60/00](#) takes precedence)**
- 59/005 . {by using insertions or spacers between the stacked layers}
- 59/02 . De-stacking from the top of the stack
- 59/023 . . {by means insertable between the stacked articles or layers}
- 59/026 . . {with a stepwise upward movement of the stack}
- 59/04 . . by suction or magnetic devices
- 59/045 . . . {with a stepwise upward movement of the stack}
- 59/06 . De-stacking from the bottom of the stack
- 59/061 . . {articles being separated substantially along the axis of the stack}
- 59/062 . . . {by means of reciprocating or oscillating escapement-like mechanisms}
- 59/063 {comprising lifting means}
- 59/065 {by angularly displacing the stack relatively to the lower most article or *vice versa*}
- 59/066 . . . {by means of rotary devices or endless elements}
- 59/067 . . {articles being separated substantially perpendicularly to the axis of the stack}
- 59/068 . . . {by means of endless elements}
- 59/08 . De-stacking after preliminary tilting of the stack
- 59/10 . De-stacking nested articles
- 59/101 . . {by means of oscillating escapement-like mechanisms}
- 59/102 . . . {the axis of oscillation being substantially parallel to the axis of the stack}
- 59/103 . . . {comprising lifting or gripping means}
- 59/105 . . {by means of reciprocating escapement-like mechanisms}
- 59/106 . . . {comprising lifting or gripping means}
- 59/107 . . {by means of rotary devices or endless elements}
- 59/108 . . . {the axis of rotation being substantially parallel to the axis of the stack}
- 59/12 . characterised by de-stacking during transit
- 60/00 Simultaneously or alternatively stacking and de-stacking of articles**
- 61/00 Use of pick-up or transfer devices or of manipulators for stacking or de-stacking articles not otherwise provided for ([manipulators B25J](#))**
- 63/00 Transferring or trans-shipping at storage areas, railway yards, harbours, {or in opening mining cuts}; Marshalling yard installations (transferring refuse between vehicles or containers [B65F 9/00](#); dredging, soil shifting [E02F](#); conveyors used in co-operation with coal or like winning apparatus [E21C 47/00](#))**
- 63/002 . {for articles}
- 63/004 . . {for containers}
- 63/006 . . . {using slanted guides}
- 63/008 . {for bulk material}
- 63/02 . with essentially horizontal transit otherwise than by bridge
- 63/022 . . {for articles}
- 63/025 . . . {for containers}
- 63/027 . . {for bulk material}
- 63/04 . with essentially horizontal transit by bridges equipped with conveyors {(cranes [B66C](#))}
- 63/042 . . {for articles}
- 63/045 . . . {for containers}
- 63/047 . . {for bulk material}
- 63/06 . with essentially vertical transit ([hoppers B65D 88/26](#))
- 63/062 . . {for articles}
- 63/065 . . . {for containers}
- 63/067 . . {for bulk material}
- 65/00 Loading or unloading (of vehicles [B65G 67/00](#))**
- 65/005 . {Control arrangements}
- 65/02 . Loading or unloading machines comprising essentially a conveyor for moving the loads associated with a device for picking-up the loads
- 65/04 . . with pick-up shovels ([constructions of shovels E02F](#))
- 65/06 . . with endless scraping or elevating pick-up conveyors
- 65/08 . . with reciprocating pick-up conveyors
- 65/10 . . . Raking or scraping devices
- 65/12 operations at positions off-set from the conveyor centreline
- 65/14 . . with jiggling pick-up conveyors, e.g. duck-bills
- 65/16 . . with rotary pick-up conveyors
- 65/18 . . . Discs
- 65/20 . . . Paddle wheels
- 65/22 . . . Screws
- 65/23 . Devices for tilting and emptying of containers
- 65/24 . . for manual tilting of barrels or casks
- 65/28 . Piling or unpling loose materials in bulk, e.g. coal, manure, timber, not otherwise provided for ([by soil-shifting or like equipment E02F](#))
- 65/30 . Methods or devices for filling or emptying bunkers, hoppers, tanks, or like containers, of interest apart from their use in particular chemical or physical processes or their application in particular machines, e.g. not covered by a single other subclass ([devices for tilting and emptying containers B65G 65/23](#); such containers having means facilitating filling or emptying [B65D 88/54](#))
- NOTE**
- Methods or devices for filling bunkers, hoppers, or containers are only classified in group [B65G 65/30](#) if they are of general application apart from their use in particular processes or their application in particular machines or if they are not covered by a single other subclass
- 65/32 . . Filling devices ([pneumatic conveyors B65G 51/00](#), [B65G 53/00](#))
- 65/34 . . Emptying devices ([conveyor constructions B65G 15/00 - B65G 35/00](#); devices similar to vehicle tipplers [B65G 67/48](#))

- 65/36 . . . Devices for emptying from the top
- 65/365 {comprising a vertical passage located inside the container}
- 65/38 Mechanical devices
- 65/40 . . . Devices for emptying otherwise than from the top
- 65/42 using belt or chain conveyors
- 65/425 {arranged to be movable}
- 65/44 using reciprocating conveyors, e.g. jiggling conveyors
- 65/46 using screw conveyors
- 65/463 {arranged vertically or substantially vertically within the container (B65G 65/466 takes precedence)}
- 65/466 {arranged to be movable}
- 65/48 using other rotating means, e.g. rotating pressure sluices in pneumatic systems { (B65G 53/46 takes precedence)}
- 65/4809 {rotating about a substantially vertical axis}
- 65/4818 {and having the form of rotating tables or pans}
- 65/4827 {with particular surface features, e.g. ribs, roughening}
- 65/4836 {and moving material over a stationary surface, e.g. sweep arms or wheels}
- 65/4845 {flexible, e.g. chains, cables, spring arms}
- 65/4854 {mounted on a carriage, e.g. for movement along slit-like outlets}
- 65/4863 {by means of eccentric motion}
- 65/4872 {through which material passes, e.g. fan-like wheels}
- 65/4881 {rotating about a substantially horizontal axis}
- 65/489 {in the form of rotating tubular chutes}
- 67/00 Loading or unloading vehicles (by means incorporated in the vehicles B60 - B64; ground or aircraft-carrier-deck installations B64F; transferring refuse between vehicles or containers B65F 9/00)**
- 67/02 . Loading or unloading land vehicles
- 67/04 . . Loading land vehicles {(loading or unloading boats to or from land vehicles B60P 3/10)}
- 67/06 . . . Feeding articles or materials from bunkers or tunnels
- 67/08 . . . using endless conveyors
- 67/10 . . . using conveyors covering the whole length of vehicle trains
- 67/12 . . . Loading elongated articles, e.g. rails, logs
- 67/14 . . . Loading hardened bricks, briquettes, or the like
- 67/16 . . . Loading coke-oven products (discharging coke-ovens C10B 33/00)
- 67/18 . . . Refuelling locomotives with solid fuels (servicing locomotives B61K 11/02)
- 67/20 . . . Loading covered vehicles
- 67/22 . . . Loading moving vehicles
- 67/24 . . Unloading land vehicles
- 67/26 . . . using rakes or scrapers
- 67/28 External transverse blades attached to endless conveyors
- 67/30 . . . using transportable tipping apparatus
- 67/32 . . . using fixed tipping installations
- 67/34 Apparatus for tipping wagons or mine cars (inverting wagons B65G 67/48; platform-lifts with tiltable platforms B66F 7/22)
- 67/36 endwise
- 67/38 comprising a turntable
- 67/40 toward one end only
- 67/42 sideways
- 67/44 by passing the vehicles over a stretch of transversely-inclined rails
- 67/46 Apparatus for lifting and tilting
- 67/48 Vehicle tipplers (devices for washing or cleaning railroad vehicles B60S)
- 67/50 Rotary vehicle tipplers, i.e. rotating through 360 degrees
- 67/52 having several decks
- 67/54 Vehicle-locking means
- 67/56 Vehicle and tippler interlocking controls
- 67/60 . Loading or unloading ships (B65G 67/02 takes precedence; arrangement of ship-based loading or unloading equipment for cargo or passengers B63B 27/00)
- 67/603 . . {using devices specially adapted for articles}
- 67/606 . . {using devices specially adapted for bulk material}
- 67/62 . . using devices influenced by the tide or by the movements of the ship, e.g. devices on pontoons (horizontal loading or unloading platforms B65G 69/22; loading ramps B65G 69/28)
- 69/00 Auxiliary measures taken, or devices used, in connection with loading or unloading (in vehicles, see the relevant subclasses; preventing, minimising, or fighting fire A62C)**
- 69/001 . {Buffers for vehicles at loading stations}
- 69/003 . {Restraining movement of a vehicle at a loading station using means not being part of the vehicle}
- 69/005 . . {the means engaging at least one wheel of the vehicle}
- 69/006 . {Centring or aligning a vehicle at a loading station using means not being part of the vehicle}
- 69/008 . {Dock- or bumper-seals}
- 69/02 . Filling storage spaces as completely as possible, e.g. application of vibrators
- 69/04 . Spreading out the materials conveyed over the whole surface to be loaded; Trimming heaps of loose materials
- 69/0408 . . {by relatively moving an endless feeding means (B65G 69/0458 takes precedence)}
- 69/0416 . . {with scraping belts or chains}
- 69/0425 . . {with vibrating or shaking means}
- 69/0433 . . {with screw conveyors}
- 69/0441 . . {with chutes, deflector means or channels (B65G 69/0458 takes precedence)}
- 69/045 . . {with scraping devices (B65G 69/0416 takes precedence)}
- 69/0458 . . {with rotating means, e.g. tables, arms}
- 69/0466 . . {with throwing devices}
- 69/0475 . . {with air jets}
- 69/0483 . . {with electric or magnetic means}
- 69/0491 . . {with a pneumatic feeding conveyor}
- 69/06 . Fluidising
- 69/08 . Devices for emptying storage spaces as completely as possible (devices preventing the formation of bridges B65D 88/64)

- 69/10 . . Obtaining an average product from stored bulk material (for measuring or testing G01)
- 69/12 . . Sieving bulk materials during loading or unloading
- 69/14 . . Pulverising loaded or unloaded materials
- 69/16 . . Preventing pulverisation, deformation, breakage, or other mechanical damage to the goods or materials
- 69/165 . . {using descending or lowering endless conveyors}
- 69/18 . . Preventing escape of dust
- 69/181 . . {by means of sealed systems}
- 69/182 . . . {with aspiration means}
- 69/183 . . . {with co-operating closure members on each of the parts of a separable transfer channel}
- 69/185 . . {by means of non-sealed systems}
- 69/186 . . . {with aspiration means}
- 69/187 . . . {with non-return closures}
- 69/188 . . . {with spraying means}
- 69/20 . . Auxiliary treatments, e.g. aerating, heating, humidifying, deaerating, cooling, de-watering or drying, during loading or unloading; Loading or unloading in a fluid medium other than air
- 69/22 . . Horizontal loading or unloading platforms (pile tables B65H; as road or railway equipment E01F 1/00)
- 69/24 . . having platform level adjusting means
- 69/26 . . Rotatable platforms
- 69/28 . . Loading ramps (as road or railway equipment E01F 1/00)
- 69/2805 . . {permanently installed on the dock}
- 69/2811 . . . {pivoting ramps}
- 69/2817 {with fluid-operated means}
- 69/2823 {extensible by pivoting parts}
- 69/2829 {extensible by sliding parts}
- 69/2835 {with spring-operated means}
- 69/2841 {extensible by pivoting parts}
- 69/2847 {extensible by sliding parts}
- 69/2852 {with electric motor-operated means}
- 69/2858 {with weight counterbalancing means}
- 69/2864 . . . {adjustable with respect to the dock}
- 69/287 . . {Constructional features of deck or surround}
- 69/2876 . . . {Safety or protection means, e.g. skirts}
- 69/2882 {operated by detectors or sensors}
- 69/2888 {Vehicle barriers mounted on deck}
- 69/2894 {Safety legs}
- 69/30 . . Non-permanently installed loading ramps, e.g. transportable
- 2201/0232 . . Coils, bobbins, rolls
- 2201/0235 . . Containers
- 2201/0238 . . . Bags
- 2201/0241 . . . Barrels, drums
- 2201/0244 . . . Bottles
- 2201/0247 Suspended bottles
- 2201/025 . . . Boxes
- 2201/0252 . . . Cans
- 2201/0255 Milkcans
- 2201/0258 . . . Trays, totes or bins
- 2201/0261 . . . Puck as article support
- 2201/0264 . . Luggage
- 2201/0267 . . Pallets
- 2201/027 . . Tablets, capsules, pills or the like
- 2201/0273 . . Tires
- 2201/0276 . . Tubes and pipes
- 2201/0279 . . Wheelbarrows
- 2201/0282 . . Wooden articles, e.g. logs, trunks or planks
- 2201/0285 . . Postal items, e.g. letters, parcels
- 2201/0288 . . Signatures, i.e. sections of printed magazines, papers or books
- 2201/0291 . . Pig used in pipe conveyors, e.g. a Molch
- 2201/0294 . . Vehicle bodies
- 2201/0297 . . Wafer cassette
- 2201/04 . . Bulk
- 2201/042 . . Granular material
- 2201/045 . . Sand, soil and mineral ore
- 2201/047 . . Articles manipulated as bulk
- 2201/06 . . Articles and bulk

Storing; Storage devices**2203/00 Indexing code relating to control or detection of the articles or the load carriers during conveying**

- 2203/02 . . Control or detection
- 2203/0208 . . relating to the transported articles
- 2203/0216 . . . Codes or marks on the article
- 2203/0225 . . . Orientation of the article
- 2203/0233 . . . Position of the article
- 2203/0241 . . . Quantity of articles
- 2203/025 . . . Speed of the article
- 2203/0258 . . . Weight of the article
- 2203/0266 . . relating to the load carrier(s)
- 2203/0275 . . . Damage on the load carrier
- 2203/0283 . . . Position of the load carrier
- 2203/0291 . . . Speed of the load carrier
- 2203/04 . . Detection means
- 2203/041 . . Camera
- 2203/042 . . Sensors
- 2203/043 . . . Magnetic
- 2203/044 . . . Optical
- 2203/045 . . . Thermic
- 2203/046 . . . RFID
- 2203/047 . . Switches
- 2203/048 . . Satellite

2205/00 Stopping elements used in conveyors to stop articles or arrays of articles

- 2205/02 . . where the stop device is adaptable to the size of the article or array
- 2205/04 . . where the stop device is not adaptable

2201/00 Indexing codes relating to handling devices, e.g. conveyors, characterised by the type of product or load being conveyed or handled

- 2201/02 . . Articles
- 2201/0202 . . Agricultural and processed food products
- 2201/0205 . . . Biscuits
- 2201/0208 . . . Eggs
- 2201/0211 . . . Fruits and vegetables
- 2201/0214 . . Articles of special size, shape or weight
- 2201/0217 . . . Elongated
- 2201/022 . . . Flat
- 2201/0223 . . . Heavy
- 2201/0226 . . Cigarettes
- 2201/0229 . . Clothes, clothes hangers

- 2205/06 . Cushioned or damping stop devices, e.g. using springs or other mechanical actions
- 2207/00 Indexing codes relating to constructional details, configuration and additional features of a handling device, e.g. Conveyors**
 - 2207/02 . Use of adhesive
 - 2207/04 . Advertising elements
 - 2207/06 . Air cushion support of articles
 - 2207/08 . Adjustable and/or adaptable to the article size
 - 2207/10 . Antistatic features
 - 2207/12 . Chain pin retainers
 - 2207/14 . Combination of conveyors
 - 2207/16 . Convertible to another type of conveyor
 - 2207/18 . Crossing conveyors
 - 2207/20 . Earthquake protection
 - 2207/22 . Heat or fire protection
 - 2207/24 . Helical or spiral conveying path
 - 2207/26 . Hygienic features, e.g. easy to sanitize
 - 2207/28 . Impact protection
 - 2207/30 . Modular constructions
 - 2207/32 . Noise prevention features
 - 2207/34 . Omni-directional rolls
 - 2207/36 . Pushing shoes on conveyors
 - 2207/38 . Pin used as carrier of one article
 - 2207/40 . Safety features of loads, equipment or persons
 - 2207/42 . Soft elements to prevent damage to articles, e.g. bristles, foam
 - 2207/44 . Spiral conveyor tracks
 - 2207/46 . Tray unloading features
 - 2207/48 . Wear protection or indication features
- 2209/00 Indexing codes relating to order picking devices in General**
 - 2209/02 . Batch order forming, e.g. several batches simultaneously
 - 2209/04 . Indication location means
 - 2209/06 . Use of order trucks
 - 2209/08 . Orders with a high and a low volume
 - 2209/10 . Partial order forming
- 2249/00 Aspects relating to conveying systems for the manufacture of fragile sheets**
 - 2249/02 . Controlled or contamination-free environments or clean space conditions
 - 2249/04 . Arrangements of vacuum systems or suction cups
 - 2249/045 . . Details of suction cups suction cups
- 2811/00 Indexing codes relating to common features for more than one conveyor kind or type**
 - 2811/06 . Devices controlling the relative position of articles
 - 2811/0605 . . by arranging articles in groups or arranging grouped articles
 - 2811/061 . . . Grouping articles in layers
 - 2811/0615 . . . Devices for arranging grouped articles in a single lane
 - 2811/0621 . . by modifying the orientation or position of articles
 - 2811/0626 . . . Orientation of articles
 - 2811/0631 . . by varying the spacing between individual articles
 - 2811/0636 . . . by means of one or several star-shaped wheels
 - 2811/0642 . . . using a fixed stopping element and means to pass the element
- 2811/0647 . . Changing the direction of movement of articles or bulk material
- 2811/0652 . . . Accessories
- 2811/0657 . . . Deflectors
- 2811/0663 . . . Pick-up means
- 2811/0668 . . . Magnetic or electrostatic devices
- 2811/0673 . . Control of conveying operations
- 2811/0678 . . . Determining the path to be followed
- 2811/0684 by stopping or tilting load-carriers not leaving the conveyor path
- 2811/0689 . . . Releasing constant material flow
- 2811/0694 for permanently occupying the conveyor path
- 2811/09 . Driving means for the conveyors
- 2811/091 . . the conveyor type being irrelevant
- 2811/092 . . . a single conveyor having more than one driving means
- 2811/093 . . . Control means for automatic stop, start or warning variation during conveying operations
- 2811/095 . . Speed variation control means
- 2811/096 . . . without reversal of the conveying direction
- 2811/097 . . . with reversal of the conveying direction
- 2811/098 . . for combined motions
- 2812/00 Indexing codes relating to the kind or type of conveyors**
 - 2812/01 . Conveyors composed of several types of conveyors
 - 2812/011 . . one conveyor being driven by another one
 - 2812/012 . . for conveying material successively by a series of conveyors
 - 2812/013 . . . without relative movement between conveyors
 - 2812/014 . . . with relative movement between conveyors
 - 2812/015 the conveyors being movably linked
 - 2812/016 . . for conveying material by co-operating units in tandem
 - 2812/017 . . . using tilted or side by side conveyor sections
 - 2812/018 . . . between conveyor sections
 - 2812/019 . . . using two or more elevators
 - 2812/02 . Belt or chain conveyors
 - 2812/02009 . . Common features for belt or chain conveyors
 - 2812/02019 . . . Supporting or guiding frames
 - 2812/02029 Transportable conveyor frames
 - 2812/02039 Profiles or beams
 - 2812/02049 with guiding means for displaceable conveyor accessories
 - 2812/02059 with supporting arrangements for ducts or cables or shaped as fluid ducts
 - 2812/02069 Rails
 - 2812/02079 Switches
 - 2812/02089 . . . Driving means
 - 2812/02099 . . . Safety measures in case of driving element breakage
 - 2812/02108 . . . Protection means
 - 2812/02118 . . . Gathering means for material falling from the conveyor
 - 2812/02128 . . Belt conveyors
 - 2812/02138 . . . Common features for belt conveyors
 - 2812/02148 Driving means for the belts
 - 2812/02158 Means preventing dust penetration
 - 2812/02168 Belts provided with guiding means, e.g. rollers
 - 2812/02178 . . . characterised by the material
 - 2812/02188 Metallic belts
 - 2812/02198 Non-metallic belts

2812/02207	. . . .	Partially metallic belts	2812/02663	. . . . .	Loading or unloading means
2812/02217	. . .	characterised by the configuration	2812/02673	. . . . .	the load-carriers being arranged above, between or beside the traction means
2812/02227	. . .	for vertical conveyance	2812/02683	. . . . .	and fixed or non-movably linked to the traction means
2812/02237	. . . .	provided with buckets	2812/02693	. . . . .	for vertical or inclined conveyance
2812/02247	. . . .	using belts with bucket profiles	2812/02702	. . . . .	Details
2812/02257	. . . .	the load remaining on the belt due to centrifugal forces	2812/02712	. . . . .	Loading or unloading means
2812/02267	. .	Conveyors having endless traction elements	2812/02722	. . . . .	Frames
2812/02277	. . .	Common features for chain conveyors	2812/02732	. . . . .	with guiding means for the traction means
2812/02287	. . . .	Driving means	2812/02742	. . . . .	Bucket elevators for bulk material
2812/02297	. . . . .	Arrangements for downward conveyance	2812/02752	. . . . .	Elevators for articles
2812/02306	. . . . .	Driving drums	2812/02762	. . . . .	Load-carriers
2812/02316	. . . . .	with means for assuring constant linear speed of chains	2812/02772	. . . . .	Plates or buckets
2812/02326	. . . .	Chains, cables or the like	2812/02782	. . . . .	with upstanding walls
2812/02336	. . . . .	Accessories	2812/02792	. . . . .	the load-carriers being connected pivotally to the traction means
2812/02346	. . . . .	Grippers associated with chain parts	2812/02801	. . . . .	Loading or unloading means
2812/02356	. . . . .	characterised by the material	2812/02811	. . . . .	guided at least partially along a vertical or inclined direction
2812/02366	. . . . .	Flexible links	2812/02821	. . . . .	with guiding means to remain in a load-carrying position
2812/02376	. . . . .	characterised by the configuration	2812/02831	. . . . .	the load-carriers resting on the traction means
2812/02386	. . . . .	Woven chains	2812/02841	. . . . .	Reversing means
2812/02396	. . . . .	Links and their attaching means	2812/02851	. . . . .	load-carriers adapted to be displaced relative to the traction means
2812/02405	. . . .	Means preventing dust penetration	2812/02861	. . .	moving the materials over supporting surfaces by impeller means, e.g. scrapers
2812/02415	. . .	with load-carrying surfaces supported by traction means	2812/02871	. . . .	for bulk material
2812/02425	. . . .	Continuous or uninterrupted load-carrying surfaces	2812/02881	. . . . .	Scraper conveyors
2812/02435	. . . . .	the surfaces being below the traction means	2812/02891	. . . . .	Troughs, channels or conduits
2812/02445	. . . . .	the surfaces being an endless belt	2812/029	. . . . .	Guiding means for displaceable conveyor accessories
2812/02455	. . . . .	the surfaces being above, between or beside the traction means	2812/0291	. . . . .	Supporting arrangements for cables or ducts
2812/02465	. . . . .	for conveyance along curves	2812/0292	. . . . .	with oppositely-moving parts of the conveyor located in a common plane
2812/02475	. . . . .	along vertical curves	2812/0293	. . . . .	Guiding means for the scrapers
2812/02485	. . . . .	the load-carrying surfaces being fixed or non-movably linked to the traction means	2812/0294	. . . . .	Wear pieces
2812/02495	. . . . .	load-carrying surfaces using platforms or grids	2812/0295	. . . . .	Scraper chains
2812/02504	. . . . .	load-carrying surfaces with upstanding walls, e.g. with bucket profile	2812/0296	. . . . .	Attachments of scrapers to traction elements
2812/02514	. . . . .	in longitudinal direction only	2812/0297	. . . . .	to one chain
2812/02524	. . . . .	in transverse direction only	2812/0298	. . . . .	to more than one chain
2812/02534	. . . . .	the surfaces being an endless belt	2812/0299	. .	Conveyors having independent belt or chain conveyor sections
2812/02544	. . . . .	with bucket profile	2812/03	. .	Vibrating conveyors
2812/02554	. . . . .	the load-carrying surfaces being pivotally attached to the traction means	2812/0304	. .	Driving means or auxiliary devices
2812/02564	. . . . .	Tipping means	2812/0308	. . .	Driving means
2812/02574	. . . . .	Guiding means to maintain load-carrying surfaces horizontal	2812/0312	. . . .	for shaking
2812/02584	. . . . .	the load-carrying surfaces resting on the traction means	2812/0316	. . . . .	using oppositely moving cylinders
2812/02594	. . . . .	Reversing means	2812/032	. . .	Help-conveyors
2812/02603	. . . . .	Load-carrying surfaces adapted to be displaced relative to the traction means	2812/0324	. .	Frames
2812/02613	. . . .	the load-carrying surfaces being separated from each other, e.g. individual load carriers	2812/0328	. . .	dismountable
2812/02623	. . . . .	and pivotally mounted	2812/0332	. . .	deformable
2812/02633	. . . . .	for bulk material	2812/0336	. . .	movable
2812/02643	. . . . .	Loading or unloading means	2812/034	. . .	Frame parts
2812/02653	. . . . .	for articles	2812/0344	. . . .	Guiding means for conveyed materials
			2812/0348	. .	Supporting or guiding means for troughs
			2812/0352	. . .	Rollers or balls

2812/0356	. . . . the roller or ball holders joining trough parts	2812/1616	. . . . Common means for pneumatic conveyors
2812/036	. . . . Pivoting arms	2812/1625	. . . . Feeding or discharging means
2812/0364	. . . . Springs	2812/1633	. . . . . using Venturi effect
2812/0368	. . . . Flexible non-elastic suspension means, e.g. chains, cables	2812/1641	. . . . Air pressure systems
2812/0372	. . . Connections between trough parts	2812/165	. . . . Details
2812/0376	. . . . using a traction or stiffening means connecting all trough parts	2812/1658	. . . . with fluidisation of materials
2812/038	. . . . adjustable	2812/1666	. . . . . without porous wall
2812/0384	. . . Troughs, tubes or the like	2812/1675	. . . . in which materials continuously flow from suction to pressure pipes
2812/0388	. . . . characterised by the configuration	2812/1683	. . . . . without passing through the air-pressure generator
2812/0392	. . . . . Screw-, spiral- or ring-shaped	2812/1691	. . . . Pumping systems
2812/0396	. . . . characterised by the material	2812/18	. . . Conveyors with suspended load-carriers operated by hand or gravity
2812/05	. . . Screw-conveyors	2812/182	. . . load-carriers, rollers therefor
2812/0505	. . . Driving means, constitutive elements or auxiliary devices	2812/184	. . . loading or unloading arrangements
2812/0511	. . . . Conveyor screws	2812/186	. . . Arresting, braking or escapement means
2812/0516	. . . . . characterised by the material	2812/188	. . . Rails or switches
2812/0522	. . . . . Flexible screws	2812/99	. . . Conveyor systems not otherwise provided for
2812/0527	. . . . . characterised by the configuration, e.g. hollow, toothed	2813/00	Indexing codes relating to transport for special purposes
2812/0533	. . . . . with opposite threads	2813/02	. . . Devices without motors and bearing wheels for moving or tilting heavy loads
2812/0538	. . . . . with changing diameter	2813/023	. . . Load-carriers
2812/0544	. . . . Houses or frames	2813/026	. . . . for bales, boxes or the like, by using pointed means
2812/055	. . . . . Connecting means	2814/00	Indexing codes relating to loading or unloading articles or bulk materials
2812/0555	. . . . . characterised by the materials, e.g. flexible houses	2814/02	. . . Auxiliary devices or arrangements
2812/0561	. . . . . characterised by the shape	2814/0205	. . . for preventing breakage, pulverisation or damage to materials
2812/0566	. . . . . for preventing blockage of materials	2814/0211	. . . . using moving braking means to slow down the speed during free fall
2812/0572	. . . . . Discharging valves	2814/0217	. . . for emptying as completely as possible
2812/0577	. . . for bulk material	2814/0223	. . . . General arrangements
2812/0583	. . . . Drum arrangements	2814/0229	. . . . Air jet devices
2812/0588	. . . . without houses	2814/0235	. . . . using liquid means
2812/0594	. . . . with parallel screws	2814/0241	. . . for spreading out the material over the whole surface to be loaded
2812/06	. . . Skip or hopper conveyors	2814/0247	. . . . by displacement of the feeding means
2812/0609	. . . Constitutive elements or auxiliary devices	2814/0252	. . . . using scraping belts or chains
2812/0618	. . . . Skips, hoppers or similar containers	2814/0258	. . . . using shaking or vibrating means
2812/0627	. . . . . characterised by the configuration	2814/0264	. . . . using screw conveyors
2812/0636	. . . . . provided with guiding means	2814/027	. . . . using chutes
2812/0645	. . . . . for vertical transport	2814/0276	. . . . using scraping means other than belts or chains
2812/0654	. . . . Tipping means	2814/0282	. . . . using turntables
2812/0663	. . . . . arranged on tracks along which the skips are guided	2814/0288	. . . . using throwing means
2812/0672	. . . Loading or unloading skips	2814/0294	. . . . using air jets
2812/0681	. . . . by reciprocating skips along guiding means	2814/03	. . . Loading or unloading means
2812/069	. . . . . for vertical shaft transport	2814/0301	. . . General arrangements
2812/08	. . . Chutes	2814/0302	. . . . Central control devices
2812/081	. . . Connecting means	2814/0304	. . . . Stacking devices
2812/082	. . . . telescopic	2814/0305	. . . . . Adding to the top
2812/083	. . . . pivoting	2814/0307	. . . . . the loading platform being lowered during stacking
2812/084	. . . . Cleaning means	2814/0308	. . . . Destacking devices
2812/085	. . . . characterised by the configuration	2814/031	. . . . . Removing from the top
2812/086	. . . . Screw-like chutes	2814/0311	. . . . Other article loading or unloading devices
2812/087	. . . . . provided with material moving or braking means	2814/0313	. . . . . with vertically reciprocating platforms
2812/088	. . . characterised by the material	2814/0314	. . . . for moving bulk material downwards
2812/09	. . . Walking beam conveyors	2814/0316	. . . . . to a storage room
2812/12	. . . Conveyors with reciprocating means		
2812/14	. . . Turntables		
2812/15	. . . Throwing-conveyors		
2812/16	. . . Pneumatic conveyors		
2812/1608	. . . for bulk material		

2814/0317	. . . . .	by tipping a container	2814/0383	. . . . .	Lifting means with suspended platforms
2814/0319	. . . . .	through a closable or non-closable outlet opening	2814/0385	. . . . .	the platform tipping around a single axis
2814/032	. . . . .	using a belt or chain conveyor in or beneath the opening	2814/0386	. . . . .	the axis remaining in a fixed position
2814/0322	. . . . .	as measuring instrument	2814/0388	. . . . .	the axis being parallel with the car longitudinal axis
2814/0323	. . . . .	with chutes or plates in or beneath the opening	2814/0389	. . . . .	the axis being parallel with the car transverse axis
2814/0325	. . . . .	with rotating drums, cylinders or cones in or beneath the opening	2814/0391	. . . . .	the axis being moved parallel with itself
2814/0326	. . . . .	for moving bulk material upwards or horizontally	2814/0392	. . . . .	the platform tipping around several axes
2814/0328	. . . . .	Picking-up means	2814/0394	. . . . .	around parallel axes
2814/0329	. . . . .	Common features for picking-up means	2814/0395	. . . . .	around crossing axes
2814/0331	. . . . .	Belt or chain conveyors	2814/0397	. . . . .	for ships
2814/0332	. . . . .	Bucket conveyors	2814/0398	. . . . .	for aircraft
2814/0334	. . . . .	Scraper conveyors			
2814/0335	. . . . .	Shaking or vibrating conveyors			
2814/0337	. . . . .	Paddle wheels			
2814/0338	. . . . .	Inclined plates or chutes			
2814/034	. . . . .	Raking devices			
2814/0341	. . . . .	Scraping devices			
2814/0343	. . . . .	Rotating discs, drums or gathering arms			
2814/0344	. . . . .	Control or feeding or discharging using level or weight measuring means			
2814/0346	. . . . .	for guided skips			
2814/0347	. . . . .	for cars or linked car-trains with individual load-carriers			
2814/0349	. . . . .	loading continuously successive cars without material spillage			
2814/035	. . . . .	Feeding or discharging devices adapted to car shapes			
2814/0352	. . . . .	Feeding or discharging devices operated by cars			
2814/0353	. . . . .	the load being lifted and the cars being moved beneath the load			
2814/0355	. . . . .	the car floor and subframe being tilted or removed			
2814/0356	. . . . .	the whole car being tilted			
2814/0358	. . . . .	by means of tilting rails			
2814/0359	. . . . .	by means of car tipplers			
2814/0361	. . . . .	Accessories			
2814/0362	. . . . .	locking or unlocking cars in the tipplers			
2814/0364	. . . . .	Means for loading or unloading cars in the tipplers			
2814/0365	. . . . .	Moving devices for tipplers			
2814/0367	. . . . .	Lifting means			
2814/0368	. . . . .	Means enhancing unloading			
2814/037	. . . . .	using a tipping platform incorporated in a ring-like rotating structure			
2814/0371	. . . . .	Driving means therefor			
2814/0373	. . . . .	the rotation resulting from power driven displacement of the structure			
2814/0374	. . . . .	the rotation resulting from the car weight only			
2814/0376	. . . . .	with relative movement between platform and structure			
2814/0377	. . . . .	with simultaneous tipping of several cars above or beside each other			
2814/0379	. . . . .	using a tipping platform without ring-like structure			
2814/038	. . . . .	Driving means therefor			
2814/0382	. . . . .	Fluid-operated lifting means			