SECTION B — PERFORMING OPERATIONS; TRANSPORTING

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

B65B MACHINES, APPARATUS OR DEVICES FOR, OR METHODS OF, PACKAGING ARTICLES OR MATERIALS; UNPACKING (bundling and pressing devices for cigars A24C 1/44; devices for tensioning and securing binders adapted to be supported by the article or articles to be bound B25B 25/00; applying closure members to bottles, jars or similar containers B67B 1/00-B67B 6/00; concurrent cleaning, filling and closing of bottles B67C 7/00; emptying bottles, jars, cans, casks, barrels or similar containers B67C 9/00)

Note(s)

1. This subclass does not cover:
   - operations of the types mentioned in Note (2) (a) to (f), employed in the manufacture of articles other than packages, which are covered by other appropriate subclasses, e.g. making confectionery products by casting in moulds formed by wrappers A23G, filling ammunition, e.g. cartridges, F42B 33/02;
   - methods of packaging, which are wholly characterised by the form of the package produced, or the form of the container or packaging-element used, which are covered by B65D.
2. In this subclass, the following terms are used with the meanings indicated:
   - "packaging" includes mainly the following operations:
     a. filling portable containers or receptacles with materials or small articles to form packages;
     b. inserting articles or groups of articles into containers or receptacles;
     c. closing filled containers or receptacles otherwise than by metal-, glass-, or wood-working operations;
     d. enclosing, or partially enclosing, articles or quantities of material, in sheets, strips, blanks, webs, or tubes of thin flexible material, e.g. wrapping;
     e. bundling articles, e.g. holding articles together in groups by applying string or wire;
     f. attaching articles to cards, sheets, or webs.
   - "package" means the end product of a packaging operation, e.g. a filled and closed container, an article enclosed in a wrapper, a group of articles held together by string or wire, a crate of bottles.
   - "materials" includes matter, or masses of articles, which are to be packaged, as distinct from separate or individual articles.

Subclass index

METHODS AND APPARATUS FOR PACKAGING
- Of general application
  - in individual receptacles: for materials; for objects; closing after filling ... 1/00, 3/00, 5/00, 7/00
  - enclosing successively in webs; wrapping; by attachment to carriers ... 9/00, 11/00, 15/00
  - for objects: bundling; joining ... 13/00, 17/02
  - other processes and apparatus ... 17/00
- For particular objects or materials; under particular conditions
  - for fragile rod-shaped or tubular objects; for bottles; for other articles presenting special problems ... 19/00, 21/00, 23/00, 25/00
  - bundling particular articles ... 27/00
  - using removable coatings ... 33/00
  - for particular materials: fibrous; other ... 27/00, 29/00
  - under particular atmospheric or gaseous conditions ... 31/00

DETAILS OF APPARATUS AND AUXILIARY DEVICES OR OPERATIONS, NOT OTHERWISE PROVIDED FOR
- Relating to contents
  - supply arrangements; introducing into containers or wrappers; preservation, purification ... 35/00, 37/00, 39/00, 55/00
  - other devices or methods ... 63/00
- Relating to containers
  - supplying container-forming material; forming containers; forming pockets; holding wrappers during wrapping ... 41/00, 43/00, 47/00, 45/00
  - bendling wrappers round contents; shrinking; closing; preserving, purifying ... 49/00, 53/00, 51/00, 55/00
  - other devices or methods ... 61/00
- Relating to apparatus: control, safety; adaptation to different requirements; other details ... 57/00, 59/00, 65/00

PACKAGING BY HAND ... 67/00
UNPACKING NOT OTHERWISE PROVIDED FOR ... 69/00

Machines, apparatus, or methods of general application for packaging articles or materials

1/00 Packaging fluent solid material, e.g. powders, granular or loose fibrous material, loose masses of small articles, in individual containers or receptacles, e.g. bags, sacks, boxes, cartons, cans or jars [1, 2006.01]

1/02 • Machines characterised by the incorporation of means for making the containers or receptacles (from flat, folded, or tubular webs of flexible sheet material B65B 9/00; making containers or receptacles of interest apart from this application, see the appropriate subclasses) **[1, 2006.01]**

1/04 • Methods of, or means for, filling the material into the containers or receptacles **[1, 2006.01]**

1/06 • • by gravity flow **[1, 2006.01]**

1/08 • • by vibratory feeders **[1, 2006.01]**

1/10 • • by rotary feeders **[1, 2006.01]**

1/12 • • • of screw type **[1, 2006.01]**

1/14 • • • of centrifugal type **[1, 2006.01]**

1/16 • • by pneumatic means, e.g. by suction **[1, 2006.01]**

1/18 • • for filling valve-bags **[1, 2006.01]**

1/20 • Reducing volume of filled material **[1, 2006.01]**

1/22 • • by vibration **[1, 2006.01]**

1/24 • • by mechanical compression **[1, 2006.01]**

1/26 • • by pneumatic means, e.g. suction **[1, 2006.01]**

1/28 • Controlling escape of air or dust from containers or receptacles during filling **[1, 2006.01]**

1/30 • Devices or methods for controlling or determining the quantity or quality of the material fed or filled **[1, 2006.01]**

1/32 • • by weighing (check-weighing of filled containers or receptacles B65B 1/46) **[1, 2006.01]**

1/34 • • • Adjusting weight by trickle feed **[1, 2006.01]**

1/36 • • by volumetric devices or methods (checking volume of filled material B65B 1/48) **[1, 2006.01]**

1/38 • • • by pistons co-operating with measuring chambers **[1, 2006.01]**

1/40 • • by timing of filling operations **[1, 2006.01]**

1/42 • • • and arresting flow by cut-off means **[1, 2006.01]**

1/44 • • Checking density of material to be filled **[1, 2006.01]**

1/46 • • Check-weighing of filled containers or receptacles **[1, 2006.01]**

1/48 • • Checking volume of filled material **[1, 2006.01]**

3/00 Packaging plastic material, semiliquids, liquids or mixed solids and liquids, in individual containers or receptacles, e.g. bags, sacks, boxes, cartons, cans or jars [1, 2006.01]

3/02 • Machines characterised by the incorporation of means for making the containers or receptacles (making containers or receptacles of interest apart from this application, see the appropriate subclasses) **[1, 2006.01]**

3/04 • Methods of, or means for, filling the material into the containers or receptacles **[1, 2006.01]**

3/06 • • by gravity flow **[1, 2006.01]**

3/08 • • by screw-type feeders **[1, 2006.01]**

3/10 • • by application of pressure to material (by screw-type feeders B65B 3/08) **[1, 2006.01]**

3/12 • • • mechanically, e.g. by pistons or pumps **[1, 2006.01]**

3/14 • • • pneumatically **[1, 2006.01]**

3/16 • • for filling collapsible tubes (for filling valve bags B65B 3/17) **[1, 2006.01]**

3/17 • • for filling valve bags **[1, 2006.01]**

3/18 • Controlling escape of air from containers or receptacles during filling **[1, 2006.01]**

3/22 • Defoaming liquids in connection with filling **[1, 2006.01]**

3/24 • Topping-up containers or receptacles to ensure complete filling **[1, 2006.01]**

3/26 • Methods or devices for controlling the quantity of the material fed or filled **[1, 2006.01]**

3/28 • • by weighing **[1, 2006.01]**

3/30 • • by volumetric measurement **[1, 2006.01]**

3/32 • • • by pistons co-operating with measuring chambers **[1, 2006.01]**

3/34 • • by timing of filling operations **[1, 2006.01]**

3/36 • • • and arresting flow by cut-off means **[1, 2006.01]**

5/00 Packaging individual articles in containers or receptacles, e.g. bags, sacks, boxes, cartons, cans, jars [1, 2006.01]

5/02 • Machines characterised by incorporation of means for making the containers or receptacles (making containers or receptacles of interest apart from this application, see the appropriate subclasses) **[1, 2006.01]**

5/04 • Packaging single articles **[1, 2006.01]**

5/06 • Packaging groups of articles, the groups being treated as single articles **[1, 2006.01]**

5/08 • Packaging groups of articles, the articles being individually gripped or guided for transfer to the containers or receptacles **[1, 2006.01]**

5/10 • Filling containers or receptacles progressively or in stages by introducing successive articles, or layers of articles **[1, 2006.01]**

5/12 • • Introducing successive articles, e.g. confectionery products, of different shape or size in predetermined positions **[1, 2006.01]**

7/00 Closing containers or receptacles after filling [1, 2006.01]

7/01 • Machines characterised by incorporation of means for making the closures before applying (making closures, of interest apart from this application, see the relevant subclass) **[6, 2006.01]**

7/02 • Closing containers or receptacles deformed by, or taking-up shape of, contents, e.g. bags, sacks **[1, 2006.01]**

7/04 • • by tucking-in mouth portion to form two flaps and subsequently folding-down **[1, 2006.01]**

7/06 • • by collapsing mouth portion, e.g. to form a single flap **[1, 2006.01]**

7/08 • • • and folding **[1, 2006.01]**

7/10 • • • and rolling-in **[1, 2006.01]**

7/12 • • • and twisting **[1, 2006.01]**

7/14 • Closing collapsible or resilient tubes, e.g. for tooth-paste, for lighter fuel **[1, 2006.01]**

7/16 • Closing semi-rigid or rigid containers or receptacles not deformed by, or not taking-up shape of, contents, e.g. boxes or cartons **[1, 2006.01]**

7/18 • • by collapsing mouth portion and subsequently folding-down or securing flaps **[1, 2006.01]**

7/20 • • by folding-down preformed flaps **[1, 2006.01]**

7/22 • • • and inserting flap portions between contents and wall **[1, 2006.01]**

7/24 • • • and interengaging tongue-and-slot closures **[1, 2006.01]**

7/26 • • by closing hinged lids **[1, 2006.01]**

7/28 • • by applying separate preformed closures, e.g. lids, covers **[1, 2006.01]**

9/00 Enclosing successive articles, or quantities of material, e.g. liquids or semiliquids, in flat, folded, or tubular webs of flexible sheet material; Subdividing filled flexible tubes to form packages [1, 2006.01]

9/02 • Enclosing successive articles, or quantities of material, between opposed webs **[1, 2006.01]**

9/04 • • one or both webs being formed with pockets for the reception of the articles, or of the quantities of material **[1, 2006.01]**

9/06 • Enclosing successive articles, or quantities of material, in a longitudinally-folded web, or in a web folded into a tube about the articles or quantities of material placed upon it **[1, 2006.01, 2012.01]**

Note(s) [2012.01]

If an invention involves both continuous and intermittent web motion, it is classified in both groups B65B 9/067 and B65B 9/073.

9/067 • • the web advancing continuously (B65B 9/08 takes precedence) **[2012.01]**

9/073 • • the web having intermittent motion (B65B 9/08 takes precedence) **[2012.01]**

9/08 • • in a web folded and sealed transversely to form pockets which are subsequently filled and then closed by sealing **[1, 2006.01, 2012.01]**

Note(s) [2012.01]

If an invention involves both continuous and intermittent web motion, it is classified in both groups B65B 9/087 and B65B 9/093.

9/087 • • • the web advancing continuously **[2012.01]**

9/093 • • • the web having intermittent motion **[2012.01]**

9/10 • Enclosing successive articles or quantities of material, in preformed tubular webs, or in webs formed into tubes around filling nozzles, e.g. extruded tubular webs **[1, 2006.01]**

9/12 • • Subdividing filled tubes to form two or more packages by sealing or securing involving displacement of contents **[1, 2006.01]**

9/13 • • the preformed tubular webs being supplied in a flattened state **[3, 2006.01]**

9/14 • • • Devices for distending the tubular webs **[1, 3, 2006.01]**

9/15 • • the preformed tubular webs being stored on filling nozzles **[3, 2006.01]**

9/18 • • • Devices for storing tubular webs **[3, 2006.01]**

9/20 • • the webs being formed into tubes in situ around the filling nozzles **[3, 2006.01, 2012.01]**

Note(s) [2012.01]

If an invention involves both continuous and intermittent web motion, it is classified in both groups B65B 9/207 and B65B 9/213.

9/207 • • • the web advancing continuously (B65B 9/22 takes precedence) **[2012.01]**

9/213 • • • the web having intermittent motion (B65B 9/22 takes precedence) **[2012.01]**

9/22 • • • Forming shoulders; Tube formers **[3, 2006.01]**

9/24 • • the tubes being formed in situ by extrusion **[3, 2006.01]**

11/00 Wrapping, e.g. partially or wholly enclosing, articles or quantities of material, in strips, sheets or blanks, of flexible material (bundling articles by applying narrow strips or bands of flexible material B65B 13/00) **[1, 2006.01]**

11/02 • Wrapping articles or quantities of material, without changing their position during the wrapping operation, e.g. in moulds with hinged folders (by doubling a wrapper and securing its opposed free margins to enclose contents B65B 11/48; by disposing contents between two sheets and securing their opposed free margins B65B 11/50) **[1, 2006.01]**

11/04 • • the articles being rotated **[1, 2006.01]**

11/06 • Wrapping articles, or quantities of material, by conveying wrapper and contents in defined paths **[1, 2006.01]**

11/08 • • in a single straight path **[1, 2006.01]**

11/10 • • • to fold the wrappers in tubular form about contents **[1, 2006.01]**

11/12 • • • • and then to form closing folds of similar form at opposite ends of the tube **[1, 2006.01]**

11/14 • • • • the ends of the tube being subsequently twisted **[1, 2006.01]**

11/16 • • • to fold the wrappers in channel form about contents and then to close the ends of the channel by folding and finally the mouth of the channel by folding or twisting **[1, 2006.01]**

11/18 • • in two or more straight paths **[1, 2006.01]**

11/20 • • • to fold the wrappers in tubular form about contents **[1, 2006.01]**

11/22 • • • • and then to form closing folds of similar form at opposite ends of the tube **[1, 2006.01]**

11/24 • • • • the ends of the tube being subsequently twisted **[1, 2006.01]**

11/26 • • • to fold the wrappers in channel form about contents and then to close the ends of the channel by folding and finally the mouth of the channel by folding or twisting **[1, 2006.01]**

11/28 • • in a curved path, e.g. on rotary tables or turrets **[1, 2006.01]**

11/30 • • • to fold the wrappers in tubular form about contents **[1, 2006.01]**

11/32 • • • • and then to form closing folds of similar form at opposite ends of the tube **[1, 2006.01]**

11/34 • • • • the ends of the tube being subsequently twisted **[1, 2006.01]**

11/36 • • • to fold the wrappers in channel form about contents and then to close the ends of the channel by folding and finally the mouth of the channel by folding or twisting **[1, 2006.01]**

11/38 • • in a combination of straight and curved paths **[1, 2006.01]**

11/40 • • • to fold the wrappers in tubular form about contents **[1, 2006.01]**

11/42 • • • • and then to form closing folds of similar form at opposite ends of the tube **[1, 2006.01]**

11/44 • • • • the ends of the tube being subsequently twisted **[1, 2006.01]**

11/46 • • • to fold the wrappers in channel form about contents and then to close the ends of the channel by folding and finally the mouth of the channel by folding or twisting **[1, 2006.01]**

11/48 • Enclosing articles, or quantities of material, by folding a wrapper, e.g. a pocketed wrapper, and securing its opposed free margins to enclose contents **[1, 2006.01]**

11/50 • Enclosing articles, or quantities of material, by disposing contents between two sheets, e.g. pocketed sheets, and securing their opposed free margins (apparatus or devices for forming pockets in or from sheets, blanks or webs B65B 47/00) **[1, 2006.01]**

11/52 • • one sheet being rendered plastic, e.g. by heating, and forced by fluid pressure, e.g. vacuum, into engagement with the other sheet and contents, e.g. skin-packaging **[1, 2006.01]**

11/54 • Wrapping by causing the wrapper to embrace one end and all sides of the contents, and closing the wrapper onto the opposite end by forming regular or irregular pleats **[1, 2006.01]**

11/56 • Rolling articles with wrappers along a supporting surface **[1, 2006.01]**

11/58 • Applying two or more wrappers, e.g. in succession **[1, 2006.01]**

13/00 Bundling articles [1, 2006.01]

13/02 • Applying and securing binding material around articles or groups of articles, e.g. using strings, wires, strips, bands or tapes **[1, 3, 2006.01]**

13/04 • • with means for guiding the binding material around the articles prior to severing from supply **[1, 2006.01]**

13/06 • • • Stationary ducts or channels **[1, 2006.01]**

13/08 • • • Single guide or carrier for the free end of material movable part-way around articles from one side only **[1, 2006.01]**

13/10 • • • Carriers travelling completely around the articles while holding the free end of material **[1, 2006.01]**

13/12 • • • • attached to rotating rings **[1, 2006.01]**

13/14 • • • Pairs of carriers or guides movable around opposite sides of the articles **[1, 2006.01]**

13/16 • • with means for severing the binding material from supply and then applying it around the articles **[1, 2006.01]**

13/18 • Details of, or auxiliary devices used in, bundling machines **[1, 2006.01]**

13/20 • • Means for compressing or compacting bundles prior to bundling **[1, 2006.01]**

13/22 • • Means for controlling tension of binding means **[1, 2006.01]**

13/24 • • Securing ends of binding material **[1, 2006.01]**

13/26 • • • by knotting **[1, 2006.01]**

13/28 • • • by twisting **[1, 2006.01]**

13/30 • • • by deforming the overlapping ends of the strip or band **[1, 2006.01]**

13/32 • • • by welding, soldering, or heat-sealing; by applying adhesive **[1, 2006.01]**

13/34 • • • by applying separate securing members, e.g. deformable clips **[1, 2006.01]**

15/00 Attaching articles to cards, sheets, strings, webs, or other carriers [1, 2006.01]

15/02 • Attaching small articles, e.g. buttons, to cards **[1, 2006.01]**

15/04 • Attaching a series of articles, e.g. small electrical components, to a continuous web **[1, 2006.01]**

17/00 Other machines, apparatus, or methods for packaging articles or materials [1, 2006.01]

17/02 • Joining articles, e.g. cans, directly to each other for convenience of storage, transport, or handling **[1, 2006.01]**

Machines, apparatus, or methods adapted for packaging articles or materials presenting special problems, or for special packaging operations; Unpacking bottles or eggs

19/00 Packaging rod-shaped or tubular articles susceptible to damage by abrasion or pressure, e.g. cigarettes, cigars, macaroni, spaghetti, drinking straws or welding electrodes [1, 2006.01]

19/02 • Packaging cigarettes **[1, 2006.01]**

19/04 • • Arranging, feeding, or orientating the cigarettes **[1, 2006.01]**

19/06 • • • Turning individual cigarettes to present printed marks in desired position **[1, 2006.01]**

19/08 • • • Positioning oval cigarettes in overlapped arrangement **[1, 2006.01]**

19/10 • • • Arranging cigarettes in layers each comprising a predetermined number **[1, 2006.01]**

19/12 • • Inserting the cigarettes, or wrapped groups thereof, into preformed containers **[1, 2006.01]**

19/14 • • • into pocket boxes, e.g. boxes of rectangular form closed at one end by a flap adapted to be inserted into a slot in the body **[1, 2006.01]**

19/16 • • • • into boxes with two pockets **[1, 2006.01]**

19/18 • • • into drawer-and-shell type boxes or cartons **[1, 2006.01]**

19/20 • • • into boxes with hinged lids **[1, 2006.01]**

19/22 • • Wrapping the cigarettes; Packaging the cigarettes in containers formed by folding wrapping material around formers **[1, 2006.01]**

19/24 • • • using hollow mandrels through which groups of cigarettes are fed **[1, 2006.01]**

19/26 • Machines specially adapted for packaging cigars **[1, 2006.01]**

19/28 • Control devices for cigarette or cigar packaging machines **[1, 2006.01]**

19/30 • • responsive to presence of faulty articles, e.g. incorrectly-filled cigarettes **[1, 2006.01]**

19/32 • • responsive to incorrect grouping of articles or to incorrect filling of packages **[1, 2006.01]**

19/34 • Packaging other rod-shaped articles, e.g. sausages, macaroni, spaghetti, drinking straws, welding electrodes **[1, 2006.01]**

21/00 Packaging or unpacking of bottles (bundling bottles B65B 27/04) **[1, 2006.01]**

21/02 • into or from preformed containers, e.g. crates **[1, 2006.01]**

21/04 • • Arranging, assembling, feeding, or orientating the bottles prior to introduction into, or after removal from, containers **[1, 2006.01]**

21/06 • • • Forming groups of bottles **[1, 2006.01]**

21/08 • • Introducing or removing single bottles, or groups of bottles, e.g. for progressive filling or emptying of containers **[1, 2006.01]**

21/10 • • • using gravity flow **[1, 2006.01]**

21/12 • • • using grippers engaging bottles, e.g. bottle necks **[1, 3, 2006.01]**

21/14 • • Introducing or removing groups of bottles, for filling or emptying containers in one operation **[1, 2006.01]**

21/16 • • • using gravity flow **[1, 2006.01]**

21/18 • • • using grippers engaging bottles, e.g. bottle necks **[1, 3, 2006.01]**

21/20 • • • • with means for varying spacing of bottles **[1, 2006.01]**

21/22 • • • by inverting and raising or lowering the container relative to bottles **[1, 2006.01]**

21/24 • Enclosing bottles in wrappers **[1, 2006.01]**

21/26 • • Applying wrappers to individual bottles by operations involving rotation or rolling of the bottles **[1, 2006.01]**

23/00 Packaging fragile or shock-sensitive articles other than bottles; Unpacking eggs (embedding articles in shock-absorbing media B65B 55/20) **[1, 2006.01]**

23/02 • Packaging or unpacking eggs **[1, 2006.01]**

23/04 • • Erecting egg trays or cartons from collapsed blanks **[1, 2006.01]**

23/06 • • Arranging, feeding, or orientating the eggs to be packed; Removing eggs from trays or cartons **[1, 2006.01]**

23/08 • • • using grippers **[1, 2006.01]**

23/10 • Packaging biscuits **[1, 2006.01]**

23/12 • • Arranging, feeding or orientating the biscuits to be packaged **[1, 2006.01]**

23/14 • • • Forming groups of biscuits **[1, 2006.01]**

23/16 • • Inserting the biscuits, or wrapped groups thereof, into preformed containers **[1, 2006.01]**

23/18 • • Wrapping individual biscuits, or groups of biscuits **[1, 2006.01]**

23/20 • Packaging plate glass, tiles, or shingles **[1, 2006.01]**

23/22 • Packaging glass ampoules, lamp bulbs, radio valves or tubes, or the like **[1, 2006.01]**

25/00 Packaging other articles presenting special problems (bundling B65B 27/00) **[1, 2006.01]**

25/02 • Packaging agricultural or horticultural products **[1, 2006.01]**

25/04 • • Packaging fruit or vegetables **[1, 2006.01]**

25/06 • Packaging slices or specially-shaped pieces of meat, cheese, or other plastic or tacky products **[1, 2006.01]**

25/08 • • between layers or strips of sheet or web material, e.g. in webs folded to zig-zag form **[1, 2006.01]**

25/10 • • Forming sector-shaped packages of cheese or like plastic products **[1, 2006.01]**

25/12 • • • and enclosing in circular containers **[1, 2006.01]**

25/14 • Packaging paper or like sheets, envelopes, or newspapers, in flat, folded, or rolled form **[1, 2006.01]**

25/16 • Packaging bread or like bakery products, e.g. unsliced loaves **[1, 2, 2006.01]**

25/18 • • Wrapping sliced bread **[1, 2006.01]**

25/20 • Packaging garments, e.g. socks, stockings, shirts **[1, 2006.01]**

25/22 • Packaging articles of food, e.g. fish fillets, intended to be cooked in the package **[1, 2006.01]**

25/24 • Packaging annular articles, e.g. tyres **[1, 2006.01]**

27/00 Bundling particular articles presenting special problems using string, wire, or narrow tape or band; Baling fibrous material, e.g. peat, not otherwise provided for [1, 2006.01]

27/02 • Bundling bricks or other building blocks **[1, 2006.01]**

27/04 • Bundling groups of cans or bottles **[1, 2006.01]**

27/06 • Bundling coils of wire or like annular objects **[1, 2006.01]**

27/08 • Bundling paper sheets, envelopes, bags or other thin flat articles; Bundling newspapers **[1, 2006.01]**

27/10 • Bundling rods, sticks, or like elongated objects **[1, 2006.01]**

27/12 • Baling or bundling compressible fibrous material, e.g. peat **[1, 2006.01]**

29/00 Packaging of materials presenting special problems [1, 2006.01]

29/02 • Packaging of substances, e.g. tea, which are intended to be infused in the package **[1, 2006.01]**

29/04 • • Attaching, or forming and attaching, string handles or tags to tea bags **[1, 2006.01]**

29/06 • Packaging of substances to which a further ingredient, e.g. water, is to be added in the package by the user for mixing prior to dispensing **[1, 2006.01]**

29/08 • Packaging of edible materials intended to be cooked in the package (infusible substances B65B 29/02) **[1, 2006.01]**

29/10 • Packaging two or more different substances isolated from one another in the package but capable of being mixed without opening the package, e.g. forming packages containing a resin and hardener isolated by a frangible partition **[1, 2006.01]**

31/00 Packaging articles or materials under special atmospheric or gaseous conditions; Adding propellants to aerosol containers [1, 2006.01]

31/02 • Filling, closing, or filling and closing, containers in chambers maintained under vacuum or superatmospheric pressure or containing a special atmosphere, e.g. of inert gas **[1, 2006.01]**

31/04 • Evacuating, pressurising or gasifying filled containers or wrappers by means of nozzles through which air or other gas, e.g. an inert gas, is withdrawn or supplied **[1, 2006.01]**

31/06 • • the nozzle being arranged for insertion into, and withdrawal from, the mouth of a filled container and operating in conjunction with means for sealing the container mouth **[1, 2006.01]**

31/08 • • the nozzle being adapted to pierce the container or wrapper **[1, 2006.01]**

31/10 • Adding propellants in solid form to aerosol containers **[1, 2006.01]**

33/00 Packaging articles by applying removable, e.g. strippable, coatings (B65B 11/52 takes precedence) **[1, 3, 2006.01]**

33/02 • Packaging small articles, e.g. spare parts for machines or engines **[1, 2006.01]**

33/04 • Packaging large articles, e.g. complete machines, aircraft **[1, 2006.01]**

33/06 • • the coating being applied to a supporting layer or framework of sheets or strips of thin flexible material, e.g. cocoon packaging **[1, 2006.01]**

Details of, auxiliary devices applied to, or auxiliary measures taken in, machines, apparatus, or methods, not otherwise provided for

35/00 Supplying, feeding, arranging or orientating articles to be packaged [1, 2006.01]

35/02 • Supply magazines **[1, 2006.01]**

35/04 • • with buffer storage devices **[1, 2006.01]**

35/06 • Separating single articles from loose masses of articles **[1, 2006.01]**

35/08 • • using pocketed conveyors **[1, 2006.01]**

35/10 • Feeding, e.g. conveying, single articles **[1, 2006.01]**

35/12 • • by gravity **[1, 2006.01]**

35/14 • • by agitators or vibrators **[1, 2006.01]**
35/16 • • by grippers **[1, 2006.01]**
35/18 • • • by suction-operated grippers **[1, 2006.01]**
35/20 • • by reciprocating or oscillatory pushers **[1, 2006.01]**
35/22 • • by roller-ways **[1, 2006.01]**
35/24 • • by endless belts or chains **[1, 2006.01]**
35/26 • • by rotary conveyors **[1, 2006.01]**
35/28 • • by pneumatic conveyors **[1, 2006.01]**
35/30 • Arranging and feeding articles in groups **[1, 2006.01]**
35/32 • • by gravity **[1, 2006.01]**
35/34 • • by agitators or vibrators **[1, 2006.01]**
35/36 • • by grippers **[1, 2006.01]**
35/38 • • • by suction-operated grippers **[1, 2006.01]**
35/40 • • by reciprocating or oscillatory pushers **[1, 2006.01]**
35/42 • • by roller-ways **[1, 2006.01]**
35/44 • • by endless belts or chains **[1, 2006.01]**
35/46 • • by rotary conveyors **[1, 2006.01]**
35/48 • • by pneumatic conveyors **[1, 2006.01]**
35/50 • • Stacking one article, or group of articles, upon another before packaging **[1, 2006.01]**
35/52 • • • building-up the stack from the bottom **[1, 2006.01]**
35/54 • • Feeding articles along multiple paths to a single packaging position **[1, 2006.01]**
35/56 • Orientating, i.e. changing the attitude of, articles, e.g. of non-uniform cross-section **[1, 2006.01]**
35/58 • • Turning articles by positively-acting means, e.g. to present labelled portions in uppermost position **[1, 2006.01]**

37/00 Supplying or feeding fluent-solid, plastic, or liquid material, or loose masses of small articles, to be packaged (methods of, or means for, filling individual containers with such materials or articles B65B 1/04, B65B 3/04) **[1, 2006.01]**

37/02 • by gravity flow **[1, 2006.01]**
37/04 • by vibratory feeders **[1, 2006.01]**
37/06 • by pistons or pumps **[1, 2006.01]**
37/08 • by rotary feeders **[1, 2006.01]**
37/10 • • of screw type **[1, 2006.01]**
37/12 • • of centrifugal type **[1, 2006.01]**
37/14 • by pneumatic feeders **[1, 2006.01]**
37/16 • Separating measured quantities from supply (in container-filling machines B65B 1/30, B65B 3/26) **[1, 2006.01]**
37/18 • • by weighing **[1, 2006.01]**
37/20 • • by volume measurement **[1, 2006.01]**

39/00 Nozzles, funnels or guides for introducing articles or materials into containers or wrappers [1, 2006.01]

39/02 • Expansible or contractible nozzles, funnels, or guides **[1, 2006.01]**
39/04 • having air-escape, or air-withdrawal, passages **[1, 2006.01]**
39/06 • adapted to support containers or wrappers **[1, 2006.01]**
39/08 • • by means of clamps **[1, 2006.01]**
39/10 • • • operating automatically **[1, 2006.01]**
39/12 • movable towards, or away from, container or wrapper during filling or depositing **[1, 2006.01]**
39/14 • movable with a moving container or wrapper during filling or depositing **[1, 2006.01]**

41/00 Supplying or feeding container-forming sheets or wrapping material [1, 2006.01]

41/02 • Feeding sheets or wrapper blanks **[1, 2006.01]**
41/04 • • by grippers **[1, 2006.01]**
41/06 • • • by suction-operated grippers **[1, 2006.01]**
41/08 • • by reciprocating or oscillating pushers **[1, 2006.01]**
41/10 • • by rollers **[1, 2006.01]**
41/12 • Feeding webs from rolls **[1, 2006.01]**
41/14 • • by grippers **[1, 2006.01]**
41/16 • • by rollers **[1, 2006.01]**
41/18 • Registering sheets, blanks, or webs **[1, 2006.01]**

43/00 Forming, feeding, opening, or setting-up containers or receptacles in association with packaging (forming pockets in sheets, blanks, or webs, by pressing the material into forming dies or moving it through folding dies B65B 47/00) **[1, 2006.01]**

43/02 • Forming flat bags from individual sheets or blanks **[1, 2006.01]**
43/04 • Forming flat bags from webs **[1, 2006.01]**
43/06 • • from more than one web **[1, 2006.01]**
43/08 • Forming three-dimensional containers from sheet material **[1, 2006.01]**
43/10 • • by folding the material **[1, 2006.01]**
43/12 • Feeding flexible bags or carton blanks in flat or collapsed state; Feeding flat bags connected to form a series or chain **[1, 2006.01]**
43/14 • • Feeding individual bags or carton blanks from piles or magazines **[1, 2006.01]**
43/16 • • • by grippers **[1, 2006.01]**
43/18 • • • • by suction-operated grippers **[1, 2006.01]**
43/20 • • • by reciprocating or oscillating pushers **[1, 2006.01]**
43/22 • • • by rollers **[1, 2006.01]**
43/24 • Breaking creases to facilitate setting-up cartons **[1, 2006.01]**
43/26 • Opening or distending bags; Opening, erecting, or setting-up boxes, cartons, or carton blanks **[1, 2006.01]**
43/28 • • by grippers co-operating with fixed supports **[1, 2006.01]**
43/30 • • by grippers engaging opposed walls, e.g. suction-operated **[1, 2006.01]**
43/32 • • by external pressure diagonally applied **[1, 2006.01]**
43/34 • • by internal pressure **[1, 2006.01]**
43/36 • • • applied pneumatically **[1, 2006.01]**
43/38 • Opening hinged lids **[1, 2006.01]**
43/39 • • Opening-out closure flaps clear of bag, box, or carton mouth **[1, 2006.01]**
43/40 • Removing separate lids **[1, 2006.01]**
43/41 • Opening drawer-and-shell cartons **[1, 2006.01]**
43/42 • Feeding or positioning bags, boxes, or cartons in the distended, opened, or set-up state; Feeding preformed rigid containers, e.g. tins, capsules, glass tubes, glasses, to the packaging position; Locating containers or receptacles at the filling position (by means of filling nozzles B65B 39/00); Supporting containers or receptacles during the filling operation (by filling nozzles B65B 39/00) **[1, 2006.01]**
43/44 • • from supply magazines (B65B 43/46-B65B 43/52 take precedence) **[1, 3, 2006.01]**
43/46 • • using grippers **[1, 2006.01]**
43/48 • • using reciprocating or oscillating pushers **[1, 2006.01]**

43/50 • • using rotary tables or turrets **[1, 2006.01]**
43/52 • • using roller-ways or endless conveyors **[1, 2006.01]**
43/54 • • Means for supporting containers or receptacles during the filling operation **[1, 2006.01]**
43/56 • • • movable stepwise to position container or receptacle for the reception of successive increments of contents **[1, 2006.01]**
43/58 • • • • vertically movable **[1, 2006.01]**
43/59 • • • vertically movable (B65B 43/58 takes precedence) **[3, 2006.01]**
43/60 • • • rotatable **[1, 2006.01]**
43/62 • • • • about an axis located at the filling position, e.g. the axis of the container or receptacle **[1, 2006.01]**

45/00 Apparatus or devices for supporting or holding wrappers during wrapping operation [1, 2006.01]

47/00 Apparatus or devices for forming pockets or receptacles in or from sheets, blanks, or webs, comprising essentially a die into which the material is pressed or a folding die through which the material is moved [1, 2006.01]
47/02 • with means for heating the material prior to forming **[1, 2006.01]**
47/04 • by application of mechanical pressure **[1, 2006.01]**
47/06 • • using folding dies **[1, 2006.01]**
47/08 • by application of fluid pressure **[1, 2006.01]**
47/10 • • by vacuum **[1, 2006.01]**

49/00 Devices for folding or bending wrappers around contents [1, 2006.01]
49/02 • Fixed or resiliently-mounted folders, e.g. non-driven rollers **[1, 2006.01]**
49/04 • • Ploughs or plates with inclined slots or opposed inclined edges **[1, 2006.01]**
49/06 • Resilient folders, e.g. brushes, diaphragms **[1, 2006.01]**
49/08 • Reciprocating or oscillating folders **[1, 2006.01]**
49/10 • Folders movable in closed non-circular paths **[1, 2006.01]**
49/12 • Rotary folders **[1, 2006.01]**
49/14 • Folders forming part of, or attached to, conveyors for partially-wrapped articles **[1, 2006.01]**
49/16 • Pneumatic means, e.g. air jets **[1, 2006.01]**

51/00 Devices for, or methods of, sealing or securing package folds or closures, e.g. twisted bag necks [1, 2006.01]
51/02 • Applying adhesives or sealing liquids **[1, 2006.01]**
51/04 • Applying separate sealing or securing members, e.g. clips (applying separate lids or covers B65B 7/28) **[1, 2006.01]**
51/05 • • Stapling **[1, 2006.01]**
51/06 • • Applying adhesive tape **[1, 2006.01]**
51/07 • • Sewing or stitching **[1, 2006.01]**
51/08 • • Applying binding material, e.g. to twisted bag necks **[1, 2006.01]**
51/09 • by deformation of the closure **[6, 2006.01]**
51/10 • Applying or generating heat or pressure or combinations thereof (B65B 51/09 takes precedence) **[1, 6, 2006.01]**
51/12 • • by resilient means, e.g. brushes **[1, 2006.01]**
51/14 • • by reciprocating or oscillating members **[1, 2006.01]**
51/16 • • by rotary members **[1, 2006.01]**
51/18 • • by endless bands or chains **[1, 2006.01]**
51/20 • • by fluid pressure acting directly on folds or on opposed surfaces, e.g. using hot-air jets (shrinking wrappers by heating B65B 53/02) **[1, 2006.01]**
51/22 • • by friction or ultrasonic or high-frequency electrical means **[1, 2006.01]**
51/24 • • to produce bead seals (combined with severing by heated wires or rods B65B 61/10) **[1, 2006.01]**
51/26 • • Devices specially adapted for producing transverse or longitudinal seams in webs or tubes **[1, 2006.01]**
51/28 • • • Rollers for producing longitudinal and transverse seams simultaneously **[1, 2006.01]**
51/30 • • • Devices, e.g. jaws, for applying pressure and heat successively, e.g. for subdividing filled tubes **[1, 2006.01]**
51/32 • Cooling, or cooling and pressing, package closures after heat-sealing **[1, 2006.01]**

53/00 Shrinking wrappers, containers, container covers or container cover securing members during or after packaging [1, 2006.01]
53/02 • by heat **[1, 2006.01]**
53/04 • • supplied by liquids **[1, 2006.01]**
53/06 • • supplied by gases, e.g. hot-air jets **[1, 2006.01]**

55/00 Preserving, protecting or purifying packages or package contents in association with packaging (by packaging under special atmospheric or gaseous conditions B65B 31/00; devices for placing protecting sheets, plugs, or wads over contents B65B 61/22) **[1, 2006.01]**
55/02 • Sterilising, e.g. of complete packages **[1, 2006.01]**
55/04 • • Sterilising wrappers or receptacles prior to, or during, packaging **[1, 2006.01]**
55/06 • • • by heat **[1, 2006.01]**
55/08 • • • by irradiation **[1, 2006.01]**
55/10 • • • by liquids or gases (B65B 55/06 takes precedence) **[1, 2006.01]**
55/12 • • Sterilising contents prior to, or during, packaging **[1, 2006.01]**
55/14 • • • by heat **[1, 2006.01]**
55/16 • • • by irradiation **[1, 2006.01]**
55/18 • • • by liquids or gases (B65B 55/14 takes precedence) **[1, 2006.01]**
55/19 • • • by adding materials intended to remove free oxygen or to develop inhibitor gases, e.g. vapour-phase inhibitors **[1, 2006.01]**
55/20 • Embedding contents in shock-absorbing media, e.g. plastic foam, granular material **[1, 2006.01]**
55/22 • Immersing contents in protective liquids **[1, 2006.01]**
55/24 • Cleaning of, or removing dust from, containers, wrappers, or packaging **[1, 2006.01]**

57/00 Automatic control, checking, warning or safety devices (registering wrapping or container-forming material fed from rolls B65B 41/18) **[1, 2006.01]**
57/02 • responsive to absence, presence, abnormal feed, or misplacement of binding or wrapping material, containers, or packages **[1, 2006.01]**
57/04 • • and operating to control, or to stop, the feed of such material, containers, or packages **[1, 2006.01]**
57/06 • • and operating to control, or to stop, the feed of articles or material to be packaged **[1, 2006.01]**
57/08 • • and operating to stop, or to control the speed of, the machine as a whole **[1, 2006.01]**

57/10 • responsive to absence, presence, abnormal feed, or misplacement of articles or materials to be packaged **[1, 2006.01]**

57/12 • • and operating to control, or stop, the feed of wrapping materials, containers, or packages **[1, 2006.01]**

57/14 • • and operating to control, or stop, the feed of articles or material to be packaged **[1, 2006.01]**

57/16 • • and operating to stop, or to control the speed of, the machine as a whole **[1, 2006.01]**

57/18 • causing operation of audible or visible alarm signals **[1, 2006.01]**

57/20 • Applications of counting devices for controlling the feed of articles (other applications B65B 65/08) **[1, 2006.01]**

59/00 Arrangements to enable machines to handle articles of different sizes, to produce packages of different sizes, to vary the contents of packages or to give access for cleaning or maintenance purposes [1, 2006.01]

59/02 • Arrangements to enable adjustments to be made while the machine is running **[1, 2006.01]**

59/04 • Machines constructed with readily-detachable units or assemblies, e.g. to facilitate maintenance **[1, 2006.01]**

61/00 Auxiliary devices, not otherwise provided for, for operating on sheets, blanks, webs, binding material, containers or packages [1, 2006.01]

61/02 • for perforating, scoring, or applying code or date marks on material prior to packaging **[1, 2006.01]**

61/04 • for severing webs, or for separating joined packages **[1, 2006.01]**

61/06 • • by cutting **[1, 2006.01]**

61/08 • • • using rotary cutters **[1, 2006.01]**

61/10 • • • using heated wires or cutters **[1, 2006.01]**

61/12 • • by tearing along perforations or lines of weakness **[1, 2006.01]**

61/14 • for incorporating, or forming and incorporating, handles or suspension means in packages (attaching, or forming and attaching, string handles or tags to tea-bags B65B 29/04) **[1, 2006.01]**

61/16 • • Forming suspension apertures in packages **[1, 2006.01]**

61/18 • for applying or incorporating package-opening or unpacking elements, e.g. tear-strips **[1, 2006.01]**

61/20 • for adding cards, coupons or other inserts to package contents (adding unpacking elements B65B 61/18) **[1, 2006.01]**

61/22 • • for placing protecting sheets, plugs, or wads over contents, e.g. cotton-wool in bottles of pills **[1, 2006.01]**

61/24 • for shaping or reshaping completed packages **[1, 2006.01]**

61/26 • for marking or coding completed packages **[1, 2006.01]**

61/28 • for discharging completed packages from machines **[1, 2006.01]**

63/00 Auxiliary devices, not otherwise provided for, for operating on articles or materials to be packaged [1, 2006.01]

63/02 • for compressing or compacting articles or materials prior to wrapping or insertion in containers or receptacles **[1, 2006.01]**

63/04 • for folding or winding articles, e.g. gloves or stockings **[1, 2006.01]**

63/06 • • Forming elongated hanks, e.g. of shoe laces **[1, 2006.01]**

63/08 • for heating or cooling articles or materials to facilitate packaging **[1, 2006.01]**

65/00 Details peculiar to packaging machines and not otherwise provided for; Arrangements of such details [1, 2006.01]

65/02 • Driving gear **[1, 2006.01]**

65/04 • Mechanisms for converting a continuous rotary motion to intermittent rotary motion, e.g. Geneva drives **[1, 2006.01]**

65/06 • coated or treated with anti-friction or anti-sticking materials, e.g. polytetrafluoroethylene **[1, 2006.01]**

65/08 • Devices for counting or registering the number of articles handled, or the number of packages produced by the machine **[1, 2006.01]**

67/00 Apparatus or devices facilitating manual packaging operations; Sack holders [1, 2006.01]

67/02 • Packaging of articles or materials in containers **[1, 2006.01]**

67/04 • • Devices facilitating insertion of single articles, or groups or articles, into bags **[1, 2006.01]**

67/06 • • Manually-operable devices for closing bag necks, by applying and securing lengths of string, wire, or tape **[1, 2006.01]**

67/08 • Wrapping of articles **[1, 2006.01]**

67/10 • • Wrapping-tables **[1, 2006.01]**

67/12 • Sack holders, i.e. stands or frames with means for supporting sacks in the open condition to facilitate filling with articles or materials **[1, 2006.01]**

69/00 Unpacking of articles or materials, not otherwise provided for [1, 2006.01]

B65C LABELLING OR TAGGING MACHINES, APPARATUS, OR PROCESSES (nailing or stapling in general B25C, B27F; processes for applying decalcomanias B44C 1/16; applying labels for packaging purposes B65B; labels, name-plates G09F)

Note(s)

In this subclass, the following term is used with the meaning indicated:

- "labels" covers also decalcomanias, stamps or the like.

1/00 Labelling flat essentially-rigid surfaces (labelling of fabrics B65C 5/00) **[1, 2006.01]**

1/02 • Affixing labels to one flat surface of articles, e.g. of packages, of flat bands **[1, 2006.01]**

1/04 • Affixing labels, e.g. wrap-around labels, to two or more flat surfaces of a polyhedral article **[1, 2006.01]**

3/00 Labelling other than flat surfaces (of fabrics B65C 5/00) **[1, 2006.01]**

3/02 • Affixing labels to elongated objects, e.g. wires, cables, bars, tubes **[1, 2006.01]**
3/04 • • Applying bands or labels to cigars or cigarettes **[1, 2006.01]**
3/06 • Affixing labels to short rigid containers **[1, 2006.01]**
3/08 • • to container bodies **[1, 2006.01]**
3/10 • • • the container being positioned for labelling with its centre-line horizontal **[1, 2006.01]**
3/12 • • • • by rolling the labels onto cylindrical containers, e.g. bottles **[1, 2006.01]**
3/14 • • • the container being positioned for labelling with its centre-line vertical **[1, 2006.01]**
3/16 • • • • by rolling the labels onto cylindrical containers, e.g. bottles **[1, 2006.01]**
3/18 • • to container necks **[1, 2006.01]**
3/20 • • to bottle closures (applying closures or capsules to bottles B67B) **[1, 2006.01]**
3/22 • • • Affixing metal foil coverings **[1, 2006.01]**
3/24 • • • Affixing labels indicating original state of bottle snap or screw closure **[1, 2006.01]**
3/26 • Affixing labels to non-rigid containers, e.g. bottles made of polyethene, boxes to be inflated by internal air pressure prior to labelling **[1, 2006.01]**

5/00 Labelling fabrics or comparable materials or articles with deformable surface, e.g. paper, fabric rolls, stockings, shoes (affixing labels to non-rigid containers B65C 3/26; by sewing D05B) **[1, 2006.01]**
5/02 • using adhesives **[1, 2006.01]**
5/04 • • Thermo-activatable adhesives **[1, 2006.01]**
5/06 • using staples **[1, 2006.01]**

7/00 Affixing tags (in combination with filling of tea bags B65B 29/04) **[1, 2006.01]**

9/00 Details of labelling machines or apparatus [1, 2006.01]
9/02 • Devices for moving articles, e.g. containers, past labelling station **[1, 2006.01]**
9/04 • • having means for rotating the articles **[1, 2006.01]**
9/06 • Devices for presenting articles in predetermined attitude or position at labelling station **[1, 2006.01]**
9/08 • Label feeding **[1, 2006.01]**
9/10 • • Label magazines **[1, 2006.01]**
9/12 • • Removing separate labels from stacks (for printing B41F) **[1, 2006.01]**
9/14 • • • by vacuum **[1, 2006.01]**
9/16 • • • by wetting devices **[1, 2006.01]**
9/18 • • Label feeding from strips, e.g. from rolls **[1, 2006.01]**
9/20 • Gluing the labels or articles **[1, 2006.01]**
9/22 • • by wetting, e.g. by applying liquid glue or a liquid to a dry glue coating **[1, 2006.01]**
9/24 • • by heat **[1, 2006.01]**
9/25 • • • by thermo-activating the glue **[2, 2006.01]**
9/26 • Devices for applying labels **[1, 2006.01]**
9/28 • • Air-blast devices **[1, 2006.01]**
9/30 • • Rollers **[1, 2006.01]**
9/32 • • • Co-operating rollers between which articles and labels are fed **[1, 2006.01]**
9/34 • • Flexible bands **[1, 2006.01]**
9/36 • • Wipers; Pressers **[1, 2006.01]**
9/38 • Label cooling or drying **[1, 2006.01]**
9/40 • Controls; Safety devices **[1, 2006.01]**
9/42 • • Label feed control **[1, 2006.01]**
9/44 • • • by special means responsive to marks on labels or articles (feed control in wrapping B65B) **[1, 2006.01]**
9/46 • Applying date marks, code marks, or the like, to the label during labelling (manually-controlled or operable apparatus having printing equipment B65C 11/02; ticket printing and issuing G07B 1/00) **[1, 2006.01]**

11/00 Manually-controlled or manually-operable label dispensers, e.g. modified for the application of labels to articles (special furniture, fittings, or accessories for shops, storehouses, bars, or the like A47F; for paper napkins, for toilet paper A47K; for playing cards A63F; movable-strip writing or reading apparatus B42D 19/00; adhesive tape dispensers B65H 35/07; dispensers for tickets G07B; coin-operated dispensers for stamps G07F) **[1, 2006.01]**
11/02 • having printing equipment **[1, 2006.01]**
11/04 • having means for moistening the labels **[1, 2006.01]**
11/06 • having means for heating thermo-activatable labels **[1, 2006.01]**

B65D CONTAINERS FOR STORAGE OR TRANSPORT OF ARTICLES OR MATERIALS, e.g. BAGS, BARRELS, BOTTLES, BOXES, CANS, CARTONS, CRATES, DRUMS, JARS, TANKS, HOPPERS, FORWARDING CONTAINERS; ACCESSORIES, CLOSURES, OR FITTINGS THEREFOR; PACKAGING ELEMENTS; PACKAGES

Note(s) [3, 6, 2009.01]

1. This subclass covers:
   - containers, packaging elements or packages with auxiliary means or provision for displaying articles or materials;
   - methods of packaging which are wholly characterised by the form of the package produced or the form of the container or packaging element used, as distinct from the operations performed or the apparatus employed, which are covered by subclass B65B.
2. This subclass, which is intended to be as comprehensive as possible, only excludes containers or packages of a nature clearly confined to a single other subclass, which are classified in that subclass.
3. In this subclass, groups B65D 5/00, B65D 27/00, B65D 30/00 or B65D 65/00 include constructional features of foldable or erectable container or wrapper blanks as well as the containers or wrappers formed by folding or erecting such blanks.
4. Containers, packaging elements or packages classified in group B65D 85/00, are also classified according to the constructional or functional features, if such features are of interest.
5. Large containers, as defined in Note (6) below, are classified in groups B65D 88/00 or B65D 90/00. Features that are of interest for containers in general may also be classified in other groups of subclass B65D when they are considered to represent information of interest for search.
6. In this subclass, the following terms or expressions are used with the meanings indicated:
   - "rigid or semi-rigid containers" includes:

a. containers not deformed by, or not taking-up the shape of, their contents;
b. containers adapted to be temporarily deformed to expel their contents;
c. pallets;
d. trays;

- "flexible containers" includes:
  a. containers deformed by, or taking-up the shape of, their contents;
  b. containers adapted to be permanently deformed to expel their contents;
- "packaging elements" includes:
  a. elements, other than containers, for covering, protecting, stiffening, or holding together articles or materials to be stored or transported;
  b. packaging materials of special type or form not provided for in other subclasses;
- "packages" includes:
  a. combinations of containers or packaging elements with articles or materials to be stored or transported;
  b. articles joined together for convenience of storage or transport;
- "paper" includes materials, e.g. cardboard, plastic sheet materials, laminated materials, or metal foils, worked in a manner analogous to paper;
- "large containers", in groups B65D 88/00or B65D 90/00, means containers having about the size of containers used in container traffic, sometimes referred to as freight, forwarding or "ISO" (International Standardization Organization) containers, or larger containers.

7. Tamper-indicating means for containers or closures are classified in the group appropriate to the type of container or closure, e.g. B65D 5/43, B65D 5/54, B65D 17/00, B65D 27/30, B65D 27/34, B65D 33/34, B65D 41/32, B65D 47/36, B65D 49/12, B65D 51/20, B65D 55/06.

Subclass index

GENERAL CONTAINERS
Rigid or semi-rigid characterised by
their structure or material....1/00-13/00
their kind....19/00, 21/00
opening by cutting or tearing....17/00
their particular use....81/00-85/00
details not otherwise provided for....23/00, 25/00
Flexible characterised by
their kind....27/00-37/00
their particular use....81/00-85/00
LARGE CONTAINERS....88/00, 90/00
MOVABLE OR HINGED CLOSURES
Kinds of closure....39/00, 41/00, 43/00, 50/00, 51/00
Clamping or using closures....45/00, 47/00, 49/00
Accessories....53/00, 55/00
PACKAGING ELEMENTS
Material....65/00, 67/00
For particular use....81/00, 85/00
Accessories
internal....57/00, 59/00
external....61/00, 63/00
not otherwise provided for....67/00
KINDS OF PACKAGES
Bales; articles on carriers; with enclosing tube, sheet, or web; using preformed containers....71/00, 73/00, 75/00, 77/00
Assemblies of objects....69/00, 71/00
For particular use....81/00, 83/00, 85/00
Kinds or details not otherwise provided for....79/00

General kinds of rigid or semi-rigid containers [3]

1/00 **Rigid or semi-rigid containers having bodies formed in one piece, e.g. by casting metallic material, by moulding plastics, by blowing vitreous material, by throwing ceramic material, by moulding pulped fibrous material or by deep-drawing operations performed on sheet material** (by winding, bending, or folding paper B65D 3/00, B65D 5/00; specially constructed to be opened by cutting, piercing, or tearing of wall portions B65D 17/00; rigid pallets with side walls B65D 19/02) **[1, 5, 2006.01]**

1/02 • Bottles or similar containers with necks or like restricted apertures, designed for pouring contents **[1, 2006.01]**
1/04 • • Multi-cavity bottles **[1, 2006.01]**
1/06 • • with closable apertures at bottom **[1, 2006.01]**
1/08 • • adapted to discharge drops (droppers B65D 47/18) **[1, 2006.01]**
1/09 • Ampoules (specially adapted for medical or pharmaceutical purposes A61J 1/06) **[5, 2006.01]**
1/10 • Jars, e.g. for preserving foodstuffs **[1, 2006.01]**
1/12 • Cans, casks, barrels, or drums **[1, 2006.01]**
1/14 • • characterised by shape **[1, 2006.01]**

1/16 • • • of curved cross-section, e.g. cylindrical **[1, 2006.01]**
1/18 • • • of polygonal cross-section **[1, 2006.01]**
1/20 • • characterised by location or arrangement of filling or discharge apertures **[1, 2006.01]**
1/22 • Boxes or like containers with side walls of substantial depth for enclosing contents **[1, 2006.01]**
1/24 • • with moulded compartments or partitions **[1, 2006.01]**
1/26 • • Thin-walled containers, e.g. formed by deep-drawing operations **[1, 2006.01]**
1/28 • • • formed of laminated material **[1, 2006.01]**
1/30 • • • Groups of containers joined together end-to-end or side-by-side **[1, 2006.01]**
1/32 • Containers adapted to be temporarily deformed by external pressure to expel contents (oil cans F16N 3/00) **[1, 2006.01]**
1/34 • Trays or like shallow containers **[1, 2006.01]**
1/36 • • with moulded compartments or partitions **[1, 2006.01]**
1/38 • Baskets or like containers of skeleton or apertured construction **[1, 2006.01]**
1/40 • Details of walls **[1, 2006.01]**
1/42 • • Reinforcing or strengthening parts or members **[1, 2006.01]**
1/44 • • • Corrugations **[1, 2006.01]**
1/46 • • • Local reinforcements, e.g. adjacent closures **[1, 2006.01]**
1/48 • • • Reinforcements of dissimilar materials, e.g. metal frames in plastic walls **[1, 2006.01]**

3/00 Rigid or semi-rigid containers having bodies or peripheral walls of curved or partially-curved cross-section made by winding or bending paper without folding along defined lines [1, 2006.01]

3/02 • characterised by shape **[1, 2006.01]**
3/04 • • essentially cylindrical **[1, 2006.01]**
3/06 • • essentially conical or frusto-conical **[1, 2006.01]**
3/08 • • having a cross-section of varying shape, e.g. circular merging into square or rectangular **[1, 2006.01]**
3/10 • characterised by form of integral or permanently-secured end closure **[1, 2006.01]**
3/12 • • Flanged discs permanently secured, e.g. by adhesives or by heat-sealing **[1, 2006.01]**
3/14 • • • Discs fitting within container end and secured by bending, rolling, or folding operations **[1, 2006.01]**
3/16 • • Discs without flanges engaging a groove in the container body **[1, 2006.01]**
3/18 • • • and secured by rolling in the end of the body **[1, 2006.01]**
3/20 • • with end portion of body adapted to be closed, by flattening or folding operations, e.g. formed with crease lines or flaps **[1, 2006.01]**
3/22 • with double walls; with walls incorporating air-chambers; with walls made of laminated material **[1, 2006.01]**
3/24 • with several compartments **[1, 2006.01]**
3/26 • Opening arrangements or devices incorporated in, or attached to, containers **[1, 2006.01]**
3/28 • Other details of walls **[1, 2006.01]**
3/30 • • Local reinforcements, e.g. metallic rims **[1, 2006.01]**

5/00 Rigid or semi-rigid containers of polygonal cross-section, e.g. boxes, cartons or trays, formed by folding or erecting one or more blanks made of paper (rigid pallets with side walls B65D 19/02) **[1, 5, 2006.01]**

5/02 • by folding or erecting a single blank to form a tubular body with or without subsequent folding operations, or the addition of separate elements, to close the ends of the body (B65D 5/36 takes precedence) **[1, 2006.01]**
5/04 • • the tubular body having no end closures **[1, 2006.01]**
5/06 • • with end-closing or contents-supporting elements formed by folding inwardly a wall extending from, and continuously around, an end of the tubular body **[1, 2006.01]**
5/08 • • with end closures formed by inward-folding of portions of body, e.g. flaps, interconnected by, or incorporating, gusset folds (by inward-folding of a wall extending continuously around an end of the body and incorporating gusset folds B65D 5/06) **[1, 2006.01]**
5/10 • • with end closures formed by inward-folding of self-locking flaps hinged to tubular body **[1, 2006.01]**
5/12 • • with end closures formed separately from tubular body **[1, 2006.01]**
5/14 • • • with inset end closures **[1, 2006.01]**
5/16 • • the tubular body being formed with an aperture or removable portion arranged to allow removal or insertion of contents through one or more sides (contents-dispensing means B65D 5/72) **[1, 2006.01]**
5/18 • by folding a single blank to U-shape to form the base of the container and opposite sides of the body portion, the remaining sides being formed primarily by extensions of one or more of these opposite sides, e.g. flaps hinged thereto (B65D 5/36 takes precedence) **[1, 2006.01]**
5/20 • by folding-up portions connected to a central panel from all sides to form a container body, e.g. of tray-like form (B65D 5/36 takes precedence) **[1, 2006.01]**
5/22 • • held erect by extensions of one or more sides being doubled-over to enclose extensions of adjacent sides **[1, 2006.01]**
5/24 • • with adjacent sides interconnected by gusset folds **[1, 2006.01]**
5/26 • • with extensions of opposite sides mutually interlocking to lie against other sides **[1, 2006.01]**
5/28 • • with extensions of sides permanently secured to adjacent sides, with sides permanently secured together by adhesive strips, or with sides held in place solely by rigidity of material **[1, 2006.01]**
5/30 • • with tongue-and-slot or like connections between sides and extensions of other sides **[1, 2006.01]**
5/32 • having bodies formed by folding and interconnecting two or more blanks (B65D 5/36 takes precedence) **[1, 2006.01]**
5/34 • • one blank forming three sides of the body, and the other blank forming the remaining sides, a hinged lid, and the opposite end closure **[1, 2006.01]**
5/35 • • • one blank forming three sides of a four-sided body, and the other blank forming the remaining side, a hinged lid, and the opposite end closure **[2, 2006.01]**
5/355 • specially adapted to be of variable capacity **[6, 2006.01]**

5/36 • specially constructed to allow collapsing and re-erecting without disengagement of side or bottom connections **[1, 2006.01]**
5/38 • Drawer-and-shell type containers **[1, 2006.01]**
5/40 • specially constructed to contain liquids **[1, 2006.01]**
5/42 • Details of containers or of foldable or erectable container blanks **[1, 2006.01]**
5/43 • • Containers characterised by means discouraging or indicating unauthorised opening of the container **[6, 2006.01]**
5/44 • • Integral, inserted or attached portions forming internal or external fittings **[1, 6, 2006.01]**
5/46 • • • Handles **[1, 2006.01]**
5/462 • • • • formed by folding a blank **[6, 2006.01]**
5/465 • • • • • not integral with the container **[6, 2006.01]**
5/468 • • • • Handholds in container body **[6, 2006.01]**
5/472 • • • • of metal, e.g. wire **[6, 2006.01]**
5/475 • • • • of plastics **[6, 2006.01]**
5/478 • • • • of cord **[6, 2006.01]**
5/48 • • • Partitions **[1, 2006.01]**
5/4805 • • • • integral **[6, 2006.01]**
5/481 • • • • • forming compartments in at least two rows **[6, 2006.01]**
5/482 • • • • • • Longitudinal partition provided with cut flaps which are folded perpendicular to the partition **[6, 2006.01]**
5/483 • • • • • • formed by folding extensions hinged to the upper or lower edges of a tubular container body (B65D 5/482 takes precedence) **[6, 2006.01]**
5/484 • • • • • • formed by folding extensions of side panels of a tray-like container body blank **[6, 2006.01]**
5/485 • • • • • • combined with inserted partitions **[6, 2006.01]**
5/486 • • • • • formed by folding extensions hinged to a tubular container body along hinge lines parallel to its axis (B65D 5/481 takes precedence) **[6, 2006.01]**
5/487 • • • • • formed by folding extensions hinged to the upper or lower edges of a tubular container body (B65D 5/483 takes precedence) **[6, 2006.01]**
5/488 • • • • • formed by folding extensions of side panels of a tray-like container body blank (B65D 5/484 takes precedence) **[6, 2006.01]**
5/489 • • • • • formed by folding inwardly portions cut in the container body (B65D 5/481 takes precedence) **[6, 2006.01]**
5/49 • • • • inserted **[6, 2006.01]**
5/491 • • • • • forming compartments in at least two rows (B65D 5/485 takes precedence) **[6, 2006.01]**
5/492 • • • • • • formed by folding a single blank (B65D 5/493, B65D 5/494 take precedence) **[6, 2006.01]**
5/493 • • • • • • provided with an at least partial bottom **[6, 2006.01]**
5/494 • • • • • • Longitudinal partition provided with cut flaps which are folded perpendicular to the partition **[6, 2006.01]**
5/495 • • • • • • formed by crossed strips with inter-engaging slots **[6, 2006.01]**
5/496 • • • • • formed by folding strips into a tubular, U- or S- section (B65D 5/491 takes precedence) **[6, 2006.01]**
5/497 • • • • • Blank provided with cut flaps which are folded perpendicular to the blank (B65D 5/491 takes precedence) **[6, 2006.01]**
5/498 • • • • • Partitions with one or more flaps formed by folding, and fixed to, or maintained in position by, the sides of the container body (B65D 5/491, B65D 5/496, B65D 5/497 take precedence) **[6, 2006.01]**
5/499 • • • • • Partitions formed from non-folded strips engaged in slots or grooves in the sides of the container body (B65D 5/491 takes precedence) **[6, 2006.01]**
5/50 • • • Internal supporting or protecting elements for contents (elements formed by inward- folding of a wall extending from, and continuously around, an end of a tubular body B65D 5/06; partitions B65D 5/48) **[1, 2006.01]**
5/52 • • • External stands or display elements for contents **[1, 2006.01]**
5/54 • • Lines of weakness to facilitate opening of container or dividing it into separate parts by cutting or tearing (break-in flaps, or members adapted to be torn-off, to provide pouring openings B65D 5/70) **[1, 2006.01]**
5/56 • • Linings or internal coatings **[1, 2006.01]**
5/58 • • • Linings spaced appreciably from container wall **[1, 2006.01]**
5/60 • • • Loose linings **[1, 2006.01]**
5/62 • • External coverings or coatings **[1, 2006.01]**
5/63 • • having two or more separate access openings (contents-dispensing means B65D 5/72) **[6, 2006.01]**
5/64 • • Lids **[1, 2006.01]**
5/66 • • • Hinged lids (B65D 5/34 takes precedence) **[1, 2006.01]**
5/68 • • • Telescope flanged lids **[1, 2006.01]**
5/70 • • Break-in flaps, or members adapted to be torn-off, to provide pouring openings (B65D 5/74 takes precedence) **[1, 2006.01]**
5/72 • • Contents-dispensing means **[1, 2006.01]**
5/74 • • • Spouts **[1, 2006.01]**
5/76 • • • for discharging metered quantities **[1, 2006.01]**

6/00 Containers having bodies formed by interconnecting or uniting two or more rigid, or substantially rigid, components made wholly or mainly of metal, plastics, wood or substitutes therefor (containers having a curved cross-section B65D 8/00; specially constructed to be opened by cutting, piercing, or tearing of wall portions B65D 17/00; rigid pallets with side walls B65D 19/02) **[3, 2006.01]**

6/02 • characterised by shape **[3, 2006.01]**
6/04 • • Trays or like containers without lids **[3, 2006.01]**
6/06 • • of drawer-and-shell type **[3, 2006.01]**
6/08 • of skeleton or like apertured construction, e.g. made of interwoven or intermeshing flexible material **[3, 2006.01]**
6/10 • with walls comprising multiple panels in spaced face-to-face relationship, e.g. double walls **[3, 2006.01]**
6/12 • • with walls, e.g. bottoms, movable under influence of contents **[3, 2006.01]**
6/14 • with walls comprising laminated panels, e.g. plywood **[3, 2006.01]**

6/16 • collapsible **[3, 2006.01]**
6/18 • • with hinged components **[3, 2006.01]**
6/20 • • • bound by flexible wire, or strip-like, elements **[3, 2006.01]**
6/22 • • • and detachable components **[3, 2006.01]**
6/24 • • with detachable components (B65D 6/22 takes precedence) **[3, 2006.01]**
6/26 • • Devices for holding collapsible containers in erected state **[3, 2006.01]**
6/28 • with permanent connections between walls, e.g. corner connections **[3, 2006.01]**
6/30 • • formed by rolling or by rolling and pressing **[3, 2006.01]**
6/32 • • formed by soldering, welding, or otherwise uniting opposed surfaces **[3, 2006.01]**
6/34 • Reinforcing or strengthening parts or members **[3, 2006.01]**
6/36 • • Battens, bands, strips or fittings **[3, 2006.01]**
6/38 • • Deformations, e.g. corrugations **[3, 2006.01]**
6/40 • with walls formed with filling or emptying apertures **[3, 2006.01]**

8/00 Containers having a curved cross-section formed by interconnecting or uniting two or more rigid, or substantially rigid, components made wholly or mainly of metal, plastics, wood or substitutes therefor (specially constructed to be opened by cutting, piercing, or tearing of wall portions B65D 17/00; rigid pallets with side walls B65D 19/02) **[3, 2006.01]**

8/02 • Arrangements of filling or discharging apertures **[3, 2006.01]**
8/04 • characterised by wall construction or by connection between walls **[3, 2006.01]**
8/06 • • with multiple walls in spaced face-to-face relationship, e.g. double walls **[3, 2006.01]**
8/08 • • Reinforcing or strengthening parts or members **[3, 2006.01]**
8/10 • • • Battens, bands, strips or fittings **[3, 2006.01]**
8/12 • • Deformations, e.g. corrugations **[3, 2006.01]**
8/14 • • collapsible **[3, 2006.01]**
8/16 • • with walls comprising laminated panels, e.g. plywood **[3, 2006.01]**
8/18 • • with permanent connections between walls **[3, 2006.01]**
8/20 • • • formed by rolling or by rolling and pressing **[3, 2006.01]**
8/22 • • • formed by soldering, welding, or otherwise uniting opposed surfaces (B65D 8/20 takes precedence) **[3, 2006.01]**

13/00 Containers having bodies formed by interconnecting two or more rigid, or substantially rigid, components made wholly or mainly of the same material, other than metal, plastics, wood, or substitutes therefor (rigid pallets with side walls B65D 19/02) **[1, 4, 2006.01]**

13/02 • of glass, pottery, or other ceramic material **[1, 2006.01]**

17/00 Rigid or semi-rigid containers specially constructed to be opened by cutting or piercing, or by tearing of frangible members or portions (frangible inner closure members associated with caps, lids or covers B65D 51/20) **[1, 2006.01]**

17/28 • at lines or points of weakness **[3, 2006.01]**
17/30 • • using cutting devices **[3, 2006.01]**
17/32 • • having non-detachable members or portions **[3, 2006.01]**
17/34 • • Arrangement or construction of pull or lift tabs (B65D 17/32 takes precedence) **[3, 2006.01]**
17/347 • • • characterised by the connection between the tab and a detachable member or portion of the container **[6, 2006.01]**
17/353 • • • • the connecting means being integral with the tab or with the detachable member or portion **[6, 2006.01]**
17/36 • • • adapted for engagement with opening tools, e.g. slotted keys (attachment of opening tools, e.g. slotted keys, to containers B65D 17/52) **[3, 2006.01]**
17/38 • • • • with strip or tool guides **[3, 2006.01]**
17/40 • • characterised by having the line of weakness extending circumferentially of the container mouth **[3, 2006.01]**
17/42 • with cutting, punching, or cutter accommodating means (for opening at lines or points of weakness B65D 17/28) **[3, 2006.01]**
17/44 • • in which the puncturing tool serves as closure **[3, 2006.01]**
17/46 • • Wires, strings or the like, e.g. rip cords **[3, 2006.01]**
17/48 • • • located in the seam-adjoining parts of the container **[3, 2006.01]**
17/50 • Non-integral frangible members applied to, or inserted in, preformed openings, e.g. tearable strips or plastic plugs (B65D 53/08 takes precedence) **[3, 2006.01]**
17/52 • Attachment of opening tools, e.g. slotted keys, to containers **[3, 2006.01]**

19/00 Pallets or like platforms, with or without side walls, for supporting loads to be lifted or lowered (in devices for lifting or lowering bulky or heavy goods for loading or unloading purposes B66F 9/12) **[1, 2006.01]**

19/02 • Rigid pallets with side walls, e.g. box pallets **[1, 2006.01]**
19/04 • • with bodies moulded or otherwise fabricated in one piece **[1, 2006.01]**
19/06 • • with bodies formed by uniting or interconnecting two or more components **[1, 2006.01]**
19/08 • • • made wholly or mainly of metal **[1, 2006.01]**
19/10 • • • • of skeleton construction, e.g. made of wire **[1, 2006.01]**
19/12 • • • • Collapsible pallets **[1, 2006.01]**
19/14 • • • made wholly or mainly of wood **[1, 2006.01]**
19/16 • • • • Collapsible pallets **[1, 2006.01]**
19/18 • • • made wholly or mainly of plastics material **[1, 2006.01]**
19/20 • • • made wholly or mainly of paper **[1, 2006.01]**
19/22 • Rigid pallets without side walls **[1, 2006.01]**
19/24 • • with bodies moulded or otherwise fabricated in one piece **[1, 2006.01]**
19/26 • • with bodies formed by uniting or interconnecting two or more components **[1, 2006.01]**
19/28 • • • made wholly or mainly of metal **[1, 2006.01]**
19/30 • • • • of skeleton construction, e.g. made of wire **[1, 2006.01]**
19/31 • • • made wholly or mainly of wood **[4, 2006.01]**
19/32 • • • made wholly or mainly of plastics material **[1, 2006.01]**
19/34 • • • made wholly or mainly of paper **[1, 2006.01]**
19/36 • Pallets comprising a flexible load carrier extending between guide elements, e.g. guide tubes **[1, 2006.01]**
19/38 • Details or accessories **[1, 2006.01]**

19/40 • • Elements for spacing platforms from supporting surface **[1, 2006.01]**

19/42 • • • Arrangements or applications of rollers or wheels **[1, 2006.01]**

19/44 • • Elements or devices for locating articles on platforms **[1, 2006.01]**

21/00 Nestable, stackable or joinable containers; Containers of variable capacity [1, 2006.01]

21/02 • Containers specially shaped, or provided with fittings or attachments, to facilitate nesting, stacking, or joining together **[1, 5, 2006.01]**

21/024 • • for stacking containers lying on their sides, or for joining containers side-by-side, by means which are lateral with respect to the normal orientation of the containers **[6, 2006.01]**

21/028 • • • with interconnecting means forming part of the containers, e.g. dovetails, snap connectors or hook elements **[6, 2006.01]**

21/032 • • for stacking containers one upon another in the upright or upside down position, e.g. with vertically projecting elements or recesses **[6, 2006.01]**

21/036 • • • having closure means specially adapted for facilitating stacking **[6, 2006.01]**

21/04 • • Open-ended containers shaped to be nested when empty and to be superposed when full **[1, 2006.01]**

21/06 • • with movable parts adapted to be placed in alternative positions for nesting the containers when empty and for stacking them when full **[1, 2006.01]**

21/08 • Containers of variable capacity (containers of polygonal cross-section adapted to be of variable capacity formed by folding or erecting blanks made of paper B65D 5/355) **[1, 2006.01]**

Details of rigid or semi-rigid containers not otherwise provided for [3]

23/00 Details of bottles or jars not otherwise provided for (screw-threaded or bayonet connections between stoppers or caps and containers B65D 39/08, B65D 41/04, B65D 41/34; closure-securing elements B65D 45/00) **[1, 2006.01]**

23/02 • Linings or internal coatings **[1, 2006.01]**

23/04 • Means for mixing or for promoting flow of contents **[1, 2006.01]**

23/06 • Integral drip catchers or drip-preventing means **[1, 2006.01]**

23/08 • Coverings or external coatings **[1, 2006.01]**

23/10 • Handles **[1, 2006.01]**

23/12 • Means for the attachment of smaller articles **[1, 2006.01]**

23/14 • • of tags **[1, 2006.01]**

23/16 • • of thermometers **[1, 2006.01]**

25/00 Details of other kinds or types of rigid or semi-rigid containers [1, 2006.01]

25/02 • Internal fittings (of containers made by folding or erecting blanks made of paper B65D 5/44) **[1, 2006.01]**

25/04 • • Partitions **[1, 2006.01]**

25/06 • • • adapted to be fitted in two or more alternative positions **[1, 2006.01]**

25/08 • • • with provisions for removing or destroying, e.g. to facilitate mixing of contents **[1, 2006.01]**

25/10 • • Devices to locate articles in containers **[1, 2006.01]**

25/14 • Linings or internal coatings (of containers made by folding or erecting blanks made of paper B65D 5/56) **[1, 2006.01]**

25/16 • • Loose, or loosely-attached, linings **[1, 2006.01]**

25/18 • • spaced appreciably from container wall **[1, 2006.01]**

25/20 • External fittings (of containers made by folding or erecting blanks made of paper B65D 5/44) **[1, 2006.01]**

25/22 • • for facilitating lifting or suspending of containers **[1, 2006.01]**

25/24 • • for spacing bases of containers from supporting surfaces, e.g. legs (for pallets B65D 19/40) **[1, 2006.01]**

25/26 • • Devices for protecting contents against shock **[1, 2006.01]**

25/28 • Handles (of containers made by folding or erecting blanks made of paper B65D 5/46; of bottles or jars B65D 23/10) **[1, 2006.01]**

25/30 • • Hand holes **[1, 2006.01]**

25/32 • • Bail handles, i.e. pivoted handles of generally semi-circular shape **[1, 2006.01]**

25/34 • Coverings or external coatings (of containers made by folding or erecting blanks made of paper B65D 5/62; for bottles or jars B65D 23/08; wrappers B65D 65/00) **[1, 2006.01]**

25/36 • • formed by applying sheet material **[1, 2006.01]**

25/38 • Devices for discharging contents (incorporated in removable or non-permanently-secured closure members B65D 47/00; for discharging thin flat articles B65D 83/08) **[1, 2006.01]**

25/40 • • Nozzles or spouts **[1, 2006.01]**

25/42 • • • Integral or attached nozzles or spouts **[1, 2006.01]**

25/44 • • • • Telescopic or retractable nozzles or spouts **[1, 2006.01]**

25/46 • • • • Hinged or pivoted nozzles or spouts **[1, 2006.01]**

25/48 • • • Separable nozzles or spouts **[1, 2006.01]**

25/50 • • • • arranged to be plugged in two alternate positions **[1, 2006.01]**

25/52 • • Devices for discharging successive articles or portions of contents **[1, 2006.01]**

25/54 • Inspection openings or windows **[1, 2006.01]**

25/56 • • with means for indicating level of contents **[1, 2006.01]**

General kinds of flexible containers [3]

27/00 Envelopes or like essentially-rectangular flexible containers for postal or other purposes having no structural provision for thickness of contents (with shock-absorbing properties B65D 81/03; letter-cards B42D 15/00) **[1, 2006.01]**

27/02 • with stiffening inserts **[1, 2006.01]**

27/04 • with apertures or windows for viewing contents **[1, 2006.01]**

27/06 • with provisions for repeated re-use **[1, 2006.01]**

27/08 • with two or more compartments **[1, 2006.01]**

27/10 • Chains of interconnected envelopes **[1, 2006.01]**

27/12 • Closures (separate fasteners B42F 1/00) **[1, 2006.01]**

27/14 • • using adhesive applied to integral parts, e.g. flaps **[1, 2006.01]**

27/16 • • • using pressure-sensitive adhesive **[1, 2006.01]**

27/18 • • • using heat-activatable adhesive **[1, 2006.01]**
27/20 • • using self-locking integral or attached elements **[1, 2006.01]**
27/22 • • • Tongue-and-slot or like closures; Tuck-in flaps **[1, 2006.01]**
27/24 • • • String closures **[1, 2006.01]**
27/26 • • • Deformable metallic elements **[1, 2006.01]**
27/28 • • Applications of separate closing elements **[1, 2006.01]**
27/30 • • with special means for indicating unauthorised opening **[1, 2006.01]**
27/32 • Opening devices incorporated during envelope manufacture **[1, 2006.01]**
27/34 • • Lines of weakness **[1, 2006.01]**
27/36 • • Finger openings, slots, or gripping tabs **[1, 2006.01]**
27/38 • • Tearing-strings or -strips **[1, 2006.01]**

30/00 Sacks, bags or like containers [3, 2006.01]
30/02 • characterised by the material used **[3, 2006.01]**
30/04 • • made of fabric **[3, 2006.01]**
30/06 • • • net-like **[3, 2006.01]**
30/08 • • with laminated or multiple walls in spaced face-to-face relationship, e.g. double walls (B65D 30/14, B65D 30/26 take precedence; with shock-absorbing properties B65D 81/03) **[3, 2006.01]**
30/10 • characterised by shape or construction **[3, 2006.01]**
30/12 • • Cross bottom bags **[3, 2006.01]**
30/14 • • • multi-layered **[3, 2006.01]**
30/16 • • with rigid end walls, e.g. free standing bags **[3, 2006.01]**
30/18 • • with block bottoms **[3, 2006.01]**
30/20 • • with folds, e.g. to facilitate collapsing **[3, 2006.01]**
30/22 • • with two or more compartments **[3, 2006.01]**
30/24 • • Bags having valves **[3, 2006.01]**
30/26 • • • multi-layered **[3, 2006.01]**
30/28 • • Triangular- or conical-shaped bags **[3, 2006.01]**

33/00 Details of, or accessories for, sacks or bags [1, 2006.01]
33/01 • Ventilation or draining of bags **[3, 2006.01]**
33/02 • Local reinforcements or stiffening inserts, e.g. wires, strings, strips or frames **[1, 2006.01]**
33/04 • Windows or other apertures, e.g. for viewing contents **[1, 2006.01]**
33/06 • Handles **[1, 2006.01]**
33/08 • • Hand holes **[1, 2006.01]**
33/10 • • formed of similar material to that used for the bag **[1, 2006.01]**
33/12 • • String handles **[1, 2006.01]**
33/14 • Suspension means (handles B65D 33/06) **[1, 2006.01]**
33/16 • End- or aperture-closing arrangements or devices (valves of valve bags B65D 30/24; removable stoppers or caps B65D 39/00, B65D 41/00; closures of filled bags B65D 77/10; closing filled bags in association with packaging B65B 7/00, B65B 51/00) **[1, 2006.01]**
33/17 • • with brackets, rings or locks **[4, 2006.01]**
33/18 • • using adhesive applied to integral parts, e.g. to flaps **[1, 2006.01]**
33/20 • • • using pressure-sensitive adhesive **[1, 2006.01]**
33/22 • • • using heat-activatable adhesive **[1, 2006.01]**
33/24 • • using self-locking integral or attached closure elements, e.g. flaps (B65D 33/25 takes precedence) **[1, 4, 2006.01]**
33/25 • • Riveting; Dovetailing; Screwing; using press buttons or slide fasteners **[4, 2006.01]**
33/26 • • using staples or stitches **[1, 2006.01]**
33/28 • • Strings or strip-like closures **[1, 4, 2006.01]**
33/30 • • Deformable or resilient metal or like strips or bands **[1, 2006.01]**
33/32 • • Metallic chain closures **[1, 2006.01]**
33/34 • • with special means for indicating unauthorised opening **[1, 2006.01]**
33/36 • Means for discharging contents **[1, 2006.01]**
33/38 • • Spouts **[1, 2006.01]**

35/00 Pliable tubular containers adapted to be permanently deformed to expel contents, e.g. collapsible tubes for toothpaste or other plastic or semi-liquid material; Holders therefor [1, 2006.01]
35/02 • Body construction **[1, 2006.01]**
35/04 • • made in one piece **[1, 2006.01]**
35/06 • • • from metallic material **[1, 2006.01]**
35/08 • • • from plastics material **[1, 2006.01]**
35/10 • • made by uniting or interconnecting two or more components **[1, 2006.01]**
35/12 • • Connections between body and closure-receiving bush **[1, 2006.01]**
35/14 • with linings or inserts **[1, 2006.01]**
35/16 • • for minimising or preventing corrosion of body **[1, 2006.01]**
35/18 • • for keeping body in rolled state after partial expulsion of contents **[1, 2006.01]**
35/20 • • for retracting contents **[1, 2006.01]**
35/22 • with two or more compartments **[1, 2006.01]**
35/24 • with auxiliary devices (linings or inserts B65D 35/14) **[1, 2006.01]**
35/26 • • for filling **[1, 2006.01]**
35/28 • • for expelling contents **[1, 2006.01]**
35/30 • • • Pistons **[1, 2006.01]**
35/32 • • Winding keys **[1, 2006.01]**
35/34 • • • connected to, or associated with, tube holders **[1, 2006.01]**
35/36 • • for applying contents to surfaces **[1, 2006.01]**
35/38 • • • Nozzles **[1, 2006.01]**
35/40 • • for metering discharge **[1, 2006.01]**
35/42 • • for preventing loss of removable closure members **[1, 2006.01]**
35/44 • Closures **[1, 2006.01]**
35/46 • • with valves **[1, 2006.01]**
35/48 • • • Hand-operated valves **[1, 2006.01]**
35/50 • • • opening when tubular containers is deformed **[1, 2006.01]**
35/52 • • • Slits **[1, 2006.01]**
35/54 • • • opening when closure is pressed against a surface to which contents are applied (nozzles B65D 35/38) **[1, 2006.01]**
35/56 • Holders for collapsible tubes **[1, 2006.01]**

37/00 Portable flexible containers not otherwise provided for [1, 2006.01]

Closure members, other than those folded of paper and incorporated in or attached to the container, for opening of rigid or semi-rigid containers without destroying outer wall portions of the container itself, or of flexible containers presenting similar closing problems; Arrangements or devices for preventing refilling of containers; Parts of containers co-operating with closure members or characterised by the form of closure members [3]

39/00 **Closures arranged within necks or pouring openings or in discharge apertures, e.g. stoppers** (lids or covers B65D 43/00; with additional securing elements B65D 45/00) **[1, 2006.01]**

39/02 • Disc closures (discs with flanges B65D 39/04) **[1, 2006.01]**

39/04 • Cup-shaped plugs or like hollow flanged members **[1, 2006.01]**

39/06 • Balls **[1, 2006.01]**

39/08 • Threaded or like closure members secured by rotation; Bushes therefor **[1, 2006.01]**

39/10 • • with bayonet cams **[1, 2006.01]**

39/12 • expansible, e.g. inflatable **[1, 2006.01]**

39/14 • extending through lateral openings in necks **[1, 2006.01]**

39/16 • with handles or other special means facilitating manual actuation **[1, 2006.01]**

39/18 • with anti-friction or wear-resistant coatings or coverings **[1, 2006.01]**

41/00 **Caps, e.g. crown caps or crown seals, i.e. members having parts arranged for engagement with the external periphery of a neck or wall defining a pouring opening or discharge aperture; Protective cap-like covers for closure members, e.g. decorative covers of metal foil or paper** (B65D 45/00 takes precedence) **[1, 2006.01]**

41/01 • specially adapted for accommodating plural sizes **[6, 2006.01]**

41/02 • Caps or cap-like covers without lines of weakness, tearing strips, tags, or like opening or removal devices **[1, 2006.01]**

41/04 • • Threaded or like caps or cap-like covers secured by rotation **[1, 2006.01]**

41/06 • • • with bayonet cams **[1, 2006.01]**

41/08 • • • engaging a threaded ring clamped on the external periphery of the neck or wall **[1, 2006.01]**

41/10 • • Caps or cap-like covers adapted to be secured in position by permanent deformation of the wall-engaging parts **[1, 2006.01]**

41/12 • • • made of relatively-stiff metallic materials, e.g. crown caps **[1, 2006.01]**

41/14 • • • made of metallic foil or like thin flexible material **[1, 2006.01]**

41/16 • • Snap-on caps or cap-like covers **[1, 2006.01]**

41/17 • • • push-on and twist-off **[6, 2006.01]**

41/18 • • • non-metallic, e.g. made of paper or plastics **[1, 2006.01]**

41/20 • • Caps or cap-like covers with membranes, e.g. arranged to be pierced **[1, 2006.01]**

41/22 • • Caps or cap-like covers with elastic parts adapted to be stretched over the container **[1, 2006.01]**

41/24 • • Caps or cap-like covers made of shrinkable material or formed in situ by dipping, e.g. using gelatine or celluloid **[1, 2006.01]**

41/26 • • Caps or cap-like covers serving as, or incorporating, drinking or measuring vessels **[1, 2006.01]**

41/28 • • Caps combined with stoppers **[1, 2006.01]**

41/30 • • • Deformable caps combined with resilient stoppers to permit re-use as temporary closures **[1, 2006.01]**

41/32 • Caps or cap-like covers with lines of weakness, tearing-strips, tags, or like opening or removal devices, e.g. to facilitate formation of pouring openings **[1, 2006.01]**

41/34 • • Threaded or like caps or cap-like covers **[1, 2006.01]**

41/36 • • • with bayonet cams **[1, 2006.01]**

41/38 • • • engaging a threaded ring clamped on the external periphery of the neck or wall **[1, 2006.01]**

41/40 • • Caps or cap-like covers adapted to be secured in position by permanent deformation of the wall-engaging parts **[1, 2006.01]**

41/42 • • • made of relatively-stiff metallic material, e.g. crown caps **[1, 2006.01]**

41/44 • • • made of metallic foil or like thin flexible material **[1, 2006.01]**

41/46 • • Snap-on caps or cap-like covers **[1, 2006.01]**

41/47 • • • push-on and twist-off **[6, 2006.01]**

41/48 • • • non-metallic, e.g. made of paper or plastics **[1, 2006.01]**

41/50 • • Caps or cap-like covers with membranes, e.g. arranged to be pierced **[1, 2006.01]**

41/52 • • Caps or cap-like covers with elastic parts adapted to be stretched over the container **[1, 2006.01]**

41/54 • • Caps or cap-like covers made of shrinkable material or formed in situ by dipping, e.g. using gelatine or celluloid **[1, 2006.01]**

41/56 • • Caps or cap-like covers serving as, or incorporating, drinking or measuring vessels **[1, 2006.01]**

41/58 • • Caps or cap-like covers combined with stoppers **[1, 2006.01]**

41/60 • • • Deformable caps combined with resilient stoppers to permit re-use as temporary closures **[1, 2006.01]**

41/62 • Secondary protective cap-like outer covers for closure members **[1, 2006.01]**

43/00 **Lids or covers for rigid or semi-rigid containers** (for cooking vessels A47J 36/06; covers for pressure vessels in general F16J 13/00) **[1, 2006.01]**

43/02 • Removable lids or covers (with means for piercing, cutting, or tearing a frangible inner closure B65D 51/22) **[1, 2006.01]**

43/03 • • nestable or stackable **[3, 2006.01]**

43/04 • • having a part, or parts, engaging within the mouth of the container and retained by friction or gravity **[1, 2006.01]**

43/06 • • having a peripheral channel embracing the rim of the container **[1, 2006.01]**

43/08 • • having a peripheral flange fitting over the rim of the container **[1, 2006.01]**

43/10 • • • and retained by snapping over beads or projections **[1, 2006.01]**

43/12 • • guided for removal by sliding **[1, 2006.01]**

43/14 • Non-removable lids or covers **[1, 2006.01]**

43/16 • • hinged for upward or downward movement (hinges of door or similar type E05D) **[1, 2006.01]**

43/18 • • pivoted for movement in plane of container mouth **[1, 2006.01]**

43/20 • • linearly slidable **[1, 2006.01]**

43/22 • • Devices for holding in closed position, e.g. clips **[1, 4, 2006.01]**
43/24 • • Devices for retaining in open position **[1, 2006.01]**
43/26 • Mechanisms for opening or closing, e.g. pedal-operated **[1, 2006.01]**

45/00 Clamping or other pressure-applying devices for securing or retaining closure members (screw-threaded or bayonet connections between stoppers or caps and containers B65D 39/08, B65D 41/04, B65D 41/34; expansible stoppers B65D 39/12; for pressure vessels in general F16J 13/00) **[1, 2006.01]**
45/02 • for applying axial pressure to engage closure with sealing surface **[1, 2006.01]**
45/04 • • comprising U-shaped or bifurcated members coacting with containers, e.g. pivoted bails **[1, 2006.01]**
45/06 • • • associated with toggle levers, e.g. swing stopper arrangements **[1, 2006.01]**
45/08 • • • incorporating springs **[1, 2006.01]**
45/10 • • • incorporating tightening screws **[1, 2006.01]**
45/12 • • • associated with locking levers engaging rack teeth for varying the applied pressure **[1, 2006.01]**
45/14 • • • coacting with inclined grooves in container wall for varying the applied pressure **[1, 2006.01]**
45/16 • • Clips, hooks, or clamps, e.g. C-shaped (U-shaped or bifurcated members B65D 45/04) **[1, 2006.01]**
45/18 • • • of snap-over type **[1, 2006.01]**
45/20 • • • pivoted **[1, 2006.01]**
45/22 • • • • resilient **[1, 2006.01]**
45/24 • • • • incorporating pressure-applying means, e.g. screws or toggles **[1, 2006.01]**
45/26 • • • • incorporating tensioning chains **[1, 2006.01]**
45/28 • • Elongated members, e.g. leaf springs, located substantially at right angles to closure axis and acting between the face of the closure and abutments on container **[1, 2006.01]**
45/30 • • Annular members, e.g. with snap-over action or screw-threaded **[1, 2006.01]**
45/32 • for applying radial pressure, e.g. contractible bands encircling closure member **[1, 2006.01]**
45/34 • • lever-operated **[1, 2006.01]**

47/00 Closures with filling and discharging, or with discharging, devices (dispensers for liquid soap A47K 5/12) **[1, 2006.01]**
47/02 • for initially filling and for preventing subsequent refilling **[1, 2006.01]**
47/04 • Closures with discharging devices other than pumps **[1, 2006.01]**
47/06 • • with pouring spouts or tubes; with discharge nozzles or passages (with slidable spouts B65D 47/26) **[1, 2006.01]**
47/08 • • • having articulated or hinged closures **[1, 2006.01]**
47/10 • • • having frangible closures **[1, 2006.01]**
47/12 • • • having removable closures **[1, 2006.01]**
47/14 • • • • and closure-retaining means **[1, 2006.01]**
47/16 • • • with closures operating automatically when spout is immersed in discharged liquid **[1, 2006.01]**
47/18 • • • for discharging drops; Droppers **[1, 2006.01]**
47/20 • • comprising hand-operated members for controlling discharge (B65D 47/34 takes precedence) **[1, 2006.01]**
47/22 • • • operating with pinching action on flexible tubes **[1, 2006.01]**
47/24 • • • with poppet valves **[1, 2006.01]**
47/26 • • • with slide valves, e.g. formed with slidable spouts **[1, 2006.01]**
47/28 • • • • having linear movement **[1, 2006.01]**
47/30 • • • with plug valves **[1, 2006.01]**
47/32 • • with means for venting **[1, 3, 2006.01]**
47/34 • Closures with discharge by pumping **[1, 2006.01]**
47/36 • Closures with frangible parts adapted to be pierced, torn, or removed, to provide discharge openings (B65D 51/18 takes precedence; caps with pierceable membranes B65D 41/20, B65D 41/50) **[1, 2006.01]**
47/38 • • with piercing means arranged to act subsequently as a valve to control the opening **[1, 2006.01]**
47/40 • with drip catchers or drip-preventing means **[1, 2006.01]**
47/42 • with pads or like contents-applying means (brushes combined or associated with containers A46B 11/00) **[1, 2006.01]**
47/44 • • combined with slits opening when container is deformed or when pad is pressed against surface to which contents are to be applied (pliable tubular containers with valves opening when closure is pressed against surface B65D 35/54) **[1, 2006.01]**

49/00 Arrangements or devices for preventing refilling of containers (for initial filling and for preventing subsequent refilling B65D 47/02) **[1, 2006.01]**
49/02 • One-way valves **[1, 2006.01]**
49/04 • • Weighted valves **[1, 2006.01]**
49/06 • • • with additional loading weights **[1, 2006.01]**
49/08 • • Spring-loaded valves **[1, 2006.01]**
49/10 • • Arrangements of several valves **[1, 2006.01]**
49/12 • by destroying, in the act of opening the container, an integral portion thereof **[1, 2006.01]**

50/00 Closures with means for discouraging unauthorised opening or removal thereof, with or without indicating means, e.g. child-proof closures (tamper-indicating closures without means for discouraging, see the relevant groups, e.g. B65D 41/32, B65D 51/20; means per se for discouraging or indicating unauthorised opening or removal of closure B65D 55/02) **[5, 2006.01]**
50/02 • openable or removable by the combination of plural actions **[5, 2006.01]**
50/04 • • requiring the combination of simultaneous actions, e.g. depressing and turning, lifting and turning, maintaining a part and turning another one (B65D 50/10 takes precedence; caps or covers secured by rotation with bayonet cams B65D 41/06, B65D 41/36) **[5, 2006.01]**
50/06 • • requiring the combination of different actions in succession (B65D 50/10 takes precedence) **[5, 2006.01]**
50/08 • • openable or removable by closure or container deformation **[5, 2006.01]**
50/10 • • disengageable only after alignment of closure parts with container **[5, 2006.01]**
50/12 • Disguised or hidden forms of closures, e.g. dummy closure in association with removable closure forming container base **[5, 2006.01]**
50/14 • openable or removable only by means of special opening member (containers with cutting, punching, or cutter accommodating means B65D 17/42; key-actuated closure locks B65D 55/14) **[5, 2006.01]**

51/00 **Closures not otherwise provided for** (covers or similar closures as engineering elements for pressure vessels in general F16J 13/00) **[1, 2006.01]**

51/02 • Loosely-engaging lids or covers for jars, cans, or like containers for liquids without means for effecting sealing of container (for cooking-vessels A47J 36/06) **[1, 2006.01]**

51/04 • • hinged (B65D 51/10 takes precedence) **[1, 2006.01]**

51/06 • • collapsible **[1, 2006.01]**

51/08 • • with axial projections fitting within, or around, the walls defining the container openings, e.g. for milk churns **[1, 2006.01]**

51/10 • • opening automatically when container is tilted for pouring **[1, 2006.01]**

51/12 • • Flexible non-elastic covers **[1, 2006.01]**

51/14 • Rigid discs or spherical members adapted to be held in sealing engagement with mouth of container, e.g. closure plates for preserving jars **[1, 2006.01]**

51/16 • with means for venting air or gas **[1, 2006.01]**

51/18 • Arrangements of closures with protective outer cap-like covers or of two or more co-operating closures **[1, 2006.01]**

51/20 • • Caps, lids, or covers co-operating with an inner closure arranged to be opened by piercing, cutting, or tearing **[1, 2006.01]**

51/22 • • • having means for piercing, cutting, or tearing the inner closure **[1, 2006.01]**

51/24 • combined with auxiliary devices for non-closing purposes **[1, 2006.01]**

51/26 • • with means for keeping contents in position, e.g. resilient means **[1, 2006.01]**

51/28 • • with auxiliary containers for additional articles or materials **[1, 2006.01]**

51/30 • • • for desiccators **[1, 2006.01]**

51/32 • • with brushes or rods for applying or stirring contents **[1, 2006.01]**

53/00 **Sealing or packing elements; Sealings formed by liquid or plastic material [1, 2006.01]**

53/02 • Collars or rings **[1, 2006.01]**

53/04 • Discs **[1, 2006.01]**

53/06 • Sealings formed by liquid or plastic material **[1, 2006.01]**

53/08 • Flexible adhesive strips adapted to seal filling or discharging apertures **[1, 2006.01]**

53/10 • characterised by special adaptation to acid-proof vessels **[1, 2006.01]**

55/00 **Accessories for container closures not otherwise provided for [1, 2006.01]**

55/02 • Locking devices; Means for discouraging or indicating unauthorised opening or removal of closure (protective covers for bottles B65D 23/08; protective cap-like outer covers for bottle or jar closures B65D 41/62; pressure-applying means B65D 45/00; closures with means for discouraging unauthorised opening or removal of closures B65D 50/00) **[1, 5, 2006.01]**

55/04 • • Spring clips, e.g. of wire or of sheet metal **[1, 2006.01]**

55/06 • • Deformable or tearable wires, strings, or strips (containers specially constructed to be opened by tear-strips, strings or the like B65D 17/00; caps or cap-like closures with tear-strips B65D 41/32); Use of seals **[1, 2006.01]**

55/08 • • • Annular elements encircling container necks **[1, 2006.01]**

55/10 • • Locking pins **[1, 2006.01]**

55/12 • • Devices or means with relatively-moving parts co-operating with abutments on bottle or jar **[1, 2006.01]**

55/14 • • Applications of locks, e.g. of permutation or key-controlled locks **[1, 2006.01]**

55/16 • Devices preventing loss of removable closure members **[1, 2006.01]**

Kinds or types of packaging elements

57/00 **Internal frames or supports for flexible articles, e.g. stiffeners; Separators for articles packaged in stacks or groups, e.g. for preventing adhesion of sticky articles [1, 2006.01]**

59/00 **Plugs, sleeves, caps, or like rigid or semi-rigid elements for protecting parts of articles or for bundling articles, e.g. protectors for screw-threads, corner protectors, end caps for tubes or for bundling rod-shaped articles [1, 2006.01]**

59/02 • Plugs **[1, 2006.01]**

59/04 • Sleeves, e.g. postal tubes **[1, 2006.01]**

59/06 • Caps **[1, 2006.01]**

59/08 • • of polygonal cross-section **[1, 2006.01]**

61/00 **External frames or supports adapted to be assembled around, or applied to, articles** (collapsible containers B65D 5/00, B65D 6/16, B65D 6/24, B65D 8/14) **[1, 2006.01]**

61/02 • Tubular frames with resilient joints **[1, 2006.01]**

63/00 **Flexible elongated elements, e.g. straps, for bundling or supporting articles [1, 2006.01]**

63/02 • Metallic straps, tapes, or bands; Joints between ends thereof **[1, 2006.01]**

63/04 • • Joints produced by deformation of ends of elements **[1, 2006.01]**

63/06 • • Joints produced by application of separate securing members, e.g. by deformation thereof **[1, 2006.01]**

63/08 • • • Joints using buckles, wedges, or like locking members attached to the ends of the elements **[1, 2006.01]**

63/10 • Non-metallic straps, tapes, or bands; Filamentary elements, e.g. strings, threads or wires; Joints between ends thereof **[1, 2006.01]**

63/12 • • Joints produced by deformation or tying of ends of elements **[1, 2006.01]**

63/14 • • Joints produced by application of separate securing members **[1, 2006.01]**

63/16 • • • Joints using buckles, wedges, or like locking members attached to the end of the element **[1, 2006.01]**

63/18 • Elements provided with handles or other suspension means **[1, 2006.01]**

65/00 **Wrappers or flexible covers; Packaging materials of special type or form** (wrappers or envelopes with shock-absorbing properties B65D 81/03) **[1, 2006.01]**

Note(s)

Attention is drawn to the definition of "packaging elements" in Note (6) following the title of this subclass.

65/02 • Wrappers or flexible covers **[1, 2006.01]**

65/04 • • non-rectangular **[1, 2006.01]**

65/06 • • • formed with foldable flaps, e.g. interlocking flaps **[1, 2006.01]**
65/08 • • • with fastening elements, e.g. slide fasteners **[1, 2006.01]**
65/10 • • rectangular **[1, 2006.01]**
65/12 • • • formed with crease lines to facilitate folding **[1, 2006.01]**
65/14 • • with areas coated with adhesive **[1, 2006.01]**
65/16 • • with provision for excluding or admitting light **[1, 2006.01]**
65/18 • • • with some areas transparent and others opaque **[1, 2006.01]**
65/20 • • • with provision for excluding light of a particular wavelength **[1, 2006.01]**
65/22 • • Details **[1, 2006.01]**
65/24 • • • Tabs or other projections for locating contents **[1, 2006.01]**
65/26 • • • Opening devices **[1, 2006.01]**
65/28 • • • • Perforations or lines of weakness **[1, 2006.01]**
65/30 • • • • Slits, slots, or cuts **[1, 2006.01]**
65/32 • • • • Tabs or like projections for gripping by the fingers **[1, 2006.01]**
65/34 • • • • Attached tearing-strings or like flexible elements **[1, 2006.01]**
65/36 • • • • Reinforcements to guide tearing **[1, 2006.01]**
65/38 • Packaging materials of special type or form **[1, 2006.01]**
65/40 • • Applications of laminates for particular packaging purposes **[1, 2006.01]**
65/42 • • Applications of coated or impregnated materials **[1, 2006.01]**
65/46 • • Applications of disintegrable, dissolvable or edible materials **[3, 2006.01]**

67/00 Kinds or types of packaging elements not otherwise provided for [1, 2006.01]
67/02 • Clips or clamps for holding articles together for convenience of storage or transport **[1, 2006.01]**

Kinds or types of packages

69/00 Articles joined together for convenience of storage or transport without the use of packaging elements (joining articles for convenience of packaging B65B 17/02) **[1, 2006.01]**

71/00 Bundles of articles held together by packaging elements for convenience of storage or transport, e.g. portable segregating carrier for plural receptacles such as beer cans or pop bottles; Bales of material [1, 2006.01]
71/02 • Arrangements of flexible binders **[1, 2006.01]**
71/04 • • with protecting or supporting elements arranged between binder and articles or materials, e.g. for preventing chafing of binder **[1, 2006.01]**
71/06 • comprising a plurality of articles completely or mainly held together by packaging elements, e.g. under tension **[3, 2006.01]**
71/08 • • Wrappers shrunk by heat **[3, 2006.01]**
71/10 • • • and provided with inserts **[5, 2006.01]**
71/12 • • the packaging elements being formed by folding a single blank **[5, 2006.01]**
71/14 • • • having the shape of a tube, without, or not being characterised by, end walls (sleeves B65D 59/04) **[5, 2006.01]**
71/16 • • • • with article-locating elements (B65D 71/24 takes precedence) **[5, 2006.01]**
71/18 • • • • • Tabs inwardly folded from upper or lower wall **[5, 2006.01]**
71/20 • • • • • Slits or openings along the foldline of the tubular body **[5, 2006.01]**
71/22 • • • • • Openings formed in the sidewall **[5, 2006.01]**
71/24 • • • • with partitions **[5, 2006.01]**
71/26 • • • • • extending from upper or lower wall **[5, 2006.01]**
71/28 • • • • characterised by the handle **[5, 2006.01]**
71/30 • • • • • unitary with the tubular packaging elements (B65D 71/32 takes precedence) **[5, 2006.01]**
71/32 • • • • • formed by finger-holes **[5, 2006.01]**
71/34 • • • • characterised by lines of weakness or the like **[5, 2006.01]**
71/36 • • • characterised by having end walls **[5, 2006.01]**
71/38 • • the packaging elements being formed by folding and interconnecting two or more blanks **[5, 2006.01]**
71/40 • comprising a plurality of articles held together only partially by packaging elements formed by folding a blank **[5, 2006.01]**
71/42 • • formed by folding a single blank into a single layer element **[5, 2006.01]**
71/44 • • • characterised by the handle **[5, 2006.01]**
71/46 • • formed by folding a single blank into a tubular element **[5, 2006.01]**
71/48 • • • characterised by the handle **[5, 2006.01]**
71/50 • comprising a plurality of articles held together only partially by packaging elements formed otherwise than by folding a blank **[5, 2006.01]**
71/52 • Tray-like packaging elements provided with handles for storage or transport of a plurality of articles (B65D 71/12, B65D 71/38, B65D 71/40, B65D 71/50 take precedence) **[5, 2006.01]**
71/54 • • without partitions (B65D 71/60, B65D 71/68 take precedence) **[5, 2006.01]**
71/56 • • with a single longitudinal partition (B65D 71/60, B65D 71/68 take precedence) **[5, 2006.01]**
71/58 • • formed by folding one blank and having vertical partitions (B65D 71/60 takes precedence) **[5, 2006.01]**
71/60 • • formed by folding one blank into a tubular element, having upper wall portions provided with openings, through which the articles extend **[5, 2006.01]**
71/62 • • • with parts of the walls bent against one another to form a longitudinal partition between two rows of articles (B65D 71/64, B65D 71/66 take precedence) **[5, 2006.01]**
71/64 • • • with walls enclosing the articles almost completely (B65D 71/66 takes precedence) **[5, 2006.01]**
71/66 • • • for holding only one row of articles **[5, 2006.01]**
71/68 • • formed by folding and interconnecting two or more blanks (B65D 71/72 takes precedence) **[5, 2006.01]**
71/70 • Trays provided with projections or recesses in order to assemble multiple articles, e.g. intermediate elements for stacking **[5, 2006.01]**
71/72 • • formed by folding one or more blanks, the articles being inserted in openings in a wall **[5, 2006.01]**

73/00 Packages comprising articles attached to cards, sheets or webs [1, 2006.01]

73/02 • Articles, e.g. small electrical components, attached to webs **[1, 2006.01]**

75/00 Packages comprising articles or materials partially or wholly enclosed in strips, sheets, blanks, tubes, or webs of flexible sheet material, e.g. in folded wrappers (B65D 71/00 takes precedence) **[1, 5, 2006.01]**

75/02 • Articles partially enclosed in folded or wound strips or sheets, e.g. wrapped newspapers **[1, 2006.01]**

75/04 • Articles or materials wholly enclosed in single sheets or wrapper blanks **[1, 2006.01]**

75/06 • • in sheets or blanks initially folded to form tubes **[1, 2006.01]**

75/08 • • • with the ends of the tube closed by folding **[1, 2006.01]**

75/10 • • • with the ends of the tube closed by twisting **[1, 2006.01]**

75/12 • • • with the ends of the tube closed by flattening and heat-sealing **[1, 2006.01]**

75/14 • • in sheets or blanks folded-up around all sides of the contents from a portion on which the contents are placed **[1, 2006.01]**

75/16 • • • the upstanding portion of the wrapper being closed by twisting **[1, 2006.01]**

75/18 • • • the upstanding portion of the wrapper being closed by regular or irregular folds or pleats, e.g. bunch-wrapped packages **[1, 2006.01]**

75/20 • • in sheets or blanks doubled around contents and having their opposed free margins united, e.g. by pressure-sensitive adhesive, crimping, heat-sealing, or welding **[1, 2006.01]**

75/22 • • • the sheet or blank being recessed to accommodate contents **[1, 2006.01]**

75/24 • • • • and formed with several recesses to accommodate a series of articles or quantities of material **[1, 2006.01]**

75/26 • Articles or materials wholly enclosed in laminated sheets or wrapper blanks **[1, 2006.01]**

75/28 • Articles or materials wholly enclosed in composite wrappers, i.e. wrappers formed by associating or interconnecting two or more sheets or blanks **[1, 2006.01]**

75/30 • • Articles or materials enclosed between two opposed sheets or blanks having their margins united, e.g. by pressure-sensitive adhesive, crimping, heat-sealing, or welding **[1, 2006.01]**

75/32 • • • one or both sheets or blanks being recessed to accommodate contents **[1, 2006.01]**

75/34 • • • • and having several recesses to accommodate a series of articles or quantities of material **[1, 2006.01]**

75/36 • • • • one sheet or blank being recessed and the other formed of relatively stiff flat sheet material, e.g. blister packages **[1, 2006.01]**

75/38 • Articles or materials enclosed in two or more wrappers disposed one inside the other **[1, 2006.01]**

75/40 • Packages formed by enclosing successive articles, or increments of material, in webs, e.g. folded or tubular webs, or by subdividing tubes filled with liquid, semi-liquid, or plastic materials **[1, 2006.01]**

75/42 • • Chains of interconnected packages **[1, 2006.01]**

75/44 • • Individual packages cut from webs or tubes **[1, 2006.01]**

75/46 • • • containing articles **[1, 2006.01]**

75/48 • • • containing liquids, semiliquids, or pastes, e.g. cushion-shaped packages **[1, 2006.01]**

75/50 • • • • Tetrahedral packages **[1, 2006.01]**

75/52 • Details **[1, 2006.01]**

75/54 • • Cards, coupons, or other inserts or accessories (opening devices B65D 75/70) **[1, 2006.01]**

75/56 • • • Handles or other suspension means **[1, 2006.01]**

75/58 • • Opening or contents-removing devices added or incorporated during package manufacture **[1, 2006.01]**

75/60 • • • Weakened closure seams **[1, 2006.01]**

75/62 • • • Cuts or perforations, e.g. in closure seams **[1, 2006.01]**

75/64 • • • Tabs formed by unsecured portion of wrapper **[1, 2006.01]**

75/66 • • • Inserted or applied tearing-strings or like flexible elements **[1, 2006.01]**

75/68 • • • • extending through wrapper closure or between wrapper layers **[1, 2006.01]**

75/70 • • • Rigid cutting or tearing devices **[1, 2006.01]**

77/00 Packages formed by enclosing articles or materials in preformed containers, e.g. boxes, cartons, sacks or bags [1, 2006.01]

77/02 • Wrapped articles enclosed in rigid or semi-rigid containers **[1, 2006.01]**

77/04 • Articles or materials enclosed in two or more containers disposed one within another **[1, 2006.01]**

77/06 • • Liquids or semiliquids enclosed in flexible containers disposed within rigid containers **[1, 2006.01]**

77/08 • Materials, e.g. different materials, enclosed in separate compartments formed during filling of a single container **[1, 2006.01]**

77/10 • Container closures formed after filling **[1, 2006.01]**

77/12 • • by collapsing and flattening the mouth portion of the container and securing without folding, e.g. by pressure-sensitive adhesive, heat-sealing, welding or applying separate securing members **[1, 2006.01]**

77/14 • • by flattening and subsequently folding or rolling the mouth portion **[1, 2006.01]**

77/16 • • by collapsing and twisting mouth portion **[1, 2006.01]**

77/18 • • • and securing by a deformable clip or binder **[1, 2006.01]**

77/20 • • by applying separate lids or covers **[1, 2006.01]**

77/22 • Details **[1, 2006.01]**

77/24 • • Inserts or accessories added or incorporated during filling of containers (opening devices B65D 77/30) **[1, 2006.01]**

77/26 • • • Elements or devices for locating or protecting articles **[1, 2006.01]**

77/28 • • • Cards, coupons, or drinking straws **[1, 2006.01]**

77/30 • • Opening or contents-removing devices added or incorporated during filling or closing of containers **[1, 2006.01]**

77/32 • • • Tearing-strings or like flexible elements **[1, 2006.01]**

77/34 • • • • enclosed in a mouth seal **[1, 2006.01]**

77/36 • • • • disposed beneath a wrapper, label, or other element of sheet material securing a lid, cover, or container mouth **[1, 2006.01]**

77/38 • • • Weakened closure seams **[1, 2006.01]**

77/40 • • • Rigid cutting or tearing devices **[1, 2006.01]**

79/00 Kinds or details of packages, not otherwise provided for [1, 2006.01]

79/02 • Arrangements or devices for indicating incorrect storage or transport **[1, 2006.01]**

Containers, packaging elements, or packages, of special types or forms or specially adapted for organisms, articles, or materials presenting particular transport, storage, or dispensing problems

81/00 Containers, packaging elements, or packages, for contents presenting particular transport or storage problems, or adapted to be used for non-packaging purposes after removal of contents [1, 2006.01]

81/02 • specially adapted to protect contents from mechanical damage **[1, 6, 2006.01]**

81/03 • • Wrappers or envelopes with shock-absorbing properties, e.g. bubble films **[6, 2006.01]**

81/05 • • maintaining contents at spaced relation from package walls, or from other contents (B65D 81/03 takes precedence) **[6, 2006.01]**

81/07 • • • using resilient suspension means **[6, 2006.01]**

81/09 • • • using flowable discrete elements of shock-absorbing material, e.g. pellets or popcorn **[6, 2006.01]**

81/107 • • • using blocks of shock-absorbing material **[6, 2006.01]**

81/113 • • • • of a shape specially adapted to accommodate contents **[6, 2006.01]**

81/127 • • • using rigid or semi-rigid sheets of shock-absorbing material **[6, 2006.01]**

81/133 • • • • of a shape specially adapted to accommodate contents, e.g. trays **[6, 2006.01]**

81/15 • • • using liquids **[6, 2006.01]**

81/17 • • specially adapted to crumple without damage to contents **[6, 2006.01]**

81/18 • providing specific environment for contents, e.g. temperature above or below ambient (with thermal insulation B65D 81/38; ice-boxes with cooling means F25D) **[1, 6, 2006.01]**

81/20 • • under vacuum or superatmospheric pressure, or in a special atmosphere, e.g. of inert gas **[1, 2006.01]**

81/22 • • in moist conditions or immersed in liquids **[1, 2006.01]**

81/24 • Adaptations for preventing deterioration or decay of contents; Applications to the container or packaging material of food preservatives, fungicides, pesticides or animal repellants (with thermal insulation B65D 81/38) **[1, 6, 2006.01]**

81/26 • • with provision for draining away, or absorbing, fluids, e.g. exuded by contents; Applications of corrosion inhibitors or desiccators **[1, 2006.01]**

81/28 • • Applications of food preservatives, fungicides, pesticides or animal repellants **[1, 2006.01]**

81/30 • • by excluding light or other outside radiation **[1, 2006.01]**

81/32 • for packaging two or more different materials which must be maintained separate prior to use in admixture (containers with removable or destructible partitions B65D 25/08) **[1, 2006.01]**

81/34 • for packaging foodstuffs intended to be cooked or heated within the package **[1, 6, 2006.01]**

81/36 • adapted to be used for non-packaging purposes after removal of contents **[1, 2006.01]**

81/38 • with thermal insulation (vacuum bottles or the like A47J 41/00) **[1, 2006.01]**

83/00 Containers or packages with special means for dispensing contents (dispensing means incorporated in removable or non-permanently secured container closures B65D 47/00; for shops, stores, offices, bars, or the like A47F 1/04; showcases or show cabinets with dispensing arrangements A47F 3/02; magazines for screws or nuts in combination with spanners, wrenches or screwdrivers B25B 23/06; for use in connection with the handling of sheets, webs, or filamentary material B65H) **[1, 2006.01]**

83/02 • for dispensing rod-shaped articles, e.g. needles **[1, 2006.01]**

83/04 • for dispensing annular, disc-shaped, or spherical or like small articles, e.g. tablets or pills **[1, 2006.01]**

83/06 • for dispensing powdered or granular material **[1, 2006.01]**

83/08 • for dispensing thin flat articles in succession (dispensers for surgical scalpel blades A61B 17/3215) **[1, 2006.01]**

83/10 • • for dispensing razor-blades **[1, 2006.01]**

83/12 • • for dispensing tickets or tokens **[1, 2006.01]**

83/14 • for delivery of liquid or semi-liquid contents by internal gaseous pressure, i.e. aerosol containers comprising propellant **[1, 2006.01]**

83/16 • • characterised by the actuating means **[5, 2006.01]**

83/18 • • • Container-carried hand levers **[5, 2006.01]**

83/20 • • • Actuator caps **[5, 2006.01]**

83/22 • • • with means to disable actuation (B65D 50/00 takes precedence) **[5, 2006.01]**

83/24 • • • with means to hold valve open **[5, 2006.01]**

83/26 • • • operating automatically, e.g. periodically **[5, 2006.01]**

83/28 • • Nozzles, nozzle fittings or accessories specially adapted therefor **[5, 2006.01]**

83/30 • • • for guiding the flow of spray **[5, 2006.01]**

83/32 • • Dip-tubes **[5, 2006.01]**

83/34 • • Cleaning or preventing clogging of the discharge passage **[5, 2006.01]**

83/36 • • allowing operation in any orientation **[5, 2006.01]**

83/38 • • Details of the container body (pressure relief devices B65D 83/70) **[5, 2006.01]**

83/40 • • Closure caps (actuator caps B65D 83/20) **[5, 2006.01]**

83/42 • • Filling or charging means **[5, 2006.01]**

83/44 • • Valves specially adapted therefor; Regulating devices (filling or discharging means B65D 83/42; pressure relief devices B65D 83/70) **[5, 2006.01]**

83/46 • • • Tilt valves (B65D 83/50 takes precedence) **[5, 2006.01]**

83/48 • • • Lift valves, e.g. operated by push action (B65D 83/50 takes precedence) **[5, 2006.01]**

83/50 • • • Non-reclosable valves **[5, 2006.01]**

83/52 • • • for metering **[5, 2006.01]**

83/54 • • • • Metering valves **[5, 2006.01]**

83/56 • • shut-off when inverted **[5, 2006.01]**

83/58 • • Separate inlets for propellant and contents in duct to valve (B65D 83/60 takes precedence) **[5, 2006.01]**

83/60 • • Contents and propellant separated **[5, 2006.01]**

83/62 • • • by membrane, bag, or the like **[5, 2006.01]**

83/64 • • • by piston **[5, 2006.01]**

83/66 • • • first separated, but finally mixed **[5, 2006.01]**

83/68 • • Dispensing two or more contents **[5, 2006.01]**

83/70 • • Pressure relief devices **[5, 2006.01]**

83/72 • • with heating or cooling devices **[5, 2006.01]**

83/74 • • • heating by exothermic reaction **[5, 2006.01]**

83/76 • for dispensing fluent material by means of a piston or the like (hand tools for discharging fluent material through an outlet orifice by pressure B05C 17/005) **[5, 2006.01]**

85/00 Containers, packaging elements or packages, specially adapted for particular articles or materials (B65D 71/00, B65D 83/00 take precedence; hand implements or travelling equipment A45C; cosmetic or toiletry equipment A45D; packages for surgical knives, scalpels or blades therefor A61B 17/3215; containers specially adapted for medical or pharmaceutical purposes A61J 1/00; paint cans B44D 3/12; oil cans F16N 3/04; containers for carrying small arms F41C 33/06; packaging of ammunition or explosive charges F42B 39/00; containers for record carriers, specially adapted for cooperation with the recording or reproducing apparatus G11B 23/00) **[1, 5, 6, 2006.01]**

Note(s) [6]

Containers, packaging elements or packages classified in this group, are also classified according to the constructional or functional features, if such features are of interest.

85/02 • for annular articles (for web or tape-like material wound in flat spiral form B65D 85/671) **[1, 2006.01]**
85/04 • • for coils of wire, rope or hose **[1, 2006.01]**
85/06 • • for tyres **[1, 2006.01]**
85/07 • for compressible or flexible articles (for wearing apparel B65D 85/18) **[2017.01]**
85/08 • • rod-shaped or tubular **[1, 2006.01]**
85/10 • • • for cigarettes **[1, 2006.01]**
85/12 • • • for cigars **[1, 2006.01]**
85/14 • • • for collapsible tubes **[1, 2006.01]**
85/18 • for wearing apparel, headwear or footwear **[1, 2006.01]**
85/20 • for incompressible or rigid rod-shaped or tubular articles **[1, 2006.01]**
85/22 • • for macaroni, spaghetti or like flour products **[1, 2006.01]**
85/24 • • for needles, nails or like elongate small articles **[1, 2006.01]**
85/26 • • for welding electrodes **[1, 2006.01]**
85/28 • • for pencils or pens (pencil boxes A45C 11/34) **[1, 2006.01]**
85/30 • for articles particularly sensitive to damage by shock or pressure **[1, 2006.01]**
85/32 • • for eggs **[1, 2006.01]**
85/34 • • for fruit, e.g. apples, oranges or tomatoes **[1, 2006.01]**
85/36 • • for bakery products, e.g. biscuits **[1, 2006.01]**
85/38 • • for delicate optical, measuring, calculating or control apparatus **[1, 2006.01]**
85/40 • • • for watches or clocks; for components thereof **[1, 2006.01]**
85/42 • • for ampoules; for lamp bulbs; for electronic valves or tubes **[1, 2006.01]**
85/44 • • for crockery **[1, 2006.01]**
85/46 • • for bricks, tiles or building blocks **[1, 2006.01]**
85/48 • • for glass sheets **[1, 2006.01]**
85/50 • for living organisms, articles or materials sensitive to changes of environment or atmospheric conditions, e.g. land animals, birds, fish, water plants, non-aquatic plants, flower bulbs, cut flowers or foliage (devices for transporting live fish A01K 63/02) **[1, 2006.01]**
85/52 • • for living plants; for growing bulbs **[1, 2006.01]**
85/57 • for recording discs **[3, 2006.01]**
85/575 • for recording-tape cassettes **[5, 2006.01]**
85/58 • for ball bearings, washers, buttons or like spherical or disc-shaped articles (cards for buttons, collar-studs or sleeve-links A44B 7/00) **[1, 3, 2006.01]**
85/60 • for sweets or like confectionery products **[1, 3, 2006.01]**
85/62 • for stacks of articles; for special arrangements of groups of articles **[1, 3, 2006.01]**
85/64 • for bulky articles **[1, 3, 2006.01]**
85/66 • for jumbo rolls; for rolls of floor covering **[1, 3, 2006.01]**
85/67 • for web or tape-like material (for jumbo rolls or rolls of floor covering B65D 85/66; for recording-tape cassettes B65D 85/575) **[1, 3, 5, 2006.01]**
85/671 • • wound in flat spiral form **[1, 3, 2006.01]**
85/672 • • • on cores **[1, 3, 2006.01]**
85/675 • • wound in helical form **[1, 3, 2006.01]**
85/676 • • • on cores **[1, 3, 2006.01]**
85/677 • • • • on flat cards **[1, 3, 2006.01]**
85/68 • for machines, engines or vehicles in assembled or dismantled form **[1, 3, 2006.01]**
85/72 • for edible or potable liquids, semiliquids, or plastic or pasty materials **[1, 3, 2006.01]**
85/73 • • with means specially adapted for effervescing the liquids, e.g. for forming bubbles or beer head **[7, 2006.01]**
85/74 • • for butter, margarine or lard **[1, 3, 2006.01]**
85/76 • • for cheese **[1, 3, 2006.01]**
85/78 • • for ice-cream **[1, 3, 2006.01]**
85/80 • • for milk **[1, 3, 2006.01]**
85/804 • Disposable containers or packages with contents which are infused or dissolved in situ **[7, 2006.01]**
85/808 • • for immersion in the liquid, e.g. tea bags **[7, 2006.01]**
85/812 • • • with features facilitating their suspension **[7, 2006.01]**
85/816 • • into which liquid is added, e.g. cups preloaded with powder or dehydrated food **[7, 2006.01]**
85/82 • for poisons **[1, 3, 2006.01]**
85/84 • for corrosive chemicals **[1, 3, 2006.01]**
85/86 • for electrical components (small electrical components attached to cards, sheets or webs B65D 73/02; for articles particularly sensitive to damage by shock or pressure B65D 85/30; for ampoules, lamp bulbs, electronic valves or tubes B65D 85/42) **[6, 2006.01]**
85/88 • • for batteries **[6, 2006.01]**
85/90 • • for integrated circuits **[6, 2006.01]**

Large containers [2017.01]

88/00 Large containers (component parts, details or accessories B65D 90/00; gas holders of variable capacity F17B; vessels for containing or storing compressed, liquefied or solidified gases F17C) **[3, 2006.01]**
88/02 • rigid (B65D 88/34-B65D 88/78 take precedence; hoppers B65D 88/26) **[3, 2006.01]**
88/04 • • spherical (B65D 88/12 takes precedence) **[3, 2006.01]**
88/06 • • cylindrical (B65D 88/12 takes precedence) **[3, 2006.01]**
88/08 • • • with a vertical axis **[3, 2006.01]**

88/10 • • parallelepipedic (B65D 88/12 takes precedence) **[3, 2006.01]**
88/12 • • specially adapted for transport **[3, 2006.01]**
88/14 • • • by air **[3, 2006.01]**
88/16 • flexible (B65D 88/34-B65D 88/78 take precedence; hoppers B65D 88/26) **[3, 2006.01]**
88/18 • • bellows-shaped (B65D 88/22 takes precedence) **[3, 2006.01]**
88/20 • • with rigid end-walls (B65D 88/18, B65D 88/22 take precedence) **[3, 2006.01]**
88/22 • • specially adapted for transport **[3, 2006.01]**
88/24 • • • by air **[3, 2006.01]**
88/26 • Hoppers, i.e. containers having funnel-shaped discharge sections (B65D 88/34-B65D 88/78 take precedence) **[3, 2006.01]**
88/28 • • Construction or shape of discharge section **[3, 2006.01]**
88/30 • • specially adapted to facilitate transportation from one utilisation site to another (B65D 88/52 takes precedence) **[3, 2006.01]**
88/32 • • in multiple arrangement **[3, 2006.01]**
88/34 • having floating covers, e.g. floating roofs or blankets (venting means B65D 90/34) **[3, 2006.01]**
88/36 • • with relatively movable sections **[3, 2006.01]**
88/38 • • with surface water receiver, e.g. drain **[3, 2006.01]**
88/40 • • with support for aground cover **[3, 2006.01]**
88/42 • • with sealing means between cover rim and receptacle **[3, 2006.01]**
88/44 • • • with magnetic means acting on the seal **[3, 2006.01]**
88/46 • • • with mechanical means acting on the seal **[3, 2006.01]**
88/48 • • • with fluid means acting on the seal **[3, 2006.01]**
88/50 • • • with resilient foam or stuffed seal **[3, 2006.01]**
88/52 • collapsible, i.e. with walls hinged together or detachably connected **[3, 2006.01]**
88/54 • characterised by means facilitating filling or emptying (construction or shape of discharge section of hoppers B65D 88/28; gates or closures B65D 90/54) **[3, 2006.01]**
88/56 • • by tilting **[3, 2006.01]**
88/58 • • by displacement of walls **[3, 2006.01]**
88/60 • • • of internal walls **[3, 2006.01]**
88/62 • • • • the walls being deformable **[3, 2006.01]**
88/64 • • preventing bridge formation **[3, 2006.01]**
88/66 • • • using vibrating or knocking devices **[3, 2006.01]**
88/68 • • • using rotating devices **[3, 2006.01]**
88/70 • • • using fluid jets (B65D 88/72 takes precedence) **[3, 2006.01]**
88/72 • • Fluidising devices **[3, 2006.01]**
88/74 • having means for heating, cooling, aerating or other conditioning of contents **[3, 2006.01]**
88/76 • for use underground **[3, 2006.01]**
88/78 • for use in or under water **[3, 2006.01]**

90/00 Component parts, details or accessories for large containers (B65D 88/34-B65D 88/78 take precedence) **[3, 2006.01]**

90/02 • Wall construction (arrangements of leakage-indicating devices comprising hollow spaces within walls B65D 90/501; arrangements of leakage-indicating devices comprising porous spaces or porous layers in walls B65D 90/505; arrangements of leakage-indicating devices comprising electrically conductive layers in walls B65D 90/513) **[3, 2006.01, 2019.01]**
90/04 • • Linings **[3, 2006.01]**
90/06 • • Coverings, e.g. for insulating purposes **[3, 2006.01]**
90/08 • • Interconnections of wall parts; Sealing means therefor **[3, 2006.01]**
90/10 • Manholes; Inspection openings; Covers therefor (safety features B65D 90/22) **[3, 2006.01]**
90/12 • Supports **[3, 2006.01]**
90/14 • • Legs, e.g. detachable **[3, 2006.01]**
90/16 • • Skids **[3, 2006.01]**
90/18 • • Castors, rolls, or the like, e.g. detachable **[3, 2006.01]**
90/20 • • Frames or nets, e.g. for flexible containers **[3, 2006.01]**
90/22 • Safety features (floating covers B65D 88/34; arrangements of indicating or measuring devices B65D 90/48) **[3, 2006.01]**
90/24 • • Spillage-retaining means, e.g. recovery ponds **[3, 2006.01]**
90/26 • • Overfill prevention (spillage retaining means B65D 90/24; arrangements of indicating or measuring devices B65D 90/48) **[3, 2006.01]**
90/28 • • Means for preventing or minimising the escape of vapours **[3, 2006.01]**
90/30 • • Recovery of escaped vapours **[3, 2006.01]**
90/32 • • Arrangements for preventing, or minimising the effect of, excessive or insufficient pressure **[3, 2006.01]**
90/34 • • • Venting means **[3, 5, 2006.01]**
90/36 • • • Weakened parts **[3, 2006.01]**
90/38 • • Means for reducing the vapour space or for reducing the formation of vapour within containers **[3, 2006.01]**
90/40 • • • by use of fillings of porous materials **[3, 2006.01]**
90/42 • • • by use of particular materials for covering surface of liquids **[3, 2006.01]**
90/44 • • • by use of inert gas for filling space above liquid or between contents **[3, 2006.01]**
90/46 • • Arrangements for carrying off, or preventing the formation of electrostatic charges **[3, 2006.01]**
90/48 • Arrangements of indicating or measuring devices **[3, 2006.01]**
90/50 • • of leakage-indicating devices **[3, 2006.01, 2019.01]**
90/501 • • • comprising hollow spaces within walls **[2019.01]**
90/503 • • • • under pressure or vacuum **[2019.01]**
90/505 • • • comprising porous spaces or porous layers in walls **[2019.01]**
90/507 • • • • under pressure or vacuum **[2019.01]**
90/51 • • • characterised by sensors **[2019.01]**
90/511 • • • • Float-type indicators **[2019.01]**
90/513 • • • comprising electrically conductive layers in walls **[2019.01]**
90/52 • Anti-slosh devices **[3, 2006.01]**
90/54 • Gates or closures (for manholes B65D 90/10; covers or similar closure members, for pressure vessels in general F16J 13/00) **[3, 2006.01]**

90/56 • • operating by deformation of flexible walls **[3, 2006.01]**
90/58 • • having closure members sliding in the plane of the opening **[3, 2006.01]**
90/60 • • • and having one or more openings **[3, 2006.01]**
90/62 • • having closure members movable out of the plane of the opening **[3, 2006.01]**
90/64 • • having multipart closure members, the parts being brought into closing position one by one according to need **[3, 2006.01]**
90/66 • • Operating devices therefor **[3, 2006.01]**

B65F GATHERING OR REMOVAL OF DOMESTIC OR LIKE REFUSE (disinfecting refuse A61L; refuse disintegrators B02C; sorting refuse B03B, B07B; handcarts for transporting refuse receptacles B62B; sack holders B65B 67/00; converting refuse into fertilisers C05F; converting refuse into solid fuels C10L; sewers, cesspools E03F; arrangements in buildings for the disposal of refuse E04F 17/10; refuse-consuming furnaces F23G)

1/00 Refuse receptacles (containers not specially adapted for refuse, features of refuse receptacles of general interest B65D) **[1, 2006.01]**
1/02 • without removable inserts **[1, 2006.01]**
1/04 • with removable inserts **[1, 2006.01]**
1/06 • • with flexible inserts, e.g. bags or sacks **[1, 2006.01]**
1/08 • • with rigid inserts **[1, 2006.01]**
1/10 • with refuse filling means, e.g. air-locks **[1, 2006.01]**
1/12 • with devices facilitating emptying **[1, 2006.01]**
1/14 • Other constructional features (holders or carriers for hand articles A45F 5/00; fastening devices for wings E05C; hinges E05D) **[1, 2006.01]**
1/16 • • Lids or covers (pedal or hand-lever operated B65D) **[1, 2006.01]**

3/00 Vehicles particularly adapted for collecting refuse (vehicles in general B60; driving vehicle equipment or auxiliaries B60K; discharging contents by tilting entire vehicles B65G; wheeled apparatus for emptying sewers or cesspools E03F 7/10) **[1, 2006.01]**
3/02 • with means for discharging refuse receptacles thereinto (conveyor construction B65G; loaders separate from vehicles B66F; fluid power control systems in general F15B) **[1, 2006.01]**
3/04 • • Linkages, pivoted arms, or pivoted carriers for raising and subsequently tipping receptacles **[1, 2006.01]**
3/06 • • • Arrangement or disposition of fluid actuators **[1, 2006.01]**
3/08 • • Platform elevators or hoists with guides or runways for raising or tipping receptacles **[1, 2006.01]**
3/10 • • • Arrangement or disposition of fluid actuators **[1, 2006.01]**
3/12 • • Conjoint motion of lids, flaps, and shutters on vehicle and on receptacle; Operation of closures on vehicle conjointly with tipping of receptacle **[1, 2006.01]**
3/14 • with devices for charging, distributing, or compressing refuse in the interior of the tank of a refuse vehicle (B65F 3/02 takes precedence) **[2, 2006.01]**
3/16 • • with conveyor wheels (with screw conveyors B65F 3/22) **[2, 2006.01]**
3/18 • • with endless conveyors, e.g. elevators **[2, 2006.01]**
3/20 • • with charging pistons, plates, or the like (for discharging B65F 3/28) **[2, 2006.01]**
3/22 • • with screw conveyors or rotary tanks **[2, 2006.01]**
3/24 • with devices for unloading the tank of a refuse vehicle **[2, 2006.01]**
3/26 • • by tipping the tank **[2, 2006.01]**
3/28 • • by a lengthwise movement of a wall, e.g. a plate, a piston, or the like (for charging B65F 3/20) **[2, 2006.01]**

5/00 Gathering or removal of refuse otherwise than by receptacles or vehicles (storage silos, charging or discharging thereof B65G) **[1, 2006.01]**

7/00 Cleaning or disinfecting devices combined with refuse receptacles or refuse vehicles (such devices per se A61L, B08B) **[1, 2006.01]**

9/00 Transferring of refuse between vehicles or containers with intermediate storage or pressing (presses for baling per se B30B 9/30) **[4, 2006.01]**

B65G TRANSPORT OR STORAGE DEVICES, e.g. CONVEYORS FOR LOADING OR TIPPING, SHOP CONVEYOR SYSTEMS OR PNEUMATIC TUBE CONVEYORS (packaging B65B; handling thin or filamentary materials, e.g. paper sheets or thread, B65H; cranes B66C; portable or mobile lifting or hauling appliances, e.g. hoists, B66D; devices for lifting or lowering goods for loading or unloading purposes, e.g. fork-lift trucks, B66F 9/00; emptying bottles, jars, cans, casks, barrels or similar containers, not otherwise provided for, B67C 9/00; delivering or transferring liquids B67D; filling or discharging vessels for liquefied, solidified or compressed gases F17C; pipe-line systems for fluids F17D)

Note(s) [2014.01]

This subclass does not cover road or railway vehicles, waterborne vessels or aircraft per se, or their adaptation for transport purposes. This subject matter is covered by classes B60-B64, for example in the following places:
- vehicles adapted for load transportation B60P;
- railway wagons adapted for load transportation B61D;
- hand carts B62B;
- superstructures for load-carrying vehicles B62D 33/00;
- loading or load-accommodating arrangements on ships or vessels B63B 25/00, B63B 27/00;
- equipment for handling freight in aircraft B64D 9/00.

Subclass index

HANDLING AND STORAGE
Loading and unloading....65/00, 67/00, 69/00
Transfer, trans-shipment....63/00
Storage....1/00, 3/00, 5/00
Piling, unpiling
of articles....57/00-61/00
of loose material....65/28
Assisting manual handling....7/00, 9/00
CONVEYORS, CHUTES
Mechanical
with endless element....15/00-23/00
with particular movement....25/00, 27/00, 29/00, 33/00
other kinds....35/00
combinations or systems of general use....37/00, 49/00
chutes; roller-ways; projectors....11/00, 13/00, 31/00
Parts or auxiliary devices applicable to different kinds
rollers; frames; auxiliary handling....39/00, 41/00, 47/00
control, safety; maintenance....43/00, 45/00
Non-mechanical....51/00, 53/00, 54/00

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) **[1, 2006.01]**

1/02 • Storage devices (furniture A47B; shop fittings A47F) **[1, 2006.01]**

1/04 • • mechanical **[1, 2006.01]**

1/06 • • • with means for presenting articles for removal at predetermined position or level (B65G 1/12 takes precedence) **[1, 3, 2006.01]**

1/07 • • • • the upper article of a pile being always presented at the same predetermined level **[3, 2006.01]**

1/08 • • • • the articles being fed by gravity **[1, 2006.01]**

1/10 • • • with relatively-movable racks to facilitate insertion or removal of articles **[1, 2006.01]**

1/12 • • • with article supports or holders movable in a closed circuit to facilitate insertion or removal of articles **[1, 2006.01]**

1/127 • • • • the circuit being confined in a vertical plane **[3, 2006.01]**

1/133 • • • • the circuit being confined in a horizontal plane **[3, 2006.01]**

1/137 • • • with arrangements or automatic control means for selecting which articles are to be removed **[4, 2006.01]**

1/14 • • Stack holders or separators **[1, 2006.01]**

1/16 • Special arrangements of articles in storage spaces **[1, 2006.01]**

1/18 • • Articles inclined so as to be mutually self-supporting **[1, 2006.01]**

1/20 • • Articles arranged in layers with spaces between articles **[1, 2006.01]**

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) **[1, 2006.01]**

3/02 • in the open air (B65G 3/04 takes precedence) **[1, 2006.01]**

3/04 • in bunkers, hoppers or like large containers (such containers per se B65D 88/00) **[1, 2006.01]**

5/00 **Storing fluids in natural or artificial cavities or chambers in the earth [1, 2006.01]**

Devices assisting manual conveyance of articles over short distances, e.g. in storage depots, warehouses or factories

7/00 **Devices for assisting manual moving or tilting heavy loads** (roller-ways B65G 13/00; for tilting and emptying barrels or casks B65G 65/24) **[1, 2006.01]**

7/02 • Devices adapted to be interposed between loads and the ground or floor, e.g. crowbars with means for assisting conveyance of loads **[1, 2006.01]**

7/04 • • Rollers **[1, 2006.01]**

7/06 • • using fluid at high pressure supplied from an independent source to provide a cushion between load and ground **[1, 2006.01]**

7/08 • • for tilting the loads **[1, 2006.01]**

7/10 • • for rolling cylindrical loads **[1, 2006.01]**

7/12 • Load-carriers, e.g. hooks, slings, harness, gloves, modified for load-carrying **[1, 2006.01]**

9/00 **Apparatus for assisting manual handling having suspended load-carriers movable by hand or gravity [1, 2006.01]**

Chutes; Kinds or types of conveyors; Constructional features, details or auxiliary devices peculiar to conveyors of particular types [4]

11/00 **Chutes** (used as storage devices B65G 1/02) **[1, 2006.01]**

11/02 • of straight form **[1, 2006.01]**

11/04 • for mail in buildings **[1, 2006.01]**

11/06 • of helical or spiral form **[1, 2006.01]**

11/08 • with discontinuous guiding surfaces, e.g. arranged in zig-zag or cascade formation **[1, 2006.01]**

11/10 • flexible **[1, 2006.01]**
11/12 • pivotable **[1, 2006.01]**
11/14 • extensible, e.g. telescopic **[1, 2006.01]**
11/16 • Interior surfaces; Linings **[1, 2006.01]**
11/18 • Supports or mountings **[1, 2006.01]**
11/20 • Auxiliary devices, e.g. for deflecting, controlling speed of, or agitating, articles or solids **[1, 2006.01]**

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) **[1, 2006.01]**
13/02 • having driven rollers **[1, 2006.01]**
13/04 • • all rollers driven **[1, 2006.01]**
13/06 • • Roller driving means **[1, 3, 2006.01]**
13/07 • • • having endless driving elements **[1, 2006.01]**
13/071 • • • with frictional engagement **[1, 2006.01]**
13/073 • • • comprising free-wheel gearing **[1, 2006.01]**
13/075 • Braking means **[1, 3, 2006.01]**
13/08 • of curved form; with branch-offs **[1, 2006.01]**
13/10 • • Switching arrangements **[1, 2006.01]**
13/11 • Roller frames **[1, 2006.01]**
13/12 • • adjustable **[1, 2006.01]**

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) **[1, 2006.01]**
15/02 • for conveying in a circular arc **[1, 2006.01]**
15/04 • the load being carried on the lower run of the endless surface **[1, 2006.01]**
15/06 • with oppositely-moving parts of the endless surface located in the same plane and parallel to one another **[1, 2006.01]**
15/08 • the load-carrying surface being formed by a concave or tubular belt, e.g. a belt forming a trough **[1, 2006.01]**
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 **[1, 2006.01]**
15/12 • • with two or more endless belts **[1, 2006.01]**
15/14 • • • the load being conveyed between the belts **[1, 2006.01]**
15/16 • • • • between an auxiliary belt and a main belt **[1, 2006.01]**
15/18 • • • the belts being sealed at their edges **[1, 2006.01]**
15/20 • • • arranged side by side, e.g. for conveyance of flat articles in vertical position **[1, 2006.01]**
15/22 • comprising a series of co-operating units **[1, 2006.01]**
15/24 • • in tandem **[1, 2006.01]**
15/26 • • extensible, e.g. telescopic **[1, 2006.01]**
15/28 • Conveyors with a load-conveying surface formed by a single flat belt, not otherwise provided for **[1, 2006.01]**
15/30 • Belts or like endless load-carriers (co-operating with rails or the like B65G 21/22; with rollers B65G 39/20) **[1, 2006.01]**
15/32 • • made of rubber or plastics **[1, 2006.01]**
15/34 • • • with reinforcing layers, e.g. of fabric **[1, 2006.01]**
15/36 • • • • the layers incorporating ropes, chains, or rolled steel sections **[1, 2006.01]**
15/38 • • • with flame-resistant layers, e.g. of asbestos, glass **[1, 2006.01]**
15/40 • • • troughed or tubular; formed with joints facilitating troughing **[1, 2006.01]**
15/42 • • • having ribs, ridges, or other surface projections **[1, 2006.01]**
15/44 • • • • for impelling the loads **[1, 2006.01]**
15/46 • • • formed with guides **[1, 2006.01]**
15/48 • • metallic **[1, 2006.01]**
15/50 • • Endless load-carriers consisting of a series of parallel ropes or belt strips **[1, 2006.01]**
15/52 • • • interconnected by transverse slats **[1, 2006.01]**
15/54 • • Endless load-carriers made of interwoven ropes or wires **[1, 2006.01]**
15/56 • • with edge-protecting or reinforcing means **[1, 2006.01]**
15/58 • • with means for holding or retaining the loads in fixed position, e.g. magnetic **[1, 2006.01]**
15/60 • Arrangements for supporting or guiding belts, e.g. by fluid jets **[1, 2006.01]**
15/62 • • Guides for sliding belts **[1, 2006.01]**
15/64 • • for automatically maintaining the position of the belts **[1, 2006.01]**

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 [1, 2006.01]
17/02 • comprising a load-carrying belt attached to, or resting on, the traction element **[1, 2006.01]**
17/04 • • the belt having loops forming load-receiving pockets **[1, 2006.01]**
17/06 • having a load-carrying surface formed by a series of interconnected, e.g. longitudinal, links, plates, or platforms **[1, 2006.01]**
17/08 • • the surface being formed by the traction element **[1, 2006.01]**
17/10 • • the surface forming a longitudinal trough **[1, 2006.01]**
17/12 • comprising a series of individual load-carriers fixed, or normally fixed, relative to traction element **[1, 2006.01]**
17/14 • • with two spaced connections to traction element **[1, 2006.01]**
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 47/34) **[1, 2006.01]**
17/18 • • and move in contact with a guiding surface **[1, 2006.01]**
17/20 • comprising load-carriers suspended from overhead traction chains **[1, 2006.01]**
17/22 • with oppositely-moving parts of the conveyor located in a common plane **[1, 2006.01]**
17/24 • comprising a series of rollers which are moved over a supporting surface by the traction element to effect conveyance of loads or load-carriers **[1, 2006.01]**
17/26 • comprising a series of co-operating units, e.g. interconnected by pivots **[1, 2006.01]**
17/28 • • extensible, e.g. telescopic **[1, 2006.01]**
17/30 • Details; Auxiliary devices (belts B65G 15/30; framework B65G 21/00) **[1, 2006.01]**
17/32 • • Individual load-carriers **[1, 2006.01]**
17/34 • • • having flat surfaces, e.g. platforms, grids, forks **[1, 2006.01]**

17/36 • • • having concave surfaces, e.g. buckets **[1, 2006.01]**

17/38 • • Chains or like traction elements (drive chains F16G 13/00); Connections between traction elements and load-carriers **[1, 2006.01]**

17/40 • • • Chains acting as load-carriers **[1, 2006.01]**

17/42 • • • Attaching load-carriers to traction elements **[1, 2006.01]**

17/44 • • • • by means excluding relative movements **[1, 2006.01]**

17/46 • • Means for holding or retaining the loads in fixed position on the load-carriers, e.g. magnetic **[1, 2006.01]**

17/48 • • Controlling attitudes of load-carriers during movement (guides B65G 21/20; inverting or tilting load-carriers to discharge contents B65G 47/38) **[1, 2006.01]**

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 [1, 2006.01]

19/02 • for articles, e.g. for containers **[1, 2006.01]**

19/04 • for moving bulk material in open troughs or channels **[1, 2006.01]**

19/06 • • the impellers being scrapers similar in size and shape to the cross-section of the trough or channel **[1, 2006.01]**

19/08 • • • and attached to a single belt, rope, or chain **[1, 2006.01]**

19/10 • • • and attached to a pair of belts, ropes, or chains **[1, 2006.01]**

19/12 • • the impellers being plates having an area substantially smaller than that of the trough or channel cross-section **[1, 2006.01]**

19/14 • for moving bulk material in closed conduits, e.g. tubes **[1, 2006.01]**

19/16 • • the impellers being elements having an area substantially smaller than that of the conduit cross-section **[1, 2006.01]**

19/18 • Details **[1, 2006.01]**

19/20 • • Traction chains, ropes, or cables **[1, 2006.01]**

19/22 • • Impellers, e.g. push-plates, scrapers; Guiding means therefor **[1, 2006.01]**

19/24 • • • Attachment of impellers to traction element **[1, 2006.01]**

19/26 • • • • pivotal **[1, 2006.01]**

19/28 • • Troughs, channels, or conduits **[1, 2006.01]**

19/30 • • • with supporting surface modified to facilitate movement of loads, e.g. friction-reducing devices **[1, 2006.01]**

21/00 Supporting or protective framework or housings for endless load-carriers or traction elements of belt or chain conveyors [1, 2006.01]

21/02 • consisting essentially of struts, ties, or like structural elements **[1, 2006.01]**

21/04 • • the ties being formed by longitudinal cables or ropes **[1, 2006.01]**

21/06 • • constructed to facilitate rapid assembly or dismantling **[1, 2006.01]**

21/08 • Protective roofs or arch supports therefor **[1, 2006.01]**

21/10 • movable, or having interchangeable or relatively-movable parts; Devices for moving framework or parts thereof **[1, 2006.01]**

21/12 • • to allow adjustment of position of load-carrier or traction element as a whole **[1, 2006.01]**

21/14 • • to allow adjustment of length or configuration of load-carrier or traction element (tensioning arrangements for belt or chain B65G 23/44) **[1, 2006.01]**

21/16 • for conveyors having endless load-carriers movable in curved paths **[1, 2006.01]**

21/18 • • in three-dimensionally curved paths **[1, 2006.01]**

21/20 • Means incorporated in, or attached to, framework or housings for guiding load-carriers, traction elements or loads supported on moving surfaces (arrangements for supporting belts B65G 15/60; rollers or roller arrangements B65G 39/00) **[1, 2006.01]**

21/22 • • Rails or the like engaging sliding elements or rollers attached to load-carriers or traction elements **[1, 2006.01]**

23/00 Driving gear for endless conveyors; Belt- or chain-tensioning arrangements [1, 2006.01]

23/02 • Belt- or chain-engaging elements **[1, 2006.01]**

23/04 • • Drums, rollers, or wheels **[1, 2006.01]**

23/06 • • • with projections engaging abutments on belts or chains, e.g. sprocket wheels **[1, 2006.01]**

23/08 • • • with self-contained driving mechanisms, e.g. motors and associated gearing **[1, 2006.01]**

23/10 • • • arranged intermediate the ends of the conveyors **[1, 2006.01]**

23/12 • • • Arrangements of co-operating drums or rollers to augment tractive effort applied to the belts **[1, 2006.01]**

23/14 • • Endless driving elements extending parallel to belt or chain **[1, 2006.01]**

23/16 • • • with dogs engaging abutments on belts or chains **[1, 2006.01]**

23/18 • • Suction or magnetic elements **[1, 2006.01]**

23/19 • • • Suction elements **[3, 2006.01]**

23/20 • • Screws **[1, 2006.01]**

23/22 • Arrangements or mountings of driving motors **[1, 2006.01]**

23/23 • • of electric linear motors **[3, 2006.01]**

23/24 • Gearing between driving motor and belt- or chain-engaging elements (contained in drums, rollers, or wheels B65G 23/08) **[1, 2006.01]**

23/26 • • Applications of clutches or brakes **[1, 2006.01]**

23/28 • • Arrangements for equalising the drive to several elements **[1, 2006.01]**

23/30 • • Variable-speed gearing **[1, 2006.01]**

23/32 • for effecting drive at two or more points spaced along the length of the conveyors **[1, 2006.01]**

23/34 • • comprising a single motor coupled to spaced driving elements **[1, 2006.01]**

23/36 • • comprising two or more driving motors each coupled to a separate driving element, e.g. at either end of the conveyors **[1, 2006.01]**

23/38 • for effecting intermittent movement of belts or chains **[1, 2006.01]**

23/40 • • Applications of pawl-and-ratchet mechanisms or Geneva wheels **[1, 2006.01]**

23/42 • • Reciprocating members engaging successive abutments on belts or chains **[1, 2006.01]**

23/44 • Belt- or chain-tensioning arrangements **[1, 2006.01]**

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 (jigging B65G 27/00) **[1, 2006.01]**

25/02 • the carrier or impeller having different forward and return paths of movement, e.g. walking-beam conveyors **[1, 2006.01]**

25/04 • the carrier or impeller having identical forward and return paths of movement, e.g. reciprocating conveyors **[1, 2006.01]**

25/06 • • having carriers, e.g. belts **[1, 2006.01]**

25/08 • • having impellers, e.g. pushers **[1, 2006.01]**

25/10 • • • with impeller pivotally mounted on a reciprocating bar **[1, 2006.01]**

25/12 • • • with impeller fixed to a reciprocating bar and the bar being rotated about its longitudinal axis on its return stroke **[1, 2006.01]**

27/00 Jigging conveyors [1, 2006.01]

27/02 • comprising helical or spiral channels or conduits for elevation of materials **[1, 2006.01]**

27/04 • Load-carriers other than helical or spiral channels or conduits **[1, 2006.01]**

27/06 • • Joints connecting load-carrier sections **[1, 2006.01]**

27/08 • Supports or mountings for load-carriers, e.g. framework, bases, spring arrangements **[1, 2006.01]**

27/10 • Applications of devices for generating or transmitting jigging movements **[1, 2006.01]**

27/12 • • of shaking devices, i.e. devices for producing movements of low frequency and large amplitude **[1, 2006.01]**

27/14 • • • hydraulic **[1, 2006.01]**

27/16 • • of vibrators, i.e. devices for producing movements of high frequency and small amplitude **[1, 2006.01]**

27/18 • • • Mechanical devices **[1, 2006.01]**

27/20 • • • • rotating unbalanced masses **[1, 2006.01]**

27/22 • • • Hydraulic or pneumatic devices **[1, 2006.01]**

27/24 • • • Electromagnetic devices **[1, 2006.01]**

27/26 • • • with elastic coupling between vibrator and load-carrier **[1, 2006.01]**

27/28 • • with provision for dynamic balancing **[1, 2006.01]**

27/30 • • • by means of an oppositely-moving mass, e.g. a second conveyor **[1, 2006.01]**

27/32 • • with means for controlling direction, frequency, or amplitude of vibration or shaking movement **[1, 2006.01]**

27/34 • comprising a series of co-operating units **[1, 2006.01]**

29/00 Rotary conveyors, e.g. rotating discs, arms, star-wheels or cones (mechanical projectors B65G 31/00; screw or rotary spiral conveyors B65G 33/00) **[1, 2006.01]**

29/02 • for inclined or vertical transit **[1, 2006.01]**

31/00 Mechanical throwing machines for articles or solid materials [1, 2006.01]

31/02 • comprising belts **[1, 2006.01]**

31/04 • comprising discs, drums, or like rotary impellers **[1, 2006.01]**

33/00 Screw or rotary spiral conveyors [1, 2006.01]

33/02 • for articles **[1, 2006.01]**

33/04 • • conveyed between a single screw and guiding means **[1, 2006.01]**

33/06 • • conveyed and guided by parallel screws **[1, 2006.01]**

33/08 • for fluent solid materials **[1, 2006.01]**

33/10 • • with non-enclosed screws **[1, 2006.01]**

33/12 • • with screws formed by straight tubes or drums having internal threads, or by spiral or helical tubes **[1, 2006.01]**

33/14 • • comprising a screw or screws enclosed in a tubular housing **[1, 2006.01]**

33/16 • • • with flexible screws operating in flexible tubes **[1, 2006.01]**

33/18 • • • with multiple screws in parallel arrangements **[1, 2006.01]**

33/20 • • • the housing being rotatable relative to the screw **[1, 2006.01]**

33/22 • • • with means for retarding material flow at the delivery end of the housing **[1, 2006.01]**

33/24 • Details **[1, 2006.01]**

33/26 • • Screws **[1, 2006.01]**

33/30 • • • with a discontinuous helical surface **[1, 2006.01]**

33/32 • • Adaptations of bearings or couplings for supporting or connecting screws (B65G 33/16 takes precedence) **[1, 2006.01]**

33/34 • • Applications of driving gear **[1, 2006.01]**

33/36 • • • for rotating housing and screw at different speeds **[1, 2006.01]**

33/38 • • • for effecting simultaneous rotation and reciprocation of screw **[1, 2006.01]**

35/00 Mechanical conveyors not otherwise provided for [1, 2006.01]

35/02 • comprising an endless traction element, e.g. a belt, arranged to roll cylindrical articles over a supporting surface **[1, 2006.01]**

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) **[1, 2006.01]**

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 (effecting drive at two or more points spaced along the length of an endless conveyor B65G 23/32) **[1, 2006.01]**

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 **[1, 2006.01]**

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 (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) **[1, 2006.01]**

37/02 • Flow sheets for conveyor combinations in warehouses, magazines or workshops **[1, 2006.01]**

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) **[1, 2006.01]**

39/02 • Adaptations of individual rollers and supports therefor **[1, 2006.01]**
39/04 • • the rollers comprising a number of roller- forming elements mounted on a single axle **[1, 2006.01]**
39/06 • • the roller sleeves being shock-absorbing, e.g. formed by helically-wound wires **[1, 2006.01]**
39/07 • • Other adaptations of sleeves **[1, 2006.01]**
39/071 • • • for aligning belts or sheets **[1, 2006.01]**
39/073 • • • for cleaning belts **[1, 2006.01]**
39/08 • • the rollers being magnetic **[1, 2006.01]**
39/09 • • Arrangements of bearing or sealing means **[1, 2006.01]**
39/10 • Arrangements of rollers (on a single axle B65G 39/04) **[1, 2006.01]**
39/12 • • mounted on framework **[1, 2006.01]**
39/14 • • • Spring-supported sets, e.g. permitting troughing of a load-carrying belt **[1, 2006.01]**
39/16 • • • for aligning belts or chains **[1, 2006.01]**
39/18 • • • for guiding loads **[1, 2006.01]**
39/20 • • attached to moving belts or chains **[1, 2006.01]**

41/00 Supporting frames or bases for conveyors as a whole, e.g. transportable conveyor frames [1, 2006.01]
41/02 • Frames mounted on wheels for movement on rail tracks **[1, 2006.01]**

43/00 Control devices, e.g. for safety, warning or fault-correcting [1, 2006.01]
43/02 • detecting dangerous physical condition of load-carriers, e.g. for interrupting the drive in the event of overheating **[1, 2006.01]**
43/04 • detecting slip between driving element and load-carrier, e.g. for interrupting the drive **[1, 2006.01]**
43/06 • interrupting the drive in case of driving-element breakage; Braking or stopping loose load-carriers **[1, 2006.01]**
43/08 • Control devices operated by article or material being fed, conveyed, or discharged **[1, 2006.01]**
43/10 • Sequence control of conveyors operating in combination **[1, 2006.01]**

45/00 Lubricating, cleaning, or clearing devices [1, 2006.01]
45/02 • Lubricating devices **[1, 2006.01]**
45/04 • • for rollers **[5, 2006.01]**
45/06 • • • forming belt troughing structure **[5, 2006.01]**
45/08 • • for chains **[5, 2006.01]**
45/10 • Cleaning devices (adaptations of roller sleeves for cleaning belts B65G 39/073) **[5, 2006.01]**
45/12 • • comprising scrapers **[5, 2006.01]**
45/14 • • • Moving scrapers **[5, 2006.01]**
45/16 • • • with scraper biasing means **[5, 2006.01]**
45/18 • • comprising brushes **[5, 2006.01]**
45/20 • • comprising screws **[5, 2006.01]**
45/22 • • comprising fluid applying means **[5, 2006.01]**
45/24 • • comprising plural diverse cleaning devices **[5, 2006.01]**
45/26 • • for gathering residue after cleaning **[5, 2006.01]**

47/00 Article or material-handling devices associated with conveyors; Methods employing such devices [1, 2006.01]
47/02 • Devices for feeding articles or materials to conveyors **[1, 2006.01]**
47/04 • • for feeding articles **[1, 2006.01]**
47/06 • • • from a single group of articles arranged in orderly pattern, e.g. workpieces in magazines (de-stacking devices B65G 59/00) **[1, 2006.01]**
47/08 • • • • spacing or grouping the articles during feeding (during transit by conveyor B65G 47/28) **[1, 2006.01]**
47/10 • • • from several groups of articles **[1, 2006.01]**
47/12 • • • from disorderly-arranged article piles or from loose assemblages of articles **[1, 2006.01]**
47/14 • • • • arranging or orientating the articles by mechanical or pneumatic means during feeding (during transit by conveyor B65G 47/24, B65G 47/26) **[1, 2006.01]**
47/16 • • for feeding materials in bulk **[1, 2006.01]**
47/18 • • • Arrangements or applications of hoppers or chutes **[1, 2006.01]**
47/19 • • • • having means for controlling material flow, e.g. to prevent overloading **[1, 2006.01]**
47/20 • • • • the hoppers or chutes being movable **[1, 2006.01]**
47/22 • Devices influencing the relative position or the attitude of articles during transit by conveyors (during feeding B65G 47/14) **[1, 2006.01]**
47/24 • • orientating the articles **[1, 2006.01]**
47/244 • • • by turning them about an axis substantially perpendicular to the conveying plane **[5, 2006.01]**
47/248 • • • by turning over or inverting them (B65G 47/244 takes precedence) **[5, 2006.01]**
47/252 • • • • about an axis substantially perpendicular to the conveying direction **[5, 2006.01]**
47/256 • • • removing incorrectly orientated articles **[5, 2006.01]**
47/26 • • arranging the articles, e.g. varying spacing between individual articles **[1, 2006.01]**
47/28 • • • during transit by a single conveyor **[1, 2006.01]**
47/29 • • • • by temporarily stopping movement **[1, 2006.01]**
47/30 • • • during transit by a series of conveyors **[1, 2006.01]**
47/31 • • • • by varying the relative speeds of the conveyors forming the series **[1, 2006.01]**
47/32 • • • • Applications of transfer devices **[1, 2006.01]**
47/34 • Devices for discharging articles or materials from conveyors (B65G 47/256 takes precedence) **[1, 2006.01]**
47/36 • • by detaching suspended articles **[1, 2006.01]**
47/38 • • by dumping, tripping, or releasing load-carriers **[1, 2006.01]**
47/40 • • • by tilting conveyor buckets **[1, 2006.01]**
47/42 • • operated by article or material being conveyed and discharged **[1, 2006.01]**
47/44 • • Arrangements or applications of hoppers or chutes **[1, 2006.01]**
47/46 • • with distribution, e.g. automatically, to desired points (in tube mail systems B65G 51/36) **[1, 2006.01]**
47/48 • • • according to bodily destination marks on either articles or load-carriers **[1, 2006.01]**
47/49 • • • • without bodily contact between article or load-carrier and automatic control device **[1, 2006.01]**
47/50 • • • according to destination signals stored in separate systems **[1, 2006.01]**
47/51 • • • according to unprogrammed signals, e.g. influenced by supply situation at destination **[1, 2006.01]**

47/52 • Devices for transferring articles or materials between conveyors, i.e. discharging or 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) **[1, 2006.01]**

47/53 • • between conveyors which cross one another **[3, 2006.01]**

47/54 • • • at least one of which is a roller-way **[1, 3, 2006.01]**

47/56 • • to or from inclined or vertical conveyor sections **[1, 2006.01]**

47/57 • • • for articles **[1, 2006.01]**

47/58 • • • for materials in bulk **[1, 2006.01]**

47/60 • • to or from conveyors of the suspended, e.g. trolley, type **[1, 2006.01]**

47/61 • • • for articles **[1, 2006.01]**

47/62 • • • for materials in bulk **[1, 2006.01]**

47/64 • • Switching conveyors **[1, 2006.01]**

47/66 • • Fixed platforms or combs, e.g. bridges between conveyors **[1, 2006.01]**

47/68 • • adapted to receive articles arriving in one layer from one conveyor and to transfer them in individual layers to more than one conveyor, or vice versa, e.g. combining the flows of articles conveyed by more than one conveyor **[1, 2006.01]**

47/69 • • • the articles being accumulated temporarily **[1, 2006.01]**

47/70 • • • with precedence controls among incoming article flows **[1, 2006.01]**

47/71 • • • the articles being discharged to several conveyors **[1, 2006.01]**

47/72 • • transferring materials in bulk from one conveyor to several conveyors or vice versa **[1, 2006.01]**

47/74 • Feeding, transfer, or discharging devices of particular kinds or types **[1, 2006.01]**

47/76 • • Fixed or adjustable ploughs or transverse scrapers **[1, 2006.01]**

47/78 • • Troughs having discharge openings and closures **[1, 2006.01]**

47/80 • • Turntables carrying articles or materials to be transferred, e.g. combined with ploughs or scrapers **[1, 2006.01]**

47/82 • • Rotary or reciprocating members for direct action on articles or materials, e.g. pushers, rakes, shovels **[1, 2006.01]**

47/84 • • Star-shaped wheels or devices having endless travelling belts or chains, the wheels or devices being equipped with article-engaging elements **[1, 2006.01]**

47/86 • • • the article-engaging elements being grippers **[1, 2006.01]**

47/88 • • Separating or stopping elements, e.g. fingers (attached to star-shaped wheels B65G 47/84) **[1, 2006.01]**

47/90 • • Devices for picking-up and depositing articles or materials **[1, 2006.01]**

47/91 • • • incorporating pneumatic, e.g. suction, grippers **[1, 2006.01]**

47/92 • • • incorporating electrostatic or magnetic grippers **[1, 2006.01]**

47/94 • • Devices for flexing or tilting travelling structures; Throw-off carriages **[1, 2006.01]**

47/95 • • • adapted for longitudinal delivery **[1, 2006.01]**

47/96 • • • Devices for tilting links or platforms **[1, 2006.01]**

49/00 Conveying systems characterised by their application for specified purposes not otherwise provided for [1, 2006.01]

49/02 • for conveying workpieces through baths of liquid **[1, 2006.01]**

49/04 • • the workpieces being immersed and withdrawn by movement in a vertical direction **[1, 2006.01]**

49/05 • for fragile or damageable materials or articles **[4, 2006.01]**

49/06 • • for fragile sheets, e.g. glass **[1, 4, 2006.01]**

49/07 • • for semiconductor wafers **[5, 2006.01]**

49/08 • • for ceramic mouldings **[4, 2006.01]**

Non-mechanical conveying through pipes or tubes; Floating in troughs

51/00 Conveying articles through pipes or tubes by fluid flow or pressure; Conveying articles over a flat surface, e.g. the base of a trough, by jets located in the surface [1, 2006.01]

51/01 • Hydraulic transport of articles (B65G 51/04 takes precedence) **[6, 2006.01]**

51/02 • Directly conveying the articles, e.g. slips, sheets, stockings, containers or workpieces, by flowing gases **[1, 2006.01]**

51/03 • • over a flat surface or in troughs **[4, 2006.01]**

51/04 • Conveying the articles in carriers having a cross-section approximating that of the pipe or tube; Tube mail systems **[1, 2006.01]**

51/06 • • Despatch carriers for tube mail **[1, 2006.01]**

51/08 • • Controlling or conditioning the operating medium **[1, 2006.01]**

51/10 • • • at section junctions of pneumatic systems **[1, 2006.01]**

51/12 • • • • Pneumatic gates **[1, 2006.01]**

51/14 • • • • Pneumatic sluices **[1, 2006.01]**

51/16 • • • varying, e.g. starting or stopping, gas pressure or flow **[1, 2006.01]**

51/18 • • Adaptations of pipes or tubes; Pipe or tube joints **[1, 2006.01]**

51/20 • • Braking arrangements **[1, 2006.01]**

51/22 • • Arrangements for stopping the carriers en route in order to control carrier sequence; Blocking or separating devices **[1, 2006.01]**

51/24 • • Switches **[1, 2006.01]**

51/26 • • Stations **[1, 2006.01]**

51/28 • • • for despatch **[1, 2006.01]**

51/30 • • • for delivery **[1, 2006.01]**

51/32 • • • for despatch, delivery, and transit **[1, 2006.01]**

51/34 • • Two-way operation **[1, 2006.01]**

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 **[1, 2006.01]**

51/38 • • • Contact devices on interior of tubes for detecting passage of carriers **[1, 2006.01]**

51/40 • • • Automatically distributing the carriers to desired stations **[1, 2006.01]**

51/42 • • • • according to indications on carriers **[1, 2006.01]**

51/44 • • • • • without mechanical contact between carriers and controllers **[1, 2006.01]**

51/46 • • • • according to separate signal systems **[1, 2006.01]**

53/00 **Conveying materials in bulk through troughs, pipes or tubes by floating the materials or by flow of gas, liquid or foam [1, 2006.01]**

53/02 • Floating material troughs **[1, 2006.01]**

53/04 • Conveying materials in bulk pneumatically through pipes or tubes; Air slides **[1, 2006.01]**

53/06 • • Gas pressure systems operating without fluidisation of the materials **[1, 2006.01]**

53/08 • • • with mechanical injection of the materials, e.g. by screw **[1, 2006.01]**

53/10 • • • with pneumatic injection of the materials by the propelling gas **[1, 2006.01]**

53/12 • • • • the gas flow acting directly on the materials in a reservoir **[1, 2006.01]**

53/14 • • • • the gas flow inducing feed of the materials by suction effect **[1, 2006.01]**

53/16 • • Gas pressure systems operating with fluidisation of the materials **[1, 2006.01]**

53/18 • • • through a porous wall **[1, 2006.01]**

53/20 • • • • of an air slide, e.g. a trough **[1, 2006.01]**

53/22 • • • • the systems comprising a reservoir, e.g. a bunker **[1, 2006.01]**

53/24 • • Gas suction systems **[1, 2006.01]**

53/26 • • • operating with fluidisation of the materials **[1, 2006.01]**

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) **[1, 2006.01]**

53/30 • Conveying materials in bulk through pipes or tubes by liquid pressure **[1, 2006.01]**

53/32 • Conveying concrete, e.g. for distributing same at building sites (mixing concrete on or by conveyors B28C 5/34) **[1, 2006.01]**

53/34 • Details **[1, 2006.01]**

53/36 • • Arrangements of containers **[1, 2006.01]**

53/38 • • Modification of material containing walls to facilitate fluidisation **[1, 2006.01]**

53/40 • • Feeding or discharging devices **[1, 2006.01]**

53/42 • • • Nozzles **[1, 2006.01]**

53/44 • • • Endless conveyors **[1, 2006.01]**

53/46 • • • Gates or sluices, e.g. rotary wheels **[1, 2006.01]**

53/48 • • • Screws or like rotary conveyors **[1, 2006.01]**

53/50 • • • Pneumatic devices (incorporated in nozzles B65G 53/42) **[1, 2006.01]**

53/52 • • Adaptations of pipes or tubes **[1, 2006.01]**

53/54 • • • Flexible pipes or tubes **[1, 2006.01]**

53/56 • • • Switches **[1, 2006.01]**

53/58 • • Devices for accelerating or decelerating flow of the materials; Use of pressure generators (controlling pressure of propelling gas B65G 53/66) **[1, 2006.01]**

53/60 • • Devices for separating the materials from propellant gas **[1, 2006.01]**

53/62 • • • using liquid **[1, 2006.01]**

53/64 • • • in discrete amounts **[1, 2006.01]**

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 **[1, 2006.01]**

54/00 **Non-mechanical conveyors not otherwise provided for [3, 2006.01]**

54/02 • electrostatic, electric, or magnetic **[3, 2006.01]**

Stacking or de-stacking; Loading or unloading

Note(s)

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; feeding, piling or stacking sheets B65H) **[1, 2006.01]**

57/02 • by adding to the top of the stack **[1, 2006.01]**

57/03 • • from above **[1, 2006.01]**

57/04 • • • by suction or magnetic devices **[1, 2006.01]**

57/06 • • • Gates for releasing articles **[1, 2006.01]**

57/08 • • articles being tilted or inverted prior to depositing **[1, 2006.01]**

57/081 • • • alternate articles being inverted **[1, 2006.01]**

57/09 • • from alongside **[1, 2006.01]**

57/10 • • • by devices, e.g. reciprocating, acting directly on articles for horizontal transport to the top of stack **[1, 2006.01]**

57/11 • • the articles being stacked by direct action of the feeding conveyor **[1, 2006.01]**

57/112 • • • the conveyor being adjustable in height **[1, 2006.01]**

57/14 • • • the articles being transferred from carriers moving in an endless path adjacent to the stacks **[1, 2006.01]**

57/16 • • Stacking of articles of particular shape **[1, 2006.01]**

57/18 • • • elongated, e.g. sticks, rods, bars **[1, 2006.01]**

57/20 • • • three-dimensional, e.g. cubiform, cylindrical **[1, 2006.01]**

57/22 • • • • in layers, each of predetermined arrangement **[1, 2006.01]**

57/24 • • • • • the layers being transferred as a whole, e.g. on pallets **[1, 2006.01]**

57/26 • • • • • the arrangement providing for spaces between the articles **[1, 2006.01]**

57/28 • by assembling the articles and tilting the assembled articles to a stacked position **[1, 2006.01]**

57/30 • by adding to the bottom of the stack **[1, 2006.01]**

57/32 • characterised by stacking during transit **[1, 2006.01]**

59/00 **De-stacking of articles** (B65G 60/00 takes precedence) **[1, 2006.01]**

59/02 • De-stacking from the top of the stack **[1, 2006.01]**

59/04 • • by suction or magnetic devices **[1, 2006.01]**

59/06 • De-stacking from the bottom of the stack **[1, 2006.01]**

59/08 • De-stacking after preliminary tilting of the stack **[1, 2006.01]**

59/10 • De-stacking nested articles **[1, 2006.01]**

59/12 • characterised by de-stacking during transit **[1, 2006.01]**

60/00 **Simultaneously or alternatively stacking and de-stacking of articles [1, 2006.01]**

61/00 **Use of pick-up or transfer devices or of manipulators for stacking or de-stacking articles not otherwise provided for [1, 2006.01]**

63/00 **Transferring or trans-shipping at storage areas, railway yards or harbours; Marshalling yard installations [1, 2006.01]**

63/02 • with essentially-horizontal transit otherwise than by bridge **[1, 2006.01]**

63/04 • with essentially-horizontal transit by bridges equipped with conveyors **[1, 2006.01]**

63/06 • with essentially-vertical transit **[1, 2006.01]**

65/00 **Loading or unloading** (of vehicles B65G 67/00) **[1, 2006.01]**

65/02 • Loading or unloading machines comprising essentially a conveyor for moving the loads associated with a device for picking-up the loads **[1, 2006.01]**

65/04 • • with pick-up shovels (construction of shovels E02F) **[1, 2006.01]**

65/06 • • with endless scraping or elevating pick-up conveyors **[1, 2006.01]**

65/08 • • with reciprocating pick-up conveyors **[1, 2006.01]**

65/10 • • • Raking or scraping devices **[1, 2006.01]**

65/12 • • • • operations at positions off-set from the conveyor centreline **[1, 2006.01]**

65/14 • • with jigging pick-up conveyors, e.g. duck-bills **[1, 2006.01]**

65/16 • • with rotary pick-up conveyors **[1, 2006.01]**

65/18 • • • Discs **[1, 2006.01]**

65/20 • • • Paddle wheels **[1, 2006.01]**

65/22 • • • Screws **[1, 2006.01]**

65/23 • Devices for tilting and emptying of containers **[3, 2006.01]**

65/24 • • for manual tilting of barrels or casks **[1, 3, 2006.01]**

65/28 • Piling or unpiling loose materials in bulk, e.g. coal, manure, timber, not otherwise provided for (by soil-shifting or like equipment E02F) **[1, 2006.01]**

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) **[1, 3, 2006.01]**

Note(s) [5]

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 **[1, 2006.01]**

65/34 • • Emptying devices (conveyor construction B65G 15/00-B65G 35/00; devices similar to vehicle tipplers B65G 67/48) **[1, 2006.01]**

65/36 • • • Devices for emptying from the top **[1, 2006.01]**

65/38 • • • • Mechanical devices **[1, 2006.01]**

65/40 • • • Devices for emptying otherwise than from the top **[1, 2006.01]**

65/42 • • • • using belt or chain conveyors **[1, 2006.01]**

65/44 • • • • using reciprocating conveyors, e.g. jigging conveyors **[1, 2006.01]**

65/46 • • • • using screw conveyors **[1, 2006.01]**

65/48 • • • • using other rotating means, e.g. rotating pressure sluices in pneumatic systems **[1, 2006.01]**

67/00 **Loading or unloading vehicles** (by means incorporated in the vehicles B60-B64, e.g. B60P 1/00, B61D 9/00, B63B 27/00, B64D 9/00; ground or aircraft-carrier-deck installations for aircraft B64F 1/32) **[1, 2006.01]**

67/02 • Loading or unloading land vehicles **[1, 2006.01]**

67/04 • • Loading land vehicles **[1, 2006.01]**

67/06 • • • Feeding articles or materials from bunkers or funnels **[1, 2006.01]**

67/08 • • • using endless conveyors **[1, 2006.01]**

67/10 • • • using conveyors covering the whole length of vehicle trains **[1, 2006.01]**

67/12 • • • Loading elongated articles, e.g. rails, logs **[1, 2006.01]**

67/14 • • • Loading hardened bricks, briquettes, or the like **[1, 2006.01]**

67/16 • • • Loading coke-oven products (discharging coke ovens C10B 33/00) **[1, 2006.01]**

67/18 • • • Refuelling locomotives with solid fuels **[1, 2006.01]**

67/20 • • • Loading covered vehicles **[1, 2006.01]**

67/22 • • • Loading moving vehicles **[1, 2006.01]**

67/24 • • Unloading land vehicles **[1, 2006.01]**

67/26 • • • using rakes or scrapers **[1, 2006.01]**

67/28 • • • • External transverse blades attached to endless conveyors **[1, 2006.01]**

67/30 • • • using transportable tipping apparatus **[1, 2006.01]**

67/32 • • • using fixed tipping installations **[1, 2006.01]**

67/34 • • • • Apparatus for tipping wagons or mine cars (inverting wagons B65G 67/48) **[1, 2006.01]**

67/36 • • • • • endwise **[1, 2006.01]**

67/38 • • • • • • comprising a turntable **[1, 2006.01]**

67/40 • • • • • • toward one end only **[1, 2006.01]**

67/42 • • • • • sideways **[1, 2006.01]**

67/44 • • • • • • by passing the vehicles over a stretch of transversely-inclined rails **[1, 2006.01]**

67/46 • • • • • Apparatus for lifting and tilting **[1, 2006.01]**

67/48 • • • • Vehicle tipplers **[1, 2006.01]**

67/50 • • • • • Rotary vehicle tipplers, i.e. rotating through 360° **[1, 2006.01]**

67/52 • • • • • • having several decks **[1, 2006.01]**

67/54 • • • • • Vehicle-locking means **[1, 2006.01]**

67/56 • • • • • Vehicle and tippler interlocking controls **[1, 2006.01]**

67/60 • Loading or unloading ships (arrangement of ship-based loading or unloading equipment for cargo or passengers B63B 27/00) **[3, 2006.01]**

67/62 • • using devices influenced by the tide or by the movements of the ship, e.g. devices on pontoons **[3, 2006.01]**

69/00 **Auxiliary measures taken, or devices used, in connection with loading or unloading** (by means incorporated in, or operatively associated with, conveyors B65G 47/00; preventing fire A62C 3/00; in vehicles, see the relevant subclasses, e.g. B60P 1/58, B61D 7/32, B62D 33/00, B63B 25/00, B64D 9/00) **[1, 2006.01]**

69/02 • Filling storage spaces as completely as possible, e.g. application of vibrators **[1, 2006.01]**

69/04 • Spreading-out the materials conveyed over the whole surface to be loaded; Trimming heaps of loose materials **[1, 2006.01]**

69/06 • Fluidising **[1, 2006.01]**

69/08 • Devices for emptying storage spaces as completely as possible (devices preventing the formation of bridges in large containers B65D 88/64) **[1, 2006.01]**

69/10 • Obtaining an average product from stored bulk material **[1, 2006.01]**

69/12 • Sieving bulk materials during loading or unloading **[1, 2006.01]**

69/14 • Pulverising loaded or unloaded materials **[1, 2006.01]**

69/16 • Preventing pulverisation, deformation, breakage, or other mechanical damage to the goods or materials **[1, 2006.01]**

69/18 • Preventing escape of dust **[1, 2006.01]**

69/20 • Auxiliary treatments, e.g. aerating, heating, humidifying, de-aerating, cooling, de-watering, or drying, during loading or unloading; Loading or unloading in a fluid medium other than air **[1, 2006.01]**

69/22 • Horizontal loading or unloading platforms (as road or railway equipment B61B 1/00, E01F 1/00) **[1, 2006.01]**

69/24 • • having platform-level adjusting means **[1, 2006.01]**

69/26 • • Rotatable platforms **[1, 2006.01]**

69/28 • Loading ramps; Loading docks (as road or railway equipment B61B 1/00, E01F 1/00) **[1, 2006.01]**

69/30 • • Non-permanently installed loading ramps, e.g. transportable **[2006.01]**

69/32 • • Shelters, surrounds or sealing arrangements for loading docks **[2006.01]**

69/34 • • Accessories, e.g. vehicle restrainers, wheel blockers, positioners or bumpers **[2006.01]**

B65H HANDLING THIN OR FILAMENTARY MATERIAL, e.g. SHEETS, WEBS, CABLES

Note(s)

1. This subclass does not cover methods or devices intimately associated with other operations on thin or filamentary material, e.g. sheets, webs, cables or means for performing such operations, which are classified in the relevant subclasses for these operations, e.g.:

B07C	Postal sorting, similar sorting of documents, e.g. cheques
B08B 1/02	Cleaning travelling work, e.g. webs, by methods involving the use of tools, brushes or like members
B21B 41/00	Metal rolling involving guiding, conveying or accumulating easily-flexible work, e.g. wire, sheet metal bands, in loops or curves
B21C 47/00, B21C 49/00	Winding-up, coiling, winding-off or temporarily accumulating metal wire, metal band or other flexible metal material, characterised by features relevant to metal processing only, other than by rolling
B21D 43/00	Feeding, positioning or storing devices, combined with, or arranged in, or specially adapted for use in connection with, apparatus for working or processing sheet metal without essentially removing material
B23K 9/12	Means for automatic feeding of electrodes for spot or seam welding or cutting
B29C 31/00	Handling for shaping or joining of plastics, for shaping of substances in a plastic state in general or for after-treatment of shaped products, e.g. feeding the material to be shaped
B41B 15/32, B41B 21/32	Film-handling mechanisms in photographic composing machines
B41F 13/02	Conveying or guiding webs through rotary-printing presses or machines
B41J 11/00-B41J 17/00	Handling of copy- or impression-transfer material in typewriters or selective printing mechanisms
B41K 3/44	Means for handling copy matter in stamping or numbering apparatus or devices
B41L	Handling sheets or webs in apparatus or devices for manifolding, duplicating or printing for office or other commercial purposes, or on addressing machines or like series-printing machines
B42B	Handling relating to permanently attaching together sheets, quires, or signatures
B42C	Handling sheets in book-binding
B65B	Handling of sheets or webs in apparatus for, or methods of, packaging articles, not of interest apart from their application in packaging machines
B65C	Handling of labels in labelling or tagging apparatus
C14B 1/62	Winding or stacking hides or leather in machines or devices for manufacturing leather
D01-D07	Spinning, weaving, braiding, lace-making, knitting, sewing, making ropes or cables
D21F 2/00	Transferring webs from wet ends to press sections in paper-making
F26B 13/00	Handling fabrics, fibres, yarns or other material in long lengths in drying apparatus
G03B	Film-strip handling or handling of pictures in apparatus for taking photographs or for projecting or viewing them
G06K 13/00	Conveying record carriers from one station to another
G06M 7/00	Counting of flat articles, e.g. sheets, carried by a conveyor
G11B 15/00-G11B 19/00, G11B 23/00, G11B 25/00	Information storage based on relative movement between record carrier and transducer, involving handling record carriers for recording or reproducing
H01F 41/06	Manufacturing coils for magnets, inductances, transformers, by winding
H01G 13/02	Machines for winding capacitors
H04N 1/00	Sheet handling not of interest apart from its use in systems for transmission or reproduction of pictures or patterns not varying in time, e.g. facsimile transmission.

2. In this subclass:
   - the groups relating to thin material, as defined under (i) of Note (3) below, are primarily intended to cover the handling of articles made of paper or cardboard, but also include the handling of articles made of other materials which have similar characteristics or present similar handling problems, e.g. articles made of sheet-plastics or leather;
   - the groups relating to filamentary material (groups B65H 49/00onwards), as defined in Note (3) below, cover only methods or devices of general application or interest.

3. In this subclass, the following terms or expressions are used with the meanings indicated:
   - "handling" includes feeding, folding (other than in the manufacture of products), guiding, orientating, storing, unwinding, and winding;
   - "thin material" includes:
     i. sheets, signatures, envelopes, blanks, and thin piles thereof (hereinafter referred to as "articles"), and
     ii. webs, tapes, and films, e.g. of paper, fabric, metal foil, or plastics;
   - "filamentary material" includes thread, wires, ropes, cables, and hoses;
   - "package" means a mass of filamentary material, formed by coiling, depositing, or winding, with or without a supporting core or former or an enclosing container or receptacle.

Subclass index

ARTICLES
- Feeding; piles
  - pile supports; lifting ends of piles for overlapping; overturning articles 1/00, 13/00, 15/00
  - separating from piles; feeding from piles or to machines; feed control; positioning; feeding to piles; feed tables 3/00, 5/00, 7/00, 9/00, 11/00
- Delivering
  - from machines to piles 29/00, 35/00, 37/00
  - gathering 39/00
  - folding; unfolding 45/00, 47/00
  - piling 13/00, 15/00, 31/00, 33/00
- Combinations of piling and depiling operations 83/00
- Recirculating articles 85/00
- Control, checking, safety 43/00

WEBS
- Feeding
  - unwinding, paying-out webs; winding webs; advancing webs 16/00, 18/00, 20/00
  - changing the web roll; special constructions of feed or guide rollers; covering cores, not otherwise provided for 19/00, 27/00, 81/00
  - webs: splicing; registering, tensioning or guiding; con- trolling tension 21/00, 23/00, 77/00
- Delivery from machines
  - with or after auxiliary operations; gathering; separating 35/00, 37/00, 39/00, 41/00
  - folding; unfolding 45/00, 47/00
- Machines: control, checking, safety or warning; driving gear not otherwise provided for 26/00, 43/00, 63/00, 79/00
- Storing 75/00

FILAMENTARY MATERIAL
- Unwinding, paying out; forwarding 49/00, 51/00
- Winding, coiling, depositing; wound packages; guides; covering cores not otherwise provided for 54/00, 55/00, 57/00, 81/00
- Tension control; Measuring pre-determined lengths; joining 59/00, 77/00, 61/00, 69/00
- Cores, formers: securing material, replacing, removing, stripping-off waste material 65/00, 67/00, 73/00
- Treatment during formation of package 71/00
- Machines: control, checking, safety or warning; driving gear not otherwise provided for 26/00, 43/00, 63/00, 79/00
- Storing 75/00

SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS 99/00

Feeding articles to machines; Separating articles from piles; Pile supports

1/00 **Supports or magazines for piles from which articles are to be separated** (carriers used for associating, collating, or gathering articles B65H 39/00; combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling B65H 83/00) **[1, 2006.01]**

1/02 • adapted to support articles on edge **[1, 2006.01]**

1/04 • adapted to support articles substantially horizontally, e.g. for separation from top of pile **[1, 2006.01]**

1/06 • • for separation from bottom of pile **[1, 2006.01]**

1/08 • with means for advancing the pile to present the articles to a separating device (pressing on piles from which articles are separated from the bottom B65H 1/06) **[1, 2006.01]**

1/10 • • comprising weights **[1, 2006.01]**

1/12 • • comprising springs **[1, 2006.01]**

1/14 • • comprising positively-acting mechanical devices **[1, 2006.01]**

1/16 • • comprising pneumatic or hydraulic means **[1, 2006.01]**

1/18 • • controlled by height of pile **[1, 2006.01]**

1/20 • • controlled by weight of pile; Floating arrangements **[1, 2006.01]**

1/22 • • moving in direction of plane of articles, e.g. for bodily advancement of fanned-out piles **[1, 2006.01]**

1/24 • • with means for relieving or controlling pressure of the pile **[1, 2006.01]**

1/26 • with auxiliary supports to facilitate introduction or renewal of the pile **[1, 2006.01]**

1/28 • compartmented to receive piles side by side **[1, 2006.01]**

1/30 • with means for replenishing the pile during continuous separation of articles therefrom **[1, 2006.01]**

3/00 **Separating articles from piles** (associating, collating, or gathering articles B65H 39/00; machines for separating superposed webs B65H 41/00; unpiling thin material combined with folding B65H 45/26; combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling B65H 83/00) **[1, 2006.01]**

3/02 • using friction forces between articles and separator **[1, 2006.01]**

3/04 • • Endless-belt separators **[1, 2006.01]**

3/06 • • Rollers or like rotary separators **[1, 2006.01]**

3/08 • using pneumatic force **[1, 2006.01]**

3/10 • • Suction rollers **[1, 2006.01]**

3/12 • • Suction bands, belts, or tables moving relatively to the pile **[1, 2006.01]**

3/14 • • Air blasts producing partial vacuum **[1, 2006.01]**

3/16 • using magnetic force **[1, 2006.01]**

3/18 • using electrostatic force **[1, 2006.01]**

3/20 • using adhesives **[1, 2006.01]**

3/22 • by needles or the like engaging the articles **[1, 2006.01]**

3/24 • by pushers engaging the edges of the articles **[1, 2006.01]**

3/26 • by separators engaging folds, flaps, or projections of articles **[1, 2006.01]**

3/28 • by screw or like separators **[1, 2006.01]**

3/30 • by escapement devices (screw or like separators B65H 3/28); from staggered piles; from piles of articles having staggered formations, e.g. cuts or perforations **[1, 2006.01]**

3/32 • by elements, e.g. fingers, plates, rollers, inserted or traversed between articles to be separated and remainder of the pile (such elements acting only as supplementary devices to assist separation or prevent double feed B65H 3/50) **[1, 2006.01]**

3/34 • Article-retaining devices controlling the release of the articles to the separators **[1, 2006.01]**

3/36 • by separators moved in special paths, e.g. enclosing an area **[1, 2006.01]**

3/38 • • the paths not enclosing an area **[1, 2006.01]**

3/40 • by two or more separators acting alternately on the same pile (rotary or oscillating bodies carrying two or more separators B65H 3/42) **[1, 2006.01]**

3/42 • by two or more separators mounted for movement with, or relative to, rotary or oscillating bodies **[1, 2006.01]**

3/44 • Simultaneously, alternately, or selectively separating articles from two or more piles **[1, 2006.01]**

3/46 • Supplementary devices or measures to assist separation or prevent double feed (control means comprising detectors responsive to double feed B65H 7/12) **[1, 2006.01]**

3/48 • • Air blast acting on edges of, or under, articles **[1, 2006.01]**

3/50 • • Elements, e.g. fingers, plates, rollers, inserted or traversed between articles to be separated and remainder of the pile **[1, 2006.01]**

3/52 • • Friction retainers acting on under or rear side of article being separated **[1, 2006.01]**

3/54 • • Pressing or holding devices **[1, 2006.01]**

3/56 • • Elements, e.g. scrapers, fingers, needles, brushes, acting on separated article or on edge of the pile **[1, 2006.01]**

3/58 • • Articles spiked, threaded, cemented, or gummed together, to prevent double feed, e.g. piles with gummed edges **[1, 2006.01]**

3/60 • • Loosening articles in piles **[1, 2006.01]**

3/62 • • • by swinging, agitating, or knocking the pile **[1, 2006.01]**

3/64 • • • by vacuum apparatus **[1, 2006.01]**

3/66 • Article guides or smoothers, e.g. movable in operation **[1, 2006.01]**

3/68 • • immovable in operation **[1, 2006.01]**

5/00 **Feeding articles separated from piles; Feeding articles to machines** (identical mechanisms or parts for delivering or advancing articles from machines B65H 29/00; recirculating articles B65H 85/00) **[1, 2006.01]**

5/02 • by belts or chains **[1, 2006.01]**

5/04 • by movable tables or carriages (rotary tables B65H 5/18) **[1, 2006.01]**

5/06 • by rollers **[1, 2006.01]**

5/08 • by grippers, e.g. suction grippers **[1, 2006.01]**

5/10 • • Reciprocating or oscillating grippers **[1, 2006.01]**

5/12 • • Revolving grippers, e.g. mounted on arms, frames, or cylinders **[1, 2006.01]**

5/14 • • Details of grippers; Actuating mechanisms therefor **[1, 2006.01]**

5/16 • by pusher, needles, friction, or like devices adapted to feed single articles along a surface or table **[1, 2006.01]**

5/18 • by rotary dials or tables **[1, 2006.01]**

5/20 • by dropping-roller or like device **[1, 2006.01]**

5/22 • by air-blast or suction device (suction grippers B65H 5/08) **[1, 2006.01]**

5/24 • Feeding streams of overlapping articles **[1, 2006.01]**

5/26 • Duplicate, alternate, selective, or coacting feeds **[1, 2006.01]**

5/28 • Feeding articles stored in rolled or folded bands **[1, 2006.01]**

5/30 • Opening devices for folded sheets or signatures **[1, 2006.01]**

5/32 • Saddle-like members over which partially-unfolded sheets or signatures are fed to signature-gathering, stitching, or like machines **[1, 2006.01]**

5/34 • Varying the phase of feed relative to the receiving machine **[1, 2006.01]**

5/36 • Article guides or smoothers, e.g. movable in operation **[1, 2006.01]**

5/38 • • immovable in operation **[1, 2006.01]**

7/00 **Controlling article feeding, separating, pile-advancing, or associated apparatus, to take account of incorrect feeding, absence of articles, or presence of faulty articles [1, 2006.01]**

7/02 • by feelers or detectors **[1, 2006.01]**

7/04 • • responsive to absence of articles, e.g. exhaustion of pile (B65H 7/14 takes precedence) **[1, 2006.01]**

7/06 • • responsive to presence of faulty articles or incorrect separation or feed (B65H 7/14 takes precedence) **[1, 2006.01]**

7/08 • • • responsive to incorrect front register **[1, 2006.01]**

7/10 • • • responsive to incorrect side register (controlling transverse register of webs B65H 23/032) **[1, 2006.01]**

7/12 • • • responsive to double feed or separation **[1, 2006.01]**

7/14 • • by photoelectric feelers or detectors **[1, 2006.01]**

7/16 • Controlling air-supply to pneumatic separators **[1, 2006.01]**

7/18 • Modifying or stopping actuation of separators **[1, 2006.01]**

7/20 • Controlling associated apparatus **[1, 2006.01]**

9/00 Registering, e.g. orientating, articles; Devices therefor [1, 2006.01]
9/02 • Gauge pins **[1, 2006.01]**
9/04 • Fixed or adjustable stops or gauges (gauge pins B65H 9/02) **[1, 2006.01]**
9/06 • Movable stops or gauges, e.g. rising and falling front stops **[1, 2006.01]**
9/08 • Holding devices, e.g. finger, needle, suction, for retaining articles in registered position **[1, 2006.01]**
9/10 • Pusher or like movable registers; Pusher or gripper devices which move articles into registered position **[1, 2006.01]**
9/12 • carried by article grippers **[1, 2006.01]**
9/14 • Retarding or controlling the forward movement of articles as they approach stops **[1, 2006.01]**
9/16 • Inclined tape, roller, or like article-forwarding side registers **[1, 2006.01]**
9/18 • Assisting by devices such as reflectors, lenses, transparent sheets, or mechanical indicators **[1, 2006.01]**
9/20 • Assisting by photoelectric, sonic, or pneumatic indicators **[1, 2006.01]**

11/00 Feed tables [1, 2006.01]
11/02 • angularly adjustable in plane of articles **[1, 2006.01]**

13/00 Lifting the ends of piles to facilitate the formation of overlapped piles [1, 2006.01]

15/00 Overturning articles [1, 4, 2006.01]
15/02 • Overturning piles **[4, 2006.01]**

Feeding webs to or from machines; Winding or unwinding webs; Splicing webs

16/00 Unwinding, paying-out webs [4, 2006.01]
16/02 • Supporting web roll **[4, 2006.01]**
16/04 • • cantilever type **[4, 2006.01]**
16/06 • • both-ends type **[4, 2006.01]**
16/08 • • parallel rollers type **[4, 2006.01]**
16/10 • Arrangements for effecting positive rotation of web roll **[4, 2006.01]**

18/00 Winding webs [4, 2006.01]
18/02 • Supporting web roll **[4, 2006.01]**
18/04 • • Interior-supporting **[4, 2006.01]**
18/06 • • Lateral-supporting **[4, 2006.01]**
18/08 • Web-winding mechanisms **[4, 2006.01]**
18/10 • • Mechanisms in which power is applied to web-roll spindle **[4, 2006.01]**
18/12 • • • to effect step-by-step advancement of web **[4, 2006.01]**
18/14 • • Mechanisms in which power is applied to web roll, e.g. to effect continuous advancement of web **[4, 2006.01]**
18/16 • • • by friction roller **[4, 2006.01]**
18/18 • • • • to effect step-by-step advancement of web **[4, 2006.01]**
18/20 • • • the web roll being supported on two parallel rollers at least one of which is driven **[4, 2006.01]**
18/22 • • • by friction band **[4, 2006.01]**
18/24 • • • • to effect step-by-step advancement of web **[4, 2006.01]**
18/26 • • Mechanisms for controlling contact pressure on winding-web package, e.g. for regulating the quantity of air between web layers **[4, 2006.01]**
18/28 • Wound package of webs **[4, 2006.01]**

19/00 Changing the web roll [1, 4, 2006.01]
19/10 • in unwinding mechanisms or in connection with unwinding operations **[1, 4, 2006.01]**
19/12 • • Lifting, transporting, or inserting the web roll; Removing empty core **[1, 4, 2006.01]**
19/14 • • Accumulating surplus web for advancing to machine while changing the web roll **[1, 4, 2006.01]**
19/16 • • Driving, e.g. accelerating, the replacement web roll in association with web-splicing operation **[1, 4, 2006.01]**
19/18 • • Attaching, e.g. pasting, the replacement web to the expiring web **[1, 4, 2006.01]**
19/20 • • Cutting-off the expiring web **[1, 4, 2006.01]**
19/22 • in winding mechanisms or in connection with winding operations **[1, 4, 2006.01]**
19/24 • • Accumulating surplus web delivered while changing the web roll **[1, 4, 2006.01]**
19/26 • • Cutting-off the web running to the wound web roll **[1, 4, 2006.01]**
19/28 • • Attaching the leading end of the web to the replacement web-roll core or spindle (cores, formers, supports or holders, e.g. reels, with arrangements for securing ends of material B65H 75/28) **[1, 4, 2006.01]**
19/29 • • Securing the trailing end of the wound web to the web roll (cores, formers, supports or holders, e.g. reels, with arrangements for securing ends of material B65H 75/28) **[4, 2006.01]**
19/30 • • Lifting, transporting, or removing the web roll; Inserting core **[1, 4, 2006.01]**

20/00 Advancing webs (web-delivering apparatus incorporating devices for performing auxiliary operations B65H 35/00, B65H 37/00) **[4, 2006.01]**
20/02 • by friction roller **[4, 2006.01]**
20/04 • • to effect step-by-step advancement of web **[4, 2006.01]**
20/06 • by friction band **[4, 2006.01]**
20/08 • • to effect step-by-step advancement of web **[4, 2006.01]**
20/10 • by a feed band against which web is held by fluid pressure, e.g. suction or air blast **[4, 2006.01]**
20/12 • by suction roller **[4, 2006.01]**
20/14 • by direct action on web of moving fluid **[4, 2006.01]**
20/16 • by web-gripping means, e.g. grippers, clips **[4, 2006.01]**
20/18 • • to effect step-by-step advancement of web **[4, 2006.01]**
20/20 • by web-penetrating means, e.g. pins **[4, 2006.01]**
20/22 • • to effect step-by-step advancement of web **[4, 2006.01]**
20/24 • by looping or like devices **[4, 2006.01]**
20/26 • Mechanisms for advancing webs to or from the inside of web rolls **[4, 2006.01]**
20/28 • Mechanisms for delivering webs in superposed folds and refeeding them from the lower end of the folded assemblies **[4, 2006.01]**

20/30 • Arrangements for accumulating surplus web (while changing the web roll B65H 19/14, B65H 19/24) **[4, 2006.01]**
20/32 • • by making loops **[4, 2006.01]**
20/34 • • • with rollers **[4, 2006.01]**
20/36 • having means to optionally advance the web either in one longitudinal direction or in the opposite longitudinal direction **[4, 2006.01]**
20/38 • • by changing the direction of mechanism driving the web-roll spindle **[4, 2006.01]**
20/40 • • by changing the direction of mechanism driving the pinch roller **[4, 2006.01]**

21/00 Apparatus for splicing webs (during web-roll changing B65H 19/00; associating two or more webs B65H 39/16) **[1, 2006.01]**
21/02 • for premarked, e.g. preprinted, webs **[1, 2006.01]**

23/00 Registering, tensioning, smoothing, or guiding webs (registering articles B65H 9/00; in connection with splicing B65H 21/00; tensioning devices of general interest in connection with the handling of webs, tapes, or filamentary materials B65H 77/00) **[1, 2006.01]**
23/02 • transversely (by tentering, gripper, or like apparatus operating on fabric webs D06C) **[1, 2006.01]**
23/022 • • by tentering devices **[4, 2006.01]**
23/025 • • • by rollers **[4, 2006.01]**
23/028 • • • by clips **[4, 2006.01]**
23/032 • • Controlling transverse register of web **[4, 2006.01]**
23/035 • • • by guide bars **[4, 2006.01]**
23/038 • • • by rollers **[4, 2006.01]**
23/04 • longitudinally **[1, 2006.01]**
23/06 • • by retarding devices, e.g. acting on web-roll spindle **[1, 2006.01]**
23/08 • • • acting on web roll being unwound **[1, 2006.01]**
23/10 • • • acting on running web (by fluid action B65H 23/24) **[1, 2006.01]**
23/12 • • • • and causing parts thereof to move in opposite directions and in frictional engagement **[1, 2006.01]**
23/14 • • • • Tensioning rollers applying braking forces **[1, 2006.01]**
23/16 • • by weighted or spring-pressed movable bars or rollers **[1, 2006.01]**
23/18 • • by controlling or regulating the web-advancing mechanism, e.g. mechanism acting on the running web **[1, 2006.01]**
23/182 • • • in unwinding mechanisms or in connection with unwinding operations **[4, 2006.01]**
23/185 • • • • motor-controlled **[4, 2006.01]**
23/188 • • • in connection with running-web **[4, 2006.01]**
23/192 • • • • motor-controlled **[4, 2006.01]**
23/195 • • • in winding mechanisms or in connection with winding operations **[4, 2006.01]**
23/198 • • • • motor-controlled **[4, 2006.01]**
23/24 • • by fluid action, e.g. to retard the running web **[1, 4, 2006.01]**
23/26 • • by transverse stationary or adjustable bars or rollers **[1, 2006.01]**
23/28 • • by longitudinally-extending strips, tubes, plates, or wires (flexible tapes or bands B65H 23/30) **[1, 2006.01]**
23/30 • • by longitudinally-extending flexible tapes or bands **[1, 2006.01]**
23/32 • • Arrangements for turning or reversing webs **[1, 2006.01]**
23/34 • • Apparatus for taking-out curl from webs **[1, 2006.01]**

26/00 Warning or safety devices, e.g. automatic fault detectors, stop-motions, for web-advancing mechanisms (safety devices in general F16P; investigating chemical or physical properties of materials in general G01N; indicating devices in general G08B) **[4, 2006.01]**
26/02 • responsive to presence of irregularities in running webs **[4, 2006.01]**
26/04 • • for variation in tension **[4, 2006.01]**
26/06 • responsive to predetermined lengths of webs **[4, 2006.01]**
26/08 • responsive to a predetermined diameter **[4, 2006.01]**

27/00 Special constructions, e.g. surface features, of feed or guide rollers for webs (rollers in general F16C 13/00) **[1, 2006.01]**

Delivering articles from machines; Piling articles; Article or web delivery apparatus incorporating devices for performing specified auxiliary operations; Associating or gathering articles or webs; Machines for separating superposed webs

29/00 Delivering or advancing articles from machines; Advancing articles to or into piles (associating, collating or gathering articles B65H 39/00; combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling B65H 83/00; recirculating articles B65H 85/00; for articles other than those defined by Note (3) (i) of this subclass, see B65G) **[1, 2006.01]**
29/02 • by mechanical grippers engaging the leading edge only of the articles **[1, 2006.01]**
29/04 • • the grippers being carried by endless chains or bands **[1, 2006.01]**
29/06 • • the grippers being carried by rotating members **[1, 2006.01]**
29/08 • • the grippers being oscillated in arcuate paths **[1, 2006.01]**
29/10 • • the grippers being reciprocated in rectilinear paths **[1, 2006.01]**
29/12 • by means of the nip between two, or between two sets of, moving tapes or bands **[1, 2006.01]**
29/14 • • and introducing into a pile **[1, 2006.01]**
29/16 • by contact of one face only with moving tapes, bands, or chains **[1, 2006.01]**
29/18 • • and introducing into a pile **[1, 2006.01]**
29/20 • by contact with rotating friction members, e.g. rollers, brushes, or cylinders **[1, 2006.01]**
29/22 • • and introducing into a pile **[1, 2006.01]**
29/24 • by air-blast or suction apparatus (dropping articles from suction carriers B65H 29/32) **[1, 2006.01]**
29/26 • by dropping **[1, 2006.01]**
29/28 • • from mechanical grippers (grippers engaging the leading edge only B65H 29/02) **[1, 2006.01]**
29/30 • • from magnetic holders **[1, 2006.01]**
29/32 • • from pneumatic, e.g. suction, carriers **[1, 2006.01]**
29/34 • • from supports slid from under the articles **[1, 2006.01]**
29/36 • • from tapes, bands, or rollers rolled from under the articles **[1, 2006.01]**
29/38 • by movable piling or advancing arms, frames, plates, or like members with which the articles are maintained in face contact **[1, 2006.01]**

29/40 • • Members rotated about an axis perpendicular to direction of article movement, e.g. star-wheels formed by S-shaped members **[1, 2006.01]**

29/42 • • Members rotated about an axis parallel to direction of article movement, e.g. helices **[1, 2006.01]**

29/44 • • Members oscillated in arcuate paths **[1, 2006.01]**

29/46 • • Members reciprocated in rectilinear path **[1, 2006.01]**

29/48 • by tables arranged to be tilted to cause sliding of articles **[1, 2006.01]**

29/50 • Piling apparatus of which the discharge point moves in accordance with the height of the pile **[1, 2006.01]**

29/51 • • piling by collecting on the periphery of cylinders **[3, 2006.01]**

29/52 • Stationary guides or smoothers **[1, 2006.01]**

29/54 • Article strippers, e.g. for stripping from advancing elements **[1, 2006.01]**

29/56 • • for stripping from elements of machines **[1, 2006.01]**

29/58 • Article switches or diverters **[1, 2006.01]**

29/60 • • diverting the stream into alternative paths (B65H 29/62 takes precedence) **[1, 2006.01]**

29/62 • • diverting faulty articles from the main stream (control devices detecting faulty articles B65H 43/04) **[1, 2006.01]**

29/64 • • directing the components of composite articles into separate paths **[1, 2006.01]**

29/66 • Advancing in streams of overlapping articles **[1, 2006.01]**

29/68 • Reducing the speed of articles as they advance (web retarding devices B65H 23/06) **[1, 2006.01]**

29/70 • Article-bending or stiffening arrangements **[1, 2006.01]**

31/00 **Pile receivers** (carriers used for associating, collating, or gathering articles B65H 39/00; combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling B65H 83/00) **[1, 2006.01]**

31/02 • with stationary end support against which pile accumulates **[1, 2006.01]**

31/04 • with movable end support arranged to recede as pile accumulates **[1, 2006.01]**

31/06 • • the articles being piled on edge **[1, 2006.01]**

31/08 • • the articles being piled one above another **[1, 2006.01]**

31/10 • • • and applied at the top of the pile **[1, 2006.01]**

31/12 • • Devices relieving the weight of the pile or permitting or effecting movement of the pile end support during piling **[1, 2006.01]**

31/14 • • • Springs (fluid springs B65H 31/16) **[1, 2006.01]**

31/16 • • • Fluid-pressure devices **[1, 2006.01]**

31/18 • • • Positively-acting mechanical devices **[1, 2006.01]**

31/20 • adjustable for different article sizes **[1, 2006.01]**

31/22 • removable or interchangeable **[1, 2006.01]**

31/24 • multiple or compartmented, e.g. for alternate, programmed, or selective filling **[1, 2006.01]**

31/26 • Auxiliary devices for retaining articles in the pile **[1, 2006.01]**

31/28 • Bands, chains, or like moving receivers (for articles piled on edge B65H 31/06) **[1, 2006.01]**

31/30 • Arrangements for removing completed piles (bands, chains, or like moving receivers B65H 31/28) **[1, 2006.01]**

31/32 • Auxiliary devices for receiving articles during removal of a completed pile **[1, 2006.01]**

31/34 • Apparatus for squaring-up piled articles **[1, 2006.01]**

31/36 • • Auxiliary devices for contacting each article with a front stop as it is piled **[1, 2006.01]**

31/38 • • Apparatus for vibrating or knocking the pile during piling **[1, 2006.01]**

31/40 • • Separate receivers, troughs, and like apparatus for knocking-up completed piles **[1, 2006.01]**

33/00 **Forming counted batches in delivery pile or stream of articles [1, 2006.01]**

33/02 • by moving a blade or like member into the pile **[1, 2006.01]**

33/04 • by inserting marker slips in pile or stream **[1, 2006.01]**

33/06 • by displacing articles to define batches **[1, 2006.01]**

33/08 • • Displacing whole batches, e.g. forming stepped piles **[1, 2006.01]**

33/10 • • Displacing the end articles of a batch **[1, 2006.01]**

33/12 • by creating gaps in the stream **[1, 2006.01]**

33/14 • by diverting batches to separate receivers **[1, 2006.01]**

33/16 • by depositing articles in batches on moving supports **[1, 2006.01]**

33/18 • • with separators between adjacent batches **[1, 2006.01]**

35/00 **Delivering articles from cutting or line-perforating machines; Article or web delivery apparatus incorporating cutting or line-perforating devices, e.g. adhesive tape dispensers** (cutting or perforating machines or devices in general B26D, B26F) **[1, 2006.01]**

35/02 • from or with longitudinal slitters or perforators **[1, 2006.01]**

35/04 • from or with transverse cutters or perforators **[1, 2006.01]**

35/06 • • from or with blade, e.g. shear-blade, cutters or perforators (from or with revolving blade B65H 35/08) **[1, 2006.01]**

35/07 • • • Adhesive-tape dispensers **[3, 2006.01]**

35/08 • • from or with revolving, e.g. cylinder, cutters or perforators **[1, 2006.01]**

35/10 • from or with devices for breaking partially-cut or perforated webs, e.g. bursters **[1, 2006.01]**

37/00 **Article or web delivery apparatus incorporating devices for performing specified auxiliary operations** (incorporating cutting or line-perforating devices B65H 35/00) **[1, 2006.01]**

37/02 • for applying adhesive (and securing together B65H 37/04) **[1, 2006.01]**

37/04 • for securing together articles or webs, e.g. by adhesive, stitching, or stapling (adhering replacement to expiring web during change of web roll B65H 19/18) **[1, 2, 2006.01]**

37/06 • for folding **[1, 2006.01]**

39/00 **Associating, collating, or gathering articles or webs** (combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling B65H 83/00; machines for both collating or gathering and permanently attaching together sheets or signatures B42C 1/00) **[1, 2006.01]**

39/02 • Associating, collating, or gathering articles from several sources **[1, 2006.01]**

39/04 • • from piles **[1, 2006.01]**

39/041 • • • the piles being disposed in rotary carriers **[3, 2006.01]**

39/042 • • • the piles being disposed in superposed carriers **[3, 2006.01]**
39/043 • • • the piles being disposed in juxtaposed carriers **[3, 2006.01]**
39/045 • • • by collecting in rotary carriers **[2, 2006.01]**
39/05 • • • by collecting in superposed carriers **[2, 2006.01]**
39/055 • • • by collecting in juxtaposed carriers **[2, 2006.01]**
39/06 • • from delivery streams **[1, 2006.01]**
39/065 • • • by collecting in rotary carriers **[2, 2006.01]**
39/07 • • • by collecting in superposed carriers **[2, 2006.01]**
39/075 • • • by collecting in juxtaposed carriers **[2, 2006.01]**
39/10 • Associating articles from a single source, e.g. to form a writing pad **[1, 2006.01]**
39/105 • • in rotary carriers **[3, 2006.01]**
39/11 • • in superposed carriers **[3, 2006.01]**
39/115 • • in juxtaposed carriers **[3, 2006.01]**
39/14 • Associating sheets with webs **[1, 2006.01]**
39/16 • Associating two or more webs **[1, 2006.01]**

41/00 Machines for separating superposed webs [1, 2006.01]

43/00 Use of control, checking, or safety devices, e.g. automatic devices comprising an element for sensing a variable [1, 2006.01]
43/02 • detecting, or responding to, absence of articles (B65H 43/08 takes precedence) **[1, 2006.01]**
43/04 • detecting, or responding to, presence of faulty articles (B65H 43/08 takes precedence; diverting faulty articles from main streams B65H 29/62) **[1, 2006.01]**
43/06 • detecting, or responding to, completion of pile (B65H 43/08 takes precedence) **[1, 2006.01]**
43/08 • Photoelectric devices **[1, 2006.01]**

Folding or unfolding thin material

45/00 Folding thin material (specially adapted for the manufacture or treatment of particular products, see the relevant places, e.g. D06F 89/00) **[1, 4, 2006.01]**
45/02 • Folding limp material without application of pressure to define or form crease lines (winding or unwinding fabrics for feeding to or from machines B65H 16/00-B65H 27/00; folding garments for packaging purposes B65B; folding fabrics in sewing machines D05B) **[1, 2006.01]**
45/04 • • Folding sheets **[1, 2006.01]**
45/06 • • Folding webs (B65H 20/28 takes precedence) **[1, 2006.01]**
45/08 • • • longitudinally **[1, 2006.01]**
45/09 • • • • Doubling, i.e. folding into half of width **[1, 2006.01]**
45/10 • • • transversely **[1, 2006.01]**
45/101 • • • • in combination with laying, i.e. forming a zig-zag pile **[1, 2006.01]**
45/103 • • • • • by a carriage which reciprocates above the laying station **[1, 2006.01]**
45/105 • • • • • • coacting with fold holders **[1, 2006.01]**
45/107 • • • • • by means of swinging or reciprocating guide bars **[1, 2006.01]**
45/109 • • • • Registering or counting the folds; Detecting irregularities in the zig-zag pile **[1, 2006.01]**
45/12 • Folding articles or webs with application of pressure to define or form crease lines (B65H 20/28 takes precedence; pleating, kilting, or goffering textile fabrics D06J) **[1, 2006.01]**
45/14 • • Buckling folders **[1, 2006.01]**
45/16 • • Rotary folders **[1, 2006.01]**
45/18 • • Oscillating or reciprocating blade folders (carried on rotary members B65H 45/16) **[1, 2006.01]**
45/20 • • Zig-zag folders **[1, 2006.01]**
45/22 • • Longitudinal folders, i.e. for folding moving sheet material parallel to the direction of movement **[1, 2006.01]**
45/24 • • Interfolding sheets, e.g. cigarette or toilet papers **[1, 2006.01]**
45/26 • • Folding in combination with unpiling (unpiling B65H 3/00) **[1, 2006.01]**
45/28 • • Folding in combination with cutting (cutting machines B26D) **[1, 2006.01]**
45/30 • • Folding in combination with creasing, smoothing, or application of adhesive (folding or adhesive-application in article or web delivering B65H 37/00) **[1, 2006.01]**

47/00 Unfolding thin limp material (B65H 20/28 takes precedence; opening devices for sheets or signatures B65H 5/30) **[1, 2006.01]**

Unwinding, paying-out, forwarding, winding, coiling, or depositing filamentary material

49/00 Unwinding or paying-out filamentary material; Supporting, storing, or transporting packages from which filamentary material is to be withdrawn or paid-out (winding B65H 54/00; flyers or other guides assisting paying-out B65H 57/00; bobbins, tubes, or other cores for packages B65H 75/00) **[1, 2006.01]**
49/02 • Methods or apparatus in which packages do not rotate **[1, 2006.01]**
49/04 • • Package-supporting devices **[1, 2006.01]**
49/06 • • • for a single operative package **[1, 2006.01]**
49/08 • • • • enclosing the package **[1, 2006.01]**
49/10 • • • for one operative package and one or more reserve packages **[1, 2006.01]**
49/12 • • • • the reserve packages being mounted to permit manual or automatic transfer to operating position **[1, 2006.01]**
49/14 • • • for several operative packages **[1, 2006.01]**
49/16 • • • • Stands for frameworks **[1, 2006.01]**
49/18 • Methods or apparatus in which packages rotate (supports or holders, for storing and repeatedly paying-out and rewinding lengths of material provided for particular purposes B65H 75/34) **[1, 2006.01]**
49/20 • • Package-supporting devices **[1, 2006.01]**
49/22 • • • Overhead suspension devices **[1, 2006.01]**
49/24 • • • Rollers **[1, 2006.01]**
49/26 • • • Axial shafts or spigots **[1, 2006.01]**
49/28 • • • Turntables **[1, 2006.01]**
49/30 • • • Swifts or skein holders **[1, 2006.01]**
49/32 • • • Stands or frameworks **[1, 2006.01]**
49/34 • • Arrangements for effecting positive rotation of packages **[1, 2006.01]**
49/36 • Securing packages to supporting devices (replacing or removing cores, receptacles, or completed packages at paying-out, winding, or depositing stations B65H 67/00) **[1, 2006.01]**

49/38 • Skips, cages, racks, or containers, adapted solely for the transport or storage of bobbins, cops, or the like **[1, 2006.01]**

51/00 **Forwarding filamentary material** (stretch-spinning methods D01D 5/12; drawing or drafting rovings or the like D01H 5/00) **[1, 2006.01]**

51/005 • Separating a bundle of forwarding filamentary materials into a plurality of groups **[4, 2006.01]**

51/01 • • by means of static electricity **[4, 2006.01]**

51/015 • Gathering a plurality of forwarding filamentary materials into a bundle **[4, 2006.01]**

51/02 • Rotary devices, e.g. with helical forwarding surfaces (devices for temporarily storing filamentary material during forwarding B65H 51/20; driven rotary devices for controlling tension B65H 59/18) **[1, 2006.01]**

51/04 • • Rollers, pulleys, capstans, or intermeshing rotary elements **[1, 2006.01]**

51/06 • • • arranged to operate singly **[1, 2006.01]**

51/08 • • • arranged to operate in groups or in co-operation with other elements **[1, 2006.01]**

51/10 • • • • with opposed coacting surfaces, e.g. providing nips **[1, 2006.01]**

51/12 • • • • in spaced relation to provide a series of independent forwarding surfaces around which material is passed or wound **[1, 2006.01]**

51/14 • Aprons, endless belts, lattices, or like driven elements **[1, 2006.01]**

51/16 • Devices for entraining material by flow of liquids or gases, e.g. air-blast devices (blowing slag wool in molten state C03B 37/06) **[1, 2006.01]**

51/18 • Gripping devices with linear motion **[1, 2006.01]**

51/20 • Devices for temporarily storing filamentary material during forwarding, e.g. for buffer storage **[1, 2006.01]**

51/22 • • Reels or cages, e.g. cylindrical, with storing and forwarding surfaces provided by rollers or bars **[1, 2006.01]**

51/24 • • • with interdigitating bars **[1, 2006.01]**

51/26 • • Rollers or bars mounted askew to facilitate movement of filamentary material along them, e.g. pairs of canted rollers **[1, 2006.01]**

51/28 • Arrangements for initating a forwarding operation **[1, 2006.01]**

51/30 • Devices controlling the forwarding speed to synchronise with supply, treatment, or take-up apparatus (B65H 59/10, B65H 59/38 take precedence) **[1, 2006.01]**

51/32 • Supporting or driving arrangements for forwarding devices **[1, 2006.01]**

54/00 **Winding, coiling, or depositing filamentary material** (cores, formers, holders, cans, or receptacles B65H 75/02; devices specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material B65H 75/34) **[1, 2006.01]**

54/02 • Winding and traversing material on to reels, bobbins, tubes, or like package cores or formers **[1, 2006.01]**

54/04 • • for making packages with closely-wound convolutions **[1, 2006.01]**

54/06 • • for making cross-wound packages **[1, 2006.01]**

54/08 • • • Precision winding arrangements **[1, 2006.01]**

54/10 • • for making packages of specified shapes or on specified types of bobbins, tubes, cores, or formers **[1, 2006.01]**

54/12 • • • on flanged bobbins or spools (B65H 54/20 takes precedence) **[1, 2006.01]**

54/14 • • • on tubes, cores, or formers having generally-parallel sides, e.g. cops or packages to be loaded into loom shuttles **[1, 2006.01]**

54/16 • • • forming bottle bobbin packages **[1, 2006.01]**

54/18 • • • forming spools to be loaded into sewing, lace, embroidery, or like machines **[1, 2006.01]**

54/20 • • • forming multiple packages **[1, 2006.01]**

54/22 • • Automatic winding machines, i.e. machines with servicing units for automatically performing end-finding, interconnecting of successive lengths of material, controlling or fault-detecting of the running material, and replacing or removing of full or empty cores **[1, 2006.01]**

54/24 • • • having a plurality of winding units moving along an endless path past one or more fixed servicing units **[1, 2006.01]**

54/26 • • • having one or more servicing units moving along a plurality of fixed winding units **[1, 2006.01]**

54/28 • • Traversing devices; Package-shaping arrangements (arrangements for preventing ribbon winding B65H 54/38; grooved, slotted, or split drums for driving of packages B65H 54/46) **[1, 2006.01]**

54/30 • • • with thread guides reciprocating or oscillating with fixed stroke **[1, 2006.01]**

54/32 • • • with thread guides reciprocating or oscillating with variable stroke **[1, 2006.01]**

54/34 • • • for laying subsidiary winding, e.g. transfer tails **[1, 2006.01]**

54/36 • • • Yarn-guide advancing or raising mechanisms, e.g. cop-building arrangements **[1, 2006.01]**

54/38 • • Arrangements for preventing ribbon winding **[1, 2006.01]**

54/40 • • Arrangements for rotating packages **[1, 2006.01]**

54/42 • • • in which the package, core, or former is rotated by frictional contact of its periphery with a driving surface **[1, 2006.01]**

54/44 • • • in which the package, core, or former is engaged with, or secured to, a driven member rotatable about the axis of the package **[1, 2006.01]**

54/46 • • • Package drive drums **[1, 2006.01]**

54/48 • • • • Grooved drums **[1, 2006.01]**

54/50 • • • • Slotted or split drums **[1, 2006.01]**

54/52 • • • Drive contact pressure control, e.g. pressing arrangements **[1, 2006.01]**

54/54 • • • Arrangements for supporting cores or formers at winding stations; Securing cores or formers to driving members **[1, 2006.01]**

54/547 • • • • Cantilever supporting arrangements **[4, 2006.01]**

54/553 • • • • Both-ends supporting arrangements **[4, 2006.01]**

54/56 • Winding of hanks or skeins **[1, 2006.01]**

54/58 • • Swifts or reels adapted solely for the formation of hanks or skeins (B65H 49/30 takes precedence) **[1, 2006.01]**

54/60 • • Devices for domestic use **[1, 2006.01]**

54/62 • • Binding of skeins **[1, 2006.01]**

54/64 • Winding of balls; Forming hollow objects by winding on to fusible or soluble cores, e.g. forming pressure vessels **[1, 2006.01]**

54/66 • • Winding yarns into balls **[1, 2006.01]**

54/68 • Winding on to cards or other flat cores, e.g. of star form **[1, 2006.01]**

54/70 • Other constructional features of yarn-winding machines **[1, 2006.01]**

54/71 • • Arrangements for severing filamentary materials **[4, 2006.01]**

54/72 • • Framework; Casings; Coverings **[1, 2006.01]**

54/74 • • Driving arrangements (arrangements for preventing ribbon winding B65H 54/38; arrangements for rotating packages B65H 54/40) **[1, 2006.01]**

54/76 • Depositing materials in cans or receptacles **[1, 2006.01]**

54/78 • • Apparatus in which the depositing device or the receptacle is reciprocated **[1, 2006.01]**

54/80 • • Apparatus in which the depositing device or the receptacle is rotated **[1, 2006.01]**

54/82 • • • and in which coils are formed before deposition **[1, 2006.01]**

54/84 • • Arrangements for compacting materials in receptacles **[1, 2006.01]**

54/86 • Arrangements for taking-up waste material before or after winding or depositing **[1, 2006.01]**

54/88 • • by means of pneumatic arrangements, e.g. suction guns **[4, 2006.01]**

55/00 Wound packages of filamentary material [1, 2006.01]

55/02 • Self-supporting packages **[1, 2006.01]**

55/04 • characterised by method of winding **[1, 2006.01]**

57/00 Guides for filamentary materials; Supports therefor [1, 2006.01]

57/02 • Stationary rods or plates **[1, 2006.01]**

57/04 • Guiding surfaces within slots or grooves **[1, 2006.01]**

57/06 • Annular guiding surfaces; Eyes, e.g. pigtails **[1, 2006.01]**

57/08 • • formed of wire or the like **[1, 2006.01]**

57/10 • • with flared apertures **[1, 2006.01]**

57/12 • Tubes **[1, 2006.01]**

57/14 • Pulleys, rollers, or rotary bars **[1, 2006.01]**

57/16 • formed to maintain a plurality of filaments in spaced relation **[1, 2006.01]**

57/18 • mounted to facilitate unwinding of material from packages **[1, 2006.01]**

57/20 • • Flyers (for inserting twist D01H) **[1, 2006.01]**

57/22 • adapted to prevent excessive ballooning of material **[1, 2006.01]**

57/24 • with wear-resistant surfaces **[1, 2006.01]**

57/26 • Supports for guides **[1, 2006.01]**

57/28 • Reciprocating or oscillating guides (traversing devices for winding, coiling, or depositing filamentary material B65H 54/28) **[1, 2006.01]**

59/00 Adjusting or controlling tension in filamentary material, e.g. for preventing snarling; Applications of tension indicators (tensioning devices of general interest in connection with the handling of webs, tapes, or filamentary material B65H 77/00) **[1, 2006.01]**

59/02 • by regulating delivery of material from supply package (by contact of package with support B65H 49/02; by controlling speed of driving mechanism of unwinding or paying-out devices B65H 59/38) **[1, 2006.01]**

59/04 • • by devices acting on package or support **[1, 2006.01]**

59/06 • • by devices acting on material leaving the package **[1, 2006.01]**

59/08 • by contact of running length of material with supply package **[1, 2006.01]**

59/10 • by devices acting on running material and not associated with supply or take-up devices (by controlling speed of driving mechanism of material-forwarding devices B65H 59/38) **[1, 2006.01]**

59/12 • • Stationary elements arranged to deflect material from straight path **[1, 2006.01]**

59/14 • • • and provided with surfaces imposing additional retarding forces on material **[1, 2006.01]**

59/16 • • Braked elements rotated by material **[1, 2006.01]**

59/18 • • Driven rotary elements (material-forwarding devices B65H 51/00) **[1, 2006.01]**

59/20 • • Co-operating surfaces mounted for relative movement **[1, 2006.01]**

59/22 • • • and arranged to apply pressure to material **[1, 2006.01]**

59/24 • • • • Surfaces movable automatically to compensate for variation in tension **[1, 2006.01]**

59/26 • • • and arranged to deflect material from straight path **[1, 2006.01]**

59/28 • • • • the surfaces being urged towards each other **[1, 2006.01]**

59/30 • • • • • Surfaces movable automatically to compensate for variation in tension **[1, 2006.01]**

59/32 • • • • the surfaces being urged away from each other **[1, 2006.01]**

59/34 • • • • • Surfaces movable automatically to compensate for variation in tension **[1, 2006.01]**

59/36 • • Floating elements compensating for irregularities in supply or take-up of material (buffer storage devices B65H 51/20) **[1, 2006.01]**

59/38 • by regulating speed of driving mechanism of unwinding, paying-out, forwarding, winding, or depositing devices, e.g. automatically in response to variations in tension **[1, 2006.01]**

59/40 • Applications of tension indicators **[1, 2006.01]**

61/00 Applications of devices for metering predetermined lengths of running material (of general application G01B) **[1, 2006.01]**

63/00 Warning or safety devices for use when unwinding, paying-out, forwarding, winding, coiling, or depositing filamentary material, e.g. automatic fault detectors or stop-motions (safety devices in general F16P; indicating devices in general G08B) **[1, 2006.01]**

63/02 • responsive to reduction in tension, failure of supply, or breakage, of material **[1, 2006.01]**

63/024 • • responsive to breakage of materials **[4, 2006.01]**

63/028 • • • characterised by the detecting or sensing element **[4, 2006.01]**

63/032 • • • • electrical or pneumatic **[4, 2006.01]**

63/036 • • • characterised by the combination of the detecting or sensing elements with other devices, e.g. stopping devices for material advancing or winding mechanism **[4, 2006.01]**

63/04 • responsive to excessive tension or irregular operation of apparatus **[1, 2006.01]**

63/06 • responsive to presence of irregularities in running material, e.g. for severing the material at irregularities **[1, 2006.01]**

63/08 • responsive to delivery of a measured length of material, completion of winding of a package, or filling of a receptacle **[1, 2006.01]**

65/00 **Securing material to cores or formers** (arrangements for securing ends of material to cores, formers, supports or holders, e.g. reels, B65H 75/28) **[1, 3, 2006.01]**

67/00 **Replacing or removing cores, receptacles, or completed packages at paying-out, winding, or depositing stations [1, 2006.01]**

67/02 • Arrangements for removing spent cores or receptacles and replacing by supply packages at paying-out stations (supports for packages B65H 49/04, B65H 49/20) **[1, 2006.01]**

67/04 • Arrangements for removing completed take-up packages and replacing by cores, formers, or empty receptacles at winding or depositing stations; Transferring material between adjacent full and empty take-up elements **[1, 2006.01]**

67/044 • • Continuous winding apparatus for winding on two or more winding heads in succession **[4, 2006.01]**

67/048 • • • having winding heads arranged on rotary capstan head **[4, 2006.01]**

67/052 • • • having two or more winding heads arranged in parallel to each other **[4, 2006.01]**

67/056 • • • having two or more winding heads arranged in series with each other **[4, 2006.01]**

67/06 • Supplying cores, receptacles, or packages to, or transporting from, winding or depositing stations **[1, 2006.01]**

67/08 • Automatic end-finding and material-interconnecting arrangements (knot-tying devices B65H 69/00) **[1, 2006.01]**

69/00 **Methods of, or devices for, interconnecting successive lengths of material; Knot-tying devices [1, 2006.01]**

69/02 • by means of adhesives **[1, 2006.01]**

69/04 • by knotting **[1, 2006.01]**

69/06 • by splicing **[1, 2006.01]**

69/08 • by welding **[1, 2006.01]**

71/00 **Moistening, sizing, oiling, waxing, colouring, or drying filamentary material as additional measures during package formation** (applying liquids or other fluent materials to surfaces in general B05) **[1, 2006.01]**

73/00 **Stripping waste material from cores or formers, e.g. to permit their re-use [1, 2006.01]**

Methods, apparatus or devices of general interest or not otherwise provided for in connection with the handling of webs, tapes or filamentary materials

75/00 **Storing webs, tapes, or filamentary material, e.g. on reels** (fishing reels A01K 89/00; storing means for record carriers, specially adapted for co-operation with the recording or reproducing apparatus G11B 23/02) **[1, 2006.01]**

75/02 • Cores, formers, supports, or holders for coiled, wound, or folded material, e.g. reels, spindles, bobbins, cop tubes, cans (packaging aspects B65D 85/67) **[1, 2006.01]**

75/04 • • Kinds or types (B65H 75/18 takes precedence) **[1, 2006.01]**

75/06 • • • Flat cores, e.g. cards **[1, 2006.01]**

75/08 • • • of circular or polygonal cross-section (cans or receptacles B65H 75/16) **[1, 2006.01]**

75/10 • • • • without flanges, e.g. cop tubes **[1, 2006.01]**

75/12 • • • • with a single end flange; formed with one end of greater diameter than the barrel **[1, 2006.01]**

75/14 • • • • with two end flanges **[1, 2006.01]**

75/16 • • • Cans or receptacles, e.g. sliver cans **[1, 2006.01]**

75/18 • • Constructional details **[1, 2006.01]**

75/20 • • • Skeleton construction, e.g. formed of wire **[1, 2006.01]**

75/22 • • • collapsible; with removable parts **[1, 2006.01]**

75/24 • • • adjustable in configuration, e.g. expansible **[1, 2006.01]**

75/26 • • • Arrangements for preventing slipping of winding **[1, 2006.01]**

75/28 • • • Arrangements for securing ends of material **[1, 3, 2006.01]**

75/30 • • • Arrangements to facilitate driving or braking **[1, 2006.01]**

75/32 • • • Arrangements to facilitate severing of material **[1, 2006.01]**

75/34 • • specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material provided for particular purposes, e.g. anchored hoses, power cables (retractors for storing flexible hoses as accessories of dental work stands A61G 15/18; vehicle safety belt retractors B60R 22/34; hose-storing devices in apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or portable containers B67D 7/40; clothes-line supports D06F 53/00; spring drums for liftable blinds with horizontal lamellae E06B 9/322; spring drums or tape drums for roll-type closures or roller blinds E06B 9/56; hauling- or hoisting-chains with arrangements for holding electric cables, hoses or the like F16G 13/16; devices for guiding pipes, cables or protective tubing, between relatively movable points, e.g. movable channels, F16L 3/01; flexible rulers or tapes with scales G01B 3/10; electrical features of stored material, see the relevant subclasses, e.g. H02G) **[1, 2, 5, 2006.01]**

75/36 • • • without essentially involving the use of a core or former internal to a stored package of material, e.g. with stored material housed within casing or container, or intermittently engaging a plurality of supports as in sinuous or serpentine fashion **[1, 2, 2006.01]**

75/38 • • • involving the use of a core or former internal to, and supporting, a stored package of material **[1, 2, 2006.01]**

75/40 • • • • mobile or transportable **[1, 2006.01]**

75/42 • • • • • attached to, or forming part of, mobile tools or machines **[1, 2006.01]**

75/44 • • • • Constructional details **[1, 2006.01]**

75/48 • • • • • Automatic re-storing devices **[1, 2, 2006.01]**

75/50 • Methods of making reels, bobbins, cop tubes, or the like by working an unspecified material, or several materials **[1, 2006.01]**

77/00 **Adjusting or controlling tension in material [1, 2006.01]**

79/00 **Driving gear for devices for forwarding, winding, unwinding, or depositing material, not otherwise provided for [1, 2006.01]**

81/00 **Methods, apparatus, or devices for covering or wrapping cores by winding webs, tapes, or filamentary material, not otherwise provided for** (forming hollow objects by winding filamentary material on to fusible or soluble cores B65H 54/64; wrapping for the purpose of packaging B65B 11/00; making wound articles of paper B31C) **[1, 2006.01]**

81/02 • Covering or wrapping annular or like cores forming a closed or substantially-closed figure **[1, 2006.01]**

81/04 • • by feeding material obliquely to the axis of the core **[1, 2006.01]**

81/06 • Covering or wrapping elongated cores **[1, 2006.01]**

81/08 • • by feeding material obliquely to the axis of the core **[1, 2006.01]**

83/00 **Combinations of piling and depiling operations, e.g. performed simultaneously, of interest apart from the single operation of piling or depiling** (B65H 85/00 takes precedence) **[5, 2006.01]**

83/02 • performed on the same pile **[5, 2006.01]**

85/00 **Recirculating articles, i.e. feeding each article to, and delivering it from, the same machine work-station more than once [5, 2006.01]**

99/00 **Subject matter not provided for in other groups of this subclass [2006.01]**