

**ECLA****EUROPEAN CLASSIFICATION****B65B**

**MACHINES, APPARATUS OR DEVICES FOR, OR METHODS OF, PACKAGING ARTICLES OR MATERIALS; UNPACKING** (bundling and pressing devices for cigars [A24C1/44](#); paper-bag holders as shop or office accessories [A47F13/08](#); apparatus for coating, e.g. by dipping, B05C; devices for tensioning and securing binders adapted to be supported by the article or articles to be bound B25B, [B65B13/00](#); nailing or stapling devices per se B25C, B27F; [N: cutting or severing in general B26D, B26F;] inserting documents in envelopes and closing the latter [B43M3/00](#), [B43M5/00](#); wrappers, containers or other packaging elements, e.g. binders protective caps B65D; stacking articles in, or removing them from, pallets B65G; devices for handling sheets or webs of interest apart from their application in packaging machines B65H; packaging of matches C06F; wrapping sugar during manufacture C13H; [N: filling of grease guns [F16N37/02](#); packing of shotgun cartridges for immediate use F42B; wrapping of coins [G07D9/00](#)]; making containers or receptacles per se, see the appropriate subclasses) [C9410]

[N: **WARNING**[C0408]

The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups: [B65B51/09](#) covered by [B65B51/00](#)

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[N: **NOTE**[N1104]

The term "packaging" should be understood as including mainly the following operations: filling portable containers or receptacles with materials or small articles to form packages inserting articles, or groups of articles, into containers or receptacles closing filled containers or receptacles otherwise than by metal-, glass-, or wood-working operations

enclosing, or partially enclosing, articles or quantities of material, in sheets, strips, blanks, webs, or tubes of thin flexible material, e.g. wrapping bundling articles, e.g. holding articles together in groups by applying string or wire attaching articles to cards, sheets, or webs

Operations of these types employed in the manufacture of articles other than packages are classified in other appropriate subclasses, e.g. making confectionery products by casting in moulds formed by wrappers A23G, filling ammunition cartridges F42B

Methods of packaging which are wholly characterised by the form of the package produced, or the form of the container or packaging-element utilised, are to be classified in B65D rather than in this subclass

In the following elaborations, the term "package" is used to mean 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

In the following elaborations, the term "materials" is to be understood as embracing matter, or masses of articles, which are to be packaged, as distinct from separate or individual articles

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

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**Guide heading:**

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

- B65B1/00**      **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 jars (under special atmospheric or gaseous conditions [B65B31/00](#)) [M1104]**
- B65B1/02**      .    Machines characterised by the incorporation of means for making the containers or receptacles (from flat, folded, or tubular webs of flexible sheet material [B65B9/00](#); making containers or receptacles of interest apart from this application, see appropriate subclasses)
- B65B1/04**      .    Methods of, or means for, filling the material into the containers or receptacles
- B65B1/06**      .    .    by gravity flow
- B65B1/08**      .    .    by vibratory feeders
- B65B1/10**      .    .    by rotary feeders
- B65B1/12**      .    .    .    of screw type
- B65B1/14**      .    .    .    of centrifugal type
- B65B1/16**      .    .    by pneumatic means, e.g. by suction
- B65B1/18**      .    .    for filling valve-bags
- B65B1/20**      .    Reducing volume of filled material
- B65B1/22**      .    .    by vibration
- B65B1/24**      .    .    by mechanical compression
- B65B1/26**      .    .    by pneumatic means, e.g. suction
- B65B1/28**      .    Controlling escape of air or dust from containers or receptacles during filling (cleaning of, or removing dust from, container wrappers or packages [B65B55/24](#)) [C0312]
- B65B1/30**      .    Devices or methods for controlling or determining the quantity or quality or the material fed or filled
- B65B1/32**      .    .    by weighing (check-weighing of filled containers or receptacles [B65B1/46](#); weighing in general [G01G](#))
- B65B1/34**      .    .    .    Adjusting weight by trickle feed
- B65B1/36**      .    .    by volumetric devices or methods (checking volume of filled material [B65B1/48](#); volumetric measurement in general [G01F](#))
- B65B1/36B**      .    .    .    [N: with measuring pockets moving in an endless path]
- B65B1/36B2**      .    .    .    .    [N: about a horizontal axis of symmetry]
- B65B1/38**      .    .    .    by pistons co-operating with measuring chambers
- B65B1/38B**      .    .    .    .    [N: moving in an endless path]
- B65B1/40**      .    .    by timing of filling operations
- B65B1/42**      .    .    .    and arresting flow by cut-off means
- B65B1/44**      .    .    Checking density of material to be filled
- B65B1/46**      .    .    Check-weighing of filled containers or receptacles (check-weighing in general [G01G](#))
- B65B1/48**      .    .    Checking volume of filled material
- B65B3/00**      **Packaging plastic material, semi-liquids, liquids, or mixed solids and liquids, in individual containers or receptacles, e.g. bags, sacks, boxes, cartons, cans, jars (packaging under special atmospheric or gaseous conditions, adding propellants to**

aerosol containers [B65B31/00](#); filling bottles or other containers with liquids or semi-liquids by bottling machines [B67C](#); filling of gas bottles at high pressure for storing gases [F17C](#))

- [B65B3/00B](#) . [N: Filling medical containers such as ampoules, vials, syringes or the like]
- [B65B3/00B1](#) . . [N: Related operations, e.g. scoring ampoules]
- [B65B3/02](#) . Machines characterised by the incorporation of means for making the containers or receptacles (making containers or receptacles of interest apart from this application, see appropriate subclasses)
- [B65B3/02B](#) . . [N: Making containers by moulding of a thermoplastic material]
- [B65B3/02C](#) . . [N: Making parallelepipedal containers from a single carton blank]
- [B65B3/02D](#) . . [N: Making containers from separate body and end-parts]
- [B65B3/04](#) . Methods of, or means for, filling the material into the containers or receptacles
- [B65B3/04B](#) . . [N: for filling flexible containers having a filling and dispensing spout, e.g. containers of the "bag-in-box"-type]
- [B65B3/06](#) . . by gravity flow
- [B65B3/08](#) . . by screw-type feeders
- [B65B3/10](#) . . by application of pressure to material (by screw-type feeders [B65B3/08](#))
- [B65B3/12](#) . . . mechanically, e.g. by pistons or pumps
- [B65B3/14](#) . . . pneumatically
- [B65B3/16](#) . . for filling collapsible tubes (for filling valve bags [B65B3/17](#))
- [B65B3/17](#) . . for filling valve bags
- [B65B3/18](#) . Controlling escape of air from containers or receptacles during filling
- [B65B3/22](#) . Defoaming liquids in connection with filling
- [B65B3/24](#) . Topping-up containers or receptacles to ensure complete filling
- [B65B3/26](#) . Methods or devices for controlling the quantity of the material fed or filled
- [B65B3/28](#) . . by weighing (in general [G01G](#))
- [B65B3/30](#) . . by volumetric measurement (in general [G01F](#))
- [B65B3/30B](#) . . . [N: with measuring pockets moving in an endless path]
- [B65B3/32](#) . . . by pistons co-operating with measuring chambers
- [B65B3/32B](#) . . . . [N: with measuring chambers travelling in an endless path]
- [B65B3/32C](#) . . . . [N: for dosing several products to be mixed]
- [B65B3/34](#) . . by timing of filling operations
- [B65B3/36](#) . . . and arresting flow by cut-off means
- [B65B5/00](#) **Packaging individual articles in containers or receptacles, e.g. bags, sacks, boxes, cartons, cans, jars**
- [B65B5/02](#) . Machines characterised by incorporation of means for making the containers or receptacles (from flat, folded, or tubular webs of flexible sheet material [B65B9/00](#); making containers or receptacles of interest apart from this application, see

- opriate subclasses)
- B65B5/02B . . [N: for making bags] [N9410]
- B65B5/02C . . [N: for making containers from preformed blanks] [N9410]
- B65B5/02C1 . . . [N: for making trays] [N9410]
- B65B5/02C2 . . . [N: for making containers from two or more blanks ([B65B5/02C1](#) takes precedence)] [N9410]
  
- B65B5/04 . Packaging single articles
- B65B5/04B . . [N: in bags]
  
- B65B5/06 . Packaging groups of articles, the groups being treated as single articles
- B65B5/06B . . [N: Filled bags]
- B65B5/06C . . [N: Confectionery]
- B65B5/06D . . [N: Potato chips]
- B65B5/06E . . [N: Gable-topped container]
- B65B5/06S . . [N: in bags ([B65B5/06B](#) - [B65B5/06E](#) take precedence)]
- B65B5/06T . . [N: in trays ([B65B5/06B](#) - [B65B5/06E](#) take precedence)]
  
- B65B5/08 . Packaging groups of articles, the articles being individually gripped or guided for transfer to the containers or receptacles
  
- B65B5/10 . Filling containers or receptacles progressively or in stages by introducing successive articles, or layers of articles
- B65B5/10B . . [N: by gravity ([B65B5/12](#) and [B65B5/10E](#) take precedence)]
- B65B5/10B1 . . . [N: for packaging pills or tablets]
- B65B5/10C . . [N: by grippers ([B65B5/12](#) and [B65B5/10E](#) take precedence)]
- B65B5/10D . . [N: by pushers ([B65B5/12](#) and [B65B5/10E](#) take precedence)]
- B65B5/10E . . [N: Article support means temporarily arranged in the container]
- B65B5/12 . . Introducing successive articles, e.g. confectionery products, of different shape or size in predetermined positions
  
- B65B7/00** **Closing containers or receptacles after filling** (combinations of container-closing apparatus with apparatus for filling containers [B65B1/00](#), [B65B3/00](#), [B65B5/00](#); under special atmospheric or gaseous conditions [B65B31/00](#))
  
- B65B7/01 . Machines characterised by incorporation of means for making the closures before applying (making closures, of interest apart from this application, see the relevant subclass) [N9601]
  
- B65B7/02 . Closing containers or receptacles deformed by, or taking-up shape, of, contents, e.g. bags, sacks
- B65B7/02B . . [N: Closing valve bags]
- B65B7/04 . . by tucking-in mouth portion to form two flaps and subsequently folding-down
- B65B7/06 . . by collapsing mouth portion, e.g. to form a single flap
- B65B7/08 . . . and folding
- B65B7/10 . . . and rolling-in

- B65B7/12 . . . and twisting
- B65B7/14 . Closing collapsible or resilient tubes, e.g. for tooth paste, for lighter fuel
- B65B7/16 . Closing semi-rigid or rigid containers or receptacles not deformed by, or not taking-up shape of, contents, e.g. boxes, cartons ([closing cans by metal-working operations B21D51/26](#); [stoppering or capping bottles or jars B67B](#))
- B65B7/16A . . [N: Sealing filled ampoules]
- B65B7/16B . . [N: by feeding web material to securing means]
- B65B7/16B1 . . . [N: Securing by heat-sealing]
- B65B7/16B2 . . . [N: Securing by deformation of the web material]
- B65B7/16B3 . . . [N: Securing by heat-shrinking]
- B65B7/16D . . [N: by applying and securing double closures]
- B65B7/18 . . by collapsing mouth portion and subsequently folding-down or securing flaps
- B65B7/20 . . by folding-down preformed flaps
- B65B7/22 . . . and inserting flap portions between contents and wall
- B65B7/24 . . . and interengaging tongue and slot closures
- B65B7/26 . . by closing hinged lids
- B65B7/28 . . by applying separate preformed closures, e.g. lids, covers
- B65B7/28B . . . [N: Feeding closures]
- B65B7/28B1 . . . . [N: the closures being interconnected]
- B65B7/28C . . . [N: applying plugs or threadless stoppers ([for bottles or jars B67B1/04](#))]
- B65B7/28D . . . [N: inserting and rotating screw stoppers ([for bottles or jars B67B1/06](#))]
- B65B7/28E . . . [N: applying and rotating preformed threaded caps ([for bottles or jars B67B3/20](#))]
- B65B7/28F . . . [N: Securing closures on containers ([in general B65B51/00](#))]
- B65B7/28F1 . . . . [N: by deformation of the closure]
- B65B7/28F1A . . . . . [N: and the container rim]
- B65B7/28F2 . . . . [N: by adhesive tape]
- B65B7/28F3 . . . . [N: by gluing]
- B65B7/28F4 . . . . [N: by heat-sealing]
- B65B7/28F5 . . . . [N: by heat-shrinking ([in general B65B53/02](#))]
- B65B7/28F6 . . . . [N: by deformation of the container rim] [N9811]
- B65B9/00** **Enclosing successive articles, or quantities of material, e.g. liquids or semi-liquids, in flat, folded, or tubular webs of flexible sheet material; Subdividing filled flexible tubes to form packages**
- B65B9/02 . [N: [IPC2012.01](#)]Enclosing successive articles, or quantities of material between opposed webs [M1104]
- B65B9/02B . . [N: Packaging fluent material ([B65B9/04 takes precedence](#))]
- B65B9/02C . . [N: the webs forming a curtain]
- B65B9/04 . . one or both webs being formed with pockets for the reception of the articles, or of the quantities of material
- B65B9/04B . . . [N: for fluent material] [N0110]

- B65B9/04C . . . [N: for single articles, e.g. tablets] [N0205]
- B65B9/06 . [N: IPC2012.01] 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 [M1104]  
 [N: **Notes**If an invention involves both continuous and intermittent web motion, it is classified in both groups [B65B9/067](#) and [B65B9/073](#).  
 [N1104]  
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- B65B9/067 . . [N: IPC2012.01] the web advancing continuously ([B65B9/08](#) takes precedence) [N1104]
- B65B9/073 . . [N: IPC2012.01] the web having intermittent motion ([B65B9/08](#) takes precedence) [N1104]
- B65B9/08 . . [N: IPC2012.01] in a web folded and sealed transversely to form pockets which are subsequently filled and then closed by sealing [M1104]  
 [N: **Notes**If an invention involves both continuous and intermittent web motion, it is classified in both groups [B65B9/087](#) and [B65B9/093](#).  
 [N1104]  
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- B65B9/087 . . . [N: IPC2012.01] the web advancing continuously [N1104]
- B65B9/093 . . . [N: IPC2012.01] the web having intermittent motion [N1104]
- B65B9/10 . [IPC2012.01] 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 ([sausage making A22C11/00](#)) [M1104]
- B65B9/12 . . Subdividing filled tubes to form two or more packages by sealing or securing involving displacement of contents ([sausage making A22C11/00](#))
- B65B9/13 . . the preformed tubular webs being supplied in a flattened state
- B65B9/13B . . . [N: for palletised loads]
- B65B9/14 . . . Devices for distending tubes supplied in the flattened state
- B65B9/15 . . the preformed tubular webs being stored on filling nozzles
- B65B9/18 . . . Devices for storing tubular webs
- B65B9/20 . . [IPC2012.01] the webs being formed into tubes in situ around the filling nozzles [M1104]  
 [N: **Notes**If an invention involves both continuous and intermittent web motion, it is classified in both groups [B65B9/207](#) and [B65B9/213](#).  
 [N1104]  
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- B65B9/20L . . . [N: Means for stripping or squeezing filled tubes prior to sealing to remove air or products from sealing area] [N1204]
- B65B9/20M . . . [N: Tube advancing means] [N1104]
- B65B9/20M2 . . . . [N: combined with longitudinal welding devices] [N1104]
- B65B9/20M4 . . . . [N: Rollers or belts] [N1104]
- B65B9/20N . . . [N: Tube guiding means] [N1104]
- B65B9/20Q . . . [N: Means for altering the cross-section of the tube filling opening prior to transversal sealing, e.g. tube spreading devices ([subdividing filled tubes to form two or more packages by sealing involving displacement of contents B65B9/12](#))] [N1104]

- B65B9/20S . . . [N: Package shaping devices acting on filled tubes prior to sealing the filling opening (shaping or reshaping completed packages [B65B61/24](#))] [N1104]
- B65B9/20T . . . [N: Machines for packages of special type or form] [N1204]
- B65B9/20T1 . . . . [N: The webs being spirally wound around the filling nozzle] [N1204]
- B65B9/207 . . . [N: IPC2012.01] the web advancing continuously ([B65B9/22](#) takes precedence) [N1104]
- B65B9/213 . . . [N: IPC2012.01] the web having intermittent motion ([B65B9/22](#) takes precedence) [N1104]
- B65B9/22 . . . Forming shoulders; Tube formers
- B65B9/24 . . . the tubes being formed in situ by extrusion
  
- B65B11/00** **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 [B65B13/00](#); devices for folding or bending wrappers around contents [B65B49/00](#); devices for gathering or twisting wrappers [B65B51/00](#))
  
- B65B11/00D . [N: in blanks, e.g. sheets precut and creased for folding (devices for folding or bending wrappers around contents [B65B49/00](#))] [N1104]
- B65B11/00R . [N: Helical strip wrapping combined with roping] [N1104]
- B65B11/00S . [N: by webs revolving around articles moved along the axis of revolution] [N1104]
- B65B11/02 . 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 [B65B11/48](#); by disposing contents between two sheets and securing their opposed free margins [B65B11/50](#); covering or wrapping cores by winding webs, tapes, or filamentary material [B65H81/00](#))
- B65B11/02B . . [N: by webs revolving around stationary articles]
- B65B11/04 . the articles being rotated [N: (wrapping devices for round bales [A01F15/07D](#))] [C0312]
- B65B11/04B . . [N: by rotating platforms supporting the articles] [C0312] [M1104]
- B65B11/06 . Wrapping articles, or quantities of material, by conveying wrapper and contents in [N: common] defined paths
- B65B11/08 . . in a single straight path
- B65B11/10 . . . to fold the wrappers in tubular form about contents
- B65B11/10B . . . . [N: the axis of the tube being parallel to the conveying direction]
- B65B11/12 . . . . and then to form closing folds of similar form at opposite ends of the tube
- B65B11/14 . . . . the ends of the tube being subsequently twisted
- B65B11/16 . . . 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
- B65B11/18 . . in two or more straight paths
- B65B11/20 . . . to fold the wrappers in tubular form about contents
- B65B11/22 . . . . and then to form closing folds of similar form at opposite ends of the tube
- B65B11/24 . . . . the ends of the tube being subsequently twisted
- B65B11/26 . . . 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
- B65B11/28
  - . . in a curved path, e.g. on rotary tables or turrets
- B65B11/30
  - . . . to fold the wrappers in tubular form about contents
- B65B11/32
  - . . . . and then to form closing folds of similar form at opposite ends of the tube
- B65B11/34
  - . . . . the ends of the tube being subsequently twisted
- B65B11/36
  - . . . 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
- B65B11/38
  - . . in a combination of straight and curved paths
- B65B11/40
  - . . . to fold the wrappers in tubular form about contents
- B65B11/42
  - . . . . and then to form closing folds of similar form at opposite ends of the tube
- B65B11/44
  - . . . . the ends of the tube being subsequently twisted
- B65B11/46
  - . . . 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
- B65B11/48
  - . Enclosing articles, or quantities of material, by folding a wrapper, e.g. a pocketed wrapper, and securing its opposed free margins to enclose contents
- B65B11/50
  - . 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 B65B47/00](#))
- B65B11/52
  - . . 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-, [N: blister-, or bubble-] packaging
- B65B11/54
  - . 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
- B65B11/56
  - . Rolling articles with wrappers along a supporting surface ([for bottles B65B21/26](#))
- B65B11/58
  - . Applying two or more wrappers, e.g. in succession
- B65B11/58B
  - . . [N: to stacked articles, e.g. pallettised loads]
- B65B13/00**
  - Bundling articles** ([bundling particular articles presenting special problems using string, wire or narrow tape or band B65B27/00](#); [N: straining wire in general [B21F9/00](#); connecting wire to wire in general [B21F15/00](#)])
- B65B13/02
  - . Applying and securing binding material around articles or groups of articles, e.g. using strings, wires, strips, bands, tapes ([specially adapted for harvesting A01D37/00, A01D39/00, A01D59/00, A01F1/00](#); tying devices in baling presses [A01F15/14, B30B9/30](#); applying reinforcing means to non-metal sleepers [E01B31/28](#))
- B65B13/02B
  - . . [N: Applying preformed bands of continuous-ring form, e.g. elastic]
- B65B13/02T
  - . . [N: Hand-held tools]
- B65B13/02T1
  - . . . [N: for applying straps having preformed connecting means, e.g. cable ties]
- B65B13/04
  - . . with means for guiding the binding material around the articles prior to severing from supply
- B65B13/06
  - . . . Stationary ducts or channels



- B65B13/08 . . . Single guide or carrier for the free end of material movable part-away around articles from one side only
- B65B13/10 . . . Carriers travelling completely around the articles while holding the free end of material
- B65B13/12 . . . . attached to rotating rings
- B65B13/14 . . . Pairs of carriers or guides movable around opposite sides of the articles
- B65B13/16 . . with means for severing the binding material from supply and then applying it around the articles
  
- B65B13/18 . Details of, or auxiliary devices used in, bundling machines [N: or bundling tools]
- B65B13/18B . . [N: applying edge protecting members during bundling]
- B65B13/18C . . [N: Affixing labels during bundling (labelling machines in general [B65C](#))] [N9809]
- B65B13/18D . . [N: Load orienting means] [N9809]
- B65B13/18E . . [N: Strap accumulators] [N9809]
- B65B13/18T . . [N: Details of tools (B65B13/24 takes precedence)] [N1204]
- B65B13/18T2 . . . [N: Supports or tables facilitating tensioning operations]
- B65B13/18T3 . . . [N: Motor means]
- B65B13/18T3B . . . . [N: pneumatic or hydraulic]
- B65B13/18T3C . . . . [N: using explosives]
- B65B13/20 . . Means for compressing or compacting bundles prior to bundling
- B65B13/22 . . Means for controlling tension of binding means
- B65B13/24 . . Securing ends of binding material
- B65B13/26 . . . by knotting
- B65B13/26T . . . . [N: Hand tools]
- B65B13/28 . . . by twisting
- B65B13/28T . . . . [N: Hand tools]
- B65B13/30 . . . by deforming the overlapping ends of the strip or band
- B65B13/30T . . . . [N: Hand tools]
- B65B13/32 . . . by welding, soldering, or heat-sealing; by applying adhesive
- B65B13/32B . . . . [N: Friction welding] [N9809]
- B65B13/32C . . . . [N: Ultrasonic welding] [N9809]
- B65B13/32T . . . . [N: Hand tools]
- B65B13/34 . . . by applying separate securing members, e.g. deformable clips
- B65B13/34T . . . . [N: Hand tools]

## **B65B15/00 Attaching articles to cards, sheets, strings, webs, or other carriers**

- B65B15/02 . Attaching small articles, e.g. buttons, to cards ([cards for buttons, collar-studs, or sleeve-links](#) [A44B7/00](#))
- B65B15/04 . Attaching a series of articles, e.g. small electrical components, to a continuous web [N: (ammunition filling [F42B](#) ; placing of electric components on belts holding the terminals [H05K13/00H](#))]

## **B65B17/00 Other machines, apparatus, or methods for packaging articles or materials**

- B65B17/02 . Joining articles, e.g. cans, directly to each other for convenience of storage, transport, or handling
- B65B17/02C . . [N: the articles being joined by a top carrier element] [N9809]

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

**B65B19/00** **Packaging rod-shaped or tubular articles susceptible to damage by abrasion or pressure, e.g. cigarettes, cigars, macaroni, spaghetti, drinking straws, welding electrodes** (final treatment of cigars or cigarettes after manufacture [A24C1/38](#), [A24C5/60](#))

- B65B19/02 . Packaging cigarettes [N: (auxiliary devices for drying glued or sealed packages [B65B61/00B](#))]
- B65B19/02B . . [N: in webs of flexible sheet material]
- B65B19/04 . . Arranging, feeding, or orientating the cigarettes
- B65B19/06 . . . Turning individual cigarettes to present printed marks in desired position
- B65B19/08 . . . Positioning oval cigarettes in overlapped arrangement
- B65B19/10 . . . Arranging cigarettes in layers each comprising a predetermined number
- B65B19/10B . . . . [N: using rotary drums for withdrawal of successive layers from a hopper] [N0110]
- B65B19/12 . . Inserting the cigarettes, or wrapped groups thereof, into preformed containers
- B65B19/14 . . . 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
- B65B19/16 . . . . into boxes with two pockets
- B65B19/18 . . . into drawer-and-shell type boxes or cartons
- B65B19/20 . . . into boxes with hinged lids
- B65B19/22 . . Wrapping the cigarettes; Packaging the cigarettes in containers formed by folding wrapping material around formers
- B65B19/22B . . . [N: in one or more straight paths ([B65B19/24](#) takes precedence)]
- B65B19/22C . . . [N: in a curved path; in a combination of straight and curved paths, e.g. on rotary tables or other endless conveyers ([B65B19/24](#) takes precedence)]
- B65B19/22C2 . . . . [N: the conveyers having continuous movement]
- B65B19/22C3 . . . . [N: using endless conveyers having pockets, each pocket being provided with separate members, e.g. folders ([B65B19/22C2](#) takes precedence)]
- B65B19/22D . . . [N: Preparing and feeding blanks (in general [B65B41/00](#))]
- B65B19/24 . . . using hollow mandrels through which groups of cigarettes are fed
- B65B19/24B . . . . [N: carried by continuously driven endless conveyers]
- B65B19/26 . Machines specially adapted for packaging cigars
- B65B19/28 . Control devices for cigarette or cigar packaging machines (of general application in packaging machines [B65B57/00](#))
- B65B19/30 . . responsive to presence of faulty articles, e.g. incorrectly filled cigarettes
- B65B19/32 . . responsive to incorrect grouping of articles or to incorrect filling of packages

- B65B19/34 . Packaging other rod-shaped articles, e.g. sausages, macaroni, spaghetti, drinking straws, welding electrodes

## **B65B21/00**      **Packaging or unpacking of bottles** (bundling bottles [B65B27/04](#))

- B65B21/02 . in or from preformed containers, e.g. crates
- B65B21/02B . . [N: the bottles being arranged in a head-to-bottom formation]
- B65B21/04 . . Arranging, assembling, feeding, or orientating the bottles prior to introduction into, or after removal from, containers [N: ([B65B21/02B](#) takes precedence)]
- B65B21/06 . . . Forming groups of bottles
- B65B21/08 . . Introducing or removing single bottles, or groups of bottles, e.g. for progressive filling or emptying of containers
- B65B21/10 . . . using gravity flow
- B65B21/12 . . . using grippers engaging bottles, e.g. bottle necks (grippers in general [B25J](#))
- B65B21/14 . . Introducing or removing groups of bottles, for filling or emptying containers in one operation
- B65B21/16 . . . using gravity flow
- B65B21/18 . . . using grippers engaging bottles, e.g. bottle necks (grippers in general [B25J](#))
- B65B21/18B . . . . [N: the grippers moving in an endless path] [N9410]
- B65B21/18C . . . . [N: Inflatable grippers] [N9709]
- B65B21/20 . . . . with means for varying spacing of bottles
- B65B21/22 . . . by inverting and raising or lowering the container relative to bottles
- B65B21/24 . Enclosing bottles in wrappers
- B65B21/24C . . [N: in collapsed carton sleeves] [N9811]
- B65B21/24F . . [N: in flexible wrappers, e.g. foils ([B65B21/26](#) takes precedence)] [N9410]
- B65B21/24G . . [N: Wrapping individual bottles in straw-made wrappers] [N9502]
- B65B21/26 . . Applying wrappers to individual bottles by operations involving rotation or rolling of the bottles (to articles in general [B65B11/56](#); [N: straw-made wrappers [21/24G](#)]) [C9502]

## **B65B23/00**      **Packaging fragile or shock-sensitive articles other than bottles; Unpacking eggs** (embedding articles in shock-absorbing media [B65B55/20](#))

- B65B23/02 . Packaging or unpacking eggs
- B65B23/04 . . Erecting egg trays or cartons from collapsed blanks
- B65B23/06 . . Arranging, feeding, or orientating the eggs to be packed; Removing eggs from trays or cartons
- B65B23/08 . . . using grippers (testing, sorting, or cleaning eggs [A01K43/00](#); egg grippers for cooking purposes [A47J29/06](#) ) [N1204]
- B65B23/10 . Packaging biscuits
- B65B23/12 . . Arranging, feeding, or orientating the biscuits to be packaged (in connection with baking [A21C15/00](#))
- B65B23/14 . . . Forming groups of biscuits
- B65B23/16 . . Inserting the biscuits, or wrapped groups thereof, into [N: already] preformed

- containers
- B65B23/18 . . Wrapping individual biscuits, or groups of biscuits
- B65B23/20 . Packaging plate glass, tiles, or shingles [N: measures for preventing damage to stacked glass sheets [B65G49/06H](#)]
- B65B23/22 . Packaging glass ampoules, lamp bulbs, radio valves or tubes, or the like
- B65B25/00 Packaging other articles presenting special problems (bundling [B65B27/00](#))**
- B65B25/00A . [N: of foodstuffs, combined with their conservation ([B65B25/04A](#), [B65B25/06B1](#), [B65B25/06D1](#) take precedence)]
- B65B25/00B . [N: packaging of information carriers, e.g. records, CD, DVD] [C0312]
- B65B25/00C . [N: packaging of razor blades]
- B65B25/00D . [N: packaging of confectionery] [N0406]
- B65B25/00D1 . . [N: packaging of lollipops] [N0406]
- B65B25/00F . [N: packaging of ice-cream] [N0406]
- B65B25/00L . [N: packaging of contact lenses] [N0312]
- B65B25/02 . Packaging agricultural or horticultural products
- B65B25/02B . . [N: Packaging flower bouquets] [N0110]
- B65B25/02C . . [N: Packaging flower pots] [N0205]
- B65B25/04 . . Packaging fruit or vegetables (bag or sack-filling devices associated with digging harvesters [A01D33/10](#))
- B65B25/04A . . . [N: combined with their conservation]
- B65B25/04B . . . [N: of olives]
- B65B25/04C . . . [N: by flotation means]
- B65B25/04D . . . [N: in crates or boxes ([B65B25/04C](#) takes precedence)]
- B65B25/04E . . . [N: in nets] [N1104]
- B65B25/06 . Packaging slices or specially-shaped pieces of meat, cheese, or other plastic or tacky products
- B65B25/06B . . [N: of fish]
- B65B25/06B1 . . . [N: combined with its conservation]
- B65B25/06C . . [N: of poultry (processing of poultry [A22C21/00](#))]
- B65B25/06D . . [N: of meat]
- B65B25/06D1 . . . [N: combined with its conservation]
- B65B25/06E . . [N: of cheese]
- B65B25/08 . . between layers or strips of sheet or web material, e.g. in webs folded to zig-zag form
- B65B25/10 . . Forming sector-shaped packages of cheese or like plastic products
- B65B25/12 . . . and enclosing in circular containers

- B65B25/14 . Packaging paper or like sheets, envelopes, or newspapers, in flat, folded, or rolled form
- B65B25/14B . . [N: packaging flat articles in boxes]
- B65B25/14B1 . . . [N: by introducing successive articles]
- B65B25/14C . . [N: packaging folded articles]
- B65B25/14D . . [N: packaging rolled-up articles]
- B65B25/14D1 . . . [N: Jumbo paper rolls]
  
- B65B25/16 . Packaging bread or like bakery products, e.g. unsliced loaves
- B65B25/18 . . Sliced bread ([cutting or slicing machines specially adapted for bakeries A21C15/04](#); [breadslicing machines or apparatus B26D](#)) [C0312]
  
- B65B25/20 . Packaging garments, e.g. socks, stockings, shirts
  
- B65B25/22 . Packaging articles of food, e.g. fish fillets, intended to be cooked in the package
  
- B65B25/24 . Packaging annular articles, e.g. tyres
  
- B65B27/00** **Bundling particular articles presenting special problems using string, wire, or narrow tape or band; Baling fibrous material, e.g. peat, not otherwise provided for**  
([bundling articles in general B65B13/00](#))
  
- B65B27/02 . Bundling bricks or other building blocks
  
- B65B27/04 . Bundling groups of cans or bottles
  
- B65B27/06 . Bundling coils of wire or like annular objects
  
- B65B27/08 . Bundling paper sheets, envelopes, bags, newspapers, or other thin flat articles
- B65B27/08C . . [N: Storage receptacles therefor]
- B65B27/08D . . [N: using more than one tie, e.g. cross-ties] [N9807]
  
- B65B27/10 . Bundling rods, sticks, or like elongated objects
- B65B27/10B . . [N: by means of adhesive tape] [N9803]
  
- B65B27/12 . Baling or bundling compressible fibrous material, e.g. peat ([baling presses for straw, hay, or the like A01F15/00](#); [baling presses in general B30B9/30](#))
- B65B27/12B . . [N: and wrapping or bagging] [N9608]
  
- B65B29/00** **Packaging of materials presenting special problems**
  
- B65B29/02 . Packaging of substances, e.g. tea, which are intended to be infused in the package
- B65B29/04 . . Attaching, or forming and attaching, string handles or tags to tea bags
  
- B65B29/06 . 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
  
- B65B29/08 . Packaging of edible materials intended to be cooked in the package ([infusible substances B65B29/02](#))

- B65B29/10
  - 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
- B65B31/00**
  - **Packaging articles or materials under special atmospheric or gaseous conditions; Adding propellants to aerosol containers** (auxiliary treatments during loading or unloading in a fluid medium other than air [B65G69/20](#))
- B65B31/00A
  - [N: Adding propellants in fluid form to aerosol containers (in solid form [B65B31/10](#))]
- B65B31/00B
  - [N: Adding fluids for preventing deformation of filled and closed containers or wrappers] [M1104]
- B65B31/02
  - Filling, closing, or filling and closing, containers [N: or wrappers] in chambers maintained under vacuum or super-atmospheric pressure or containing a special atmosphere, e.g. of inert gas [M1104]
- B65B31/02C
  - . [N: the containers or wrappers being interconnected] [M1104]
- B65B31/02D
  - . [N: the chambers moving in an endless path] [M1104]
- B65B31/02E
  - . [N: specially adapted for wrappers or bags ([B65B31/02C](#), [B65B31/02D](#) take precedence)] [M1104]
- B65B31/02F
  - . [N: specially adapted for rigid or semi-rigid containers ([B65B31/02C](#), [B65B31/02D](#) take precedence)] [M1104]
- B65B31/02F1
  - . . [N: closed by a stopper]
- B65B31/02F2
  - . . [N: closed by a lid sealed to the upper rim of the container, e.g. tray-like container]
- B65B31/04
  - Evacuating, pressurising, or gasifying filled containers or wrappers, [N: or containers or wrappers to be filled,] by means of nozzles through which air or other gas, e.g. an inert gas, is withdrawn or supplied (nozzles for introducing articles or materials into containers [B65B39/00](#))
- B65B31/04B
  - . [N: the nozzles acting from above on containers or wrappers open at their top ([B65B31/04D](#) take precedence)] [M1104]
- B65B31/04B1
  - . . [N: the nozzles being arranged for insertion into, and withdrawal from, the container or wrapper] [M1104]
- B65B31/04C
  - . [N: the nozzles acting horizontally between an upper and a lower part of the container or wrapper, e.g. between container and lid] [M1104]
- B65B31/04D
  - . [N: the nozzles being combined with a filling device ([B65B31/04C](#) takes precedence)]
- B65B31/04D1
  - . . [N: of Vertical Form-Fill-Seal [VFFS] machines] [M1104]
- B65B31/04E
  - . [N: the nozzles co-operating, or being combined, with a device for opening or closing the container or wrapper ([B65B31/06](#) takes precedence)] [M1104]
- B65B31/04E1
  - . . [N: the nozzles co-operating with a check valve in the opening of the container or wrapper] [M1104]
- B65B31/04E3
  - . . [N: specially adapted for wrappers or bags] [N1104]
- B65B31/06
  - . 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
- B65B31/08
  - . the nozzle being adapted to pierce the container or wrapper
- B65B31/10
  - Adding propellants in solid form to aerosol containers

**B65B33/00**      **Packaging articles by applying removable, e.g. strippable, coatings** (applying liquids or other fluent materials to surfaces in general [B05](#); wrapping cores by winding [B65H81/00](#))

[B65B33/02](#)      .      Packaging small articles, e.g. spare parts for machines or engines

[B65B33/04](#)      .      Packaging large articles, e.g. complete machines, aircraft

[B65B33/06](#)      .      .      the coating being applied to a supporting layer or framework of sheets or strips of thin flexible material, e.g. cocoon packaging

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

**B65B35/00**      **Supplying, feeding, arranging, or orientating articles to be packaged** (cigarettes [B65B19/04](#); bottles [B65B21/04](#); eggs [B65B23/06](#); biscuits [B65B23/12](#); [N: adjustable conveying means [B65B59/00C](#) ] if not restricted to packaging machines [B07C](#), [B65G](#), [B65H](#)) [[N1204](#)]

[B65B35/02](#)      .      Supply magazines

[B65B35/04](#)      .      .      with buffer storage devices

[B65B35/06](#)      .      Separating single articles from loose masses of articles

[B65B35/08](#)      .      .      using pocketed conveyers

[B65B35/10](#)      .      Feeding, e.g. conveying, single articles ([orientating \[B65B35/56\]\(#\)](#))

[B65B35/12](#)      .      .      by gravity

[B65B35/14](#)      .      .      by agitators or vibrators

[B65B35/16](#)      .      .      by grippers

[B65B35/18](#)      .      .      .      by suction-operated grippers

[B65B35/20](#)      .      .      by reciprocating or oscillatory pushers

[B65B35/20B](#)      .      .      .      [[N: linked to endless conveyers](#)] [[N9410](#)]

[B65B35/22](#)      .      .      by roller-ways

[B65B35/24](#)      .      .      by endless belts or chains [[N: \(\[B65B35/20B\]\(#\) takes precedence\)](#)] [[C9410](#)]

[B65B35/24C](#)      .      .      .      [[N: using cooperating conveyers engaging the articles simultaneously](#)] [[N9502](#)]

[B65B35/24D](#)      .      .      .      [[N: using extensible or retractable conveyers](#)] [[N9502](#)]

[B65B35/26](#)      .      .      by rotary conveyers

[B65B35/28](#)      .      .      by pneumatic conveyers

[B65B35/30](#)      .      Arranging and feeding articles in groups ([orientating \[B65B35/56\]\(#\)](#))

[B65B35/32](#)      .      .      by gravity

[B65B35/34](#)      .      .      by agitators or vibrators

[B65B35/36](#)      .      .      by grippers

[B65B35/38](#)      .      .      .      by suction-operated grippers

[B65B35/40](#)      .      .      by reciprocating or oscillatory pushers

[B65B35/40B](#)      .      .      .      [[N: linked to endless conveyers](#)] [[N9410](#)]



- B65B35/42 . . by roller-ways
- B65B35/44 . . by endless belts or chains [N: ([B65B35/40B](#) takes precedence)] [C9410]
- B65B35/46 . . by rotary conveyers
- B65B35/48 . . by pneumatic conveyers
- B65B35/50 . . Stacking one article, or group of articles, upon another before packaging
- B65B35/52 . . . building-up the stack from the bottom
- B65B35/54 . . Feeding articles along multiple paths to a single packaging position
  
- B65B35/56 . Orientating, i.e. changing the attitude of, articles, e.g. of non-uniform cross-section
- B65B35/58 . . Turning articles by positively-acting means, e.g. to present labelled portions in uppermost position
  
- B65B37/00** **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 [B65B1/04](#), [B65B3/04](#))**
  
- B65B37/00B . [N: by endless belts or chains]
- B65B37/02 . by gravity flow
- B65B37/04 . by vibratory feeders
- B65B37/06 . by pistons or pumps
- B65B37/08 . by rotary feeders
- B65B37/10 . . of screw type
- B65B37/12 . . of centrifugal type
- B65B37/14 . by pneumatic feeders
- B65B37/16 . Separating measured quantities from supply (in container-filling machines [B65B1/30](#), [B65B3/26](#))
- B65B37/18 . . by weighing (in general [G01G](#))
- B65B37/20 . . by volume measurement (in general [G01F](#))
  
- B65B39/00** **Nozzles, funnels, or guides for introducing articles or materials into containers or wrappers (nozzles in general [B05B](#); funnels in general [B67C11/00](#))**
  
- B65B39/00A . [N: with flow cut-off means, e.g. valves]
- B65B39/00A1 . . [N: Pivoting plates]
- B65B39/00A2 . . [N: Rotating means]
- B65B39/00A3 . . [N: moving linearly]
- B65B39/00A3A . . . [N: transverse to flow direction]
  
- B65B39/00B . [N: Grids for introducing bottles into cases]
  
- B65B39/00C . [N: Guides or funnels for introducing articles into containers or wrappers]

- B65B39/02 . Expansible or contractible nozzles, funnels, or guides
- B65B39/04 . having air-escape, or air-withdrawal, passages
- B65B39/06 . adapted to support containers or wrappers
- B65B39/08 . . by means of clamps
- B65B39/10 . . . operating automatically
- B65B39/12 . movable towards or away from container or wrapper during filling or depositing
- B65B39/14 . movable with a moving container or wrapper during filling or depositing
- B65B39/14B . . [N: in an endless path]
- B65B41/00** **Supplying or feeding container-forming sheets or wrapping material (in general [B65H](#))**
- B65B41/02 . Feeding sheets or wrapper blanks
- B65B41/04 . . by grippers
- B65B41/06 . . . by suction-operated grippers
- B65B41/08 . . by reciprocating or oscillating pushers
- B65B41/10 . . by rollers
- B65B41/12 . Feeding webs from rolls
- B65B41/14 . . by grippers
- B65B41/16 . . by rollers
- B65B41/18 . Registering sheets, blanks, or webs
- B65B43/00** **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 [B65B47/00](#))**
- B65B43/02 . Forming flat bags from individual sheets or blanks
- B65B43/04 . Forming flat bags from webs
- B65B43/06 . . from more than one web
- B65B43/08 . Forming three-dimensional containers from sheet material
- B65B43/10 . . by folding the material
- B65B43/12 . Feeding flexible bags or carton blanks in flat or collapsed state; Feeding flat bags connected to form a series or chain
- B65B43/12B . . [N: Feeding flat bags connected to form a series or chain]
- B65B43/12C . . [N: Feeding carton blanks in flat or collapsed state]
- B65B43/14 . . Feeding individual bags or carton blanks from piles or magazines [N: (shopping bag dispensing systems [A47F9/04B](#))] [C0110]
- B65B43/14C . . . [N: Feeding carton blanks from piles or magazines]

- B65B43/16 . . . by grippers
- B65B43/16C . . . . [N: specially adapted for carton blanks]
- B65B43/18 . . . . by suction-operated grippers
- B65B43/18C . . . . . [N: specially adapted for carton blanks]
- B65B43/20 . . . by reciprocating or oscillating pushers
- B65B43/20C . . . . [N: specially adapted for carton blanks]
- B65B43/22 . . . by rollers
- B65B43/22C . . . . [N: specially adapted for carton blanks]
  
- B65B43/24 . Breaking creases to facilitate setting-up cartons
  
- B65B43/26 . Opening or distending bags; Opening, erecting, or setting-up boxes, cartons, or carton blanks
- B65B43/26B . . [N: opening of valve bags (filling of valve bags [B65B1/18](#), [B65B3/17](#))]
- B65B43/26C . . [N: Opening, erecting or setting-up boxes, cartons or carton blanks]
- B65B43/26D . . [N: Opening of bags interconnected in a web] [N9709]
- B65B43/28 . . by grippers co-operating with fixed supports
- B65B43/28C . . . [N: specially adapted for boxes, cartons or carton blanks]
- B65B43/30 . . by grippers engaging opposed walls, e.g. suction-operated
- B65B43/30C . . . [N: specially adapted for boxes, cartons or carton blanks]
- B65B43/32 . . by external pressure diagonally applied
- B65B43/32C . . . [N: to boxes, cartons or carton blanks]
- B65B43/34 . . by internal pressure
- B65B43/34C . . . [N: applied to boxes, cartons or carton blanks]
- B65B43/36 . . . applied pneumatically
- B65B43/36C . . . . [N: to boxes, cartons or carton blanks]
  
- B65B43/38 . Opening hinged lids
- B65B43/39 . . Opening-out closure flaps clear of bag, box, or carton mouth
  
- B65B43/40 . Removing separate lids
  
- B65B43/41 . Opening drawer-and-shell cartons
  
- B65B43/42 . 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 [B65B39/00](#)); Supporting containers or receptacles during the filling operation (by filling-nozzles [B65B39/00](#))
  
- B65B43/44 . . from supply magazines
- B65B43/46 . . using grippers
- B65B43/46B . . . [N: for bags] [N9410]
- B65B43/48 . . using reciprocating or oscillating pushers
- B65B43/50 . . using rotary tables or turrets [N: ([B65B43/46](#) takes precedence)] [C9502]
- B65B43/52 . . using roller-ways or endless conveyers
- B65B43/54 . . Means for supporting containers or receptacles during the filling operation

- B65B43/56 . . . movable stepwise to position container or receptacle for the reception of successive increments of contents
- B65B43/58 . . . . vertically movable
- B65B43/59 . . . vertically movable ([B65B43/58](#) takes precedence)
- B65B43/60 . . . rotatable
- B65B43/62 . . . . about an axis located at the filling position, e.g. the axis of the container or receptacle
  
- B65B45/00 Apparatus or devices for supporting or holding wrappers during wrapping operation** ([filling nozzles, funnels, guides](#) [B65B39/00](#))
  
- B65B47/00 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**
  
- B65B47/02 . with means for heating the material prior to forming
- B65B47/04 . by application of mechanical pressure
- B65B47/06 . . using folding dies
- B65B47/08 . by application of fluid pressure
- B65B47/10 . . by vacuum
  
- B65B49/00 Devices for folding or bending wrappers around contents**
  
- B65B49/02 . Fixed or resiliently-mounded folders, e.g. non-driven rollers
- B65B49/04 . . Ploughs or plates with inclined slots or opposed inclined edges
- B65B49/06 . Resilient folders, e.g. brushes, diaphragms
- B65B49/08 . Reciprocating or oscillating folders
- B65B49/10 . Folders movable in closed non-circular paths
- B65B49/12 . Rotary folders
- B65B49/14 . Folders forming part of, or attached to, conveyers for partially-wrapped articles
- B65B49/16 . Pneumatic means, e.g. air jets
  
- B65B51/00 Devices for, or methods of, sealing or securing package folds or closures; Devices for gathering or twisting wrappers, or necks of bags**
  
- B65B51/02 . Applying adhesives or sealing liquids ([activating adhesives by applying heat or pressure](#) [B65B51/10](#))
- B65B51/02B . . [\[N: using applicator nozzles\] \[N9807\]](#)
- B65B51/02C . . [\[N: using rotating applicators\] \[N9807\]](#)

- B65B51/04 . Applying separate sealing or securing members, e.g. clips, ([applying separate lids or covers B65B7/28](#))
- B65B51/04B . . [N: Applying springy clips around bag necks]
- B65B51/04C . . [N: Applying a closure element to the mouths of bags] [C0110]
- B65B51/05 . . Stapling
- B65B51/06 . . Applying adhesive tape [N: (adhesive tape dispensers B65H35/00B)] [N1204]
- B65B51/06B . . . [N: to the mouths of bags]
- B65B51/06C . . . [N: to the necks of bags]
- B65B51/06F . . . [N: to the closure flaps of boxes]
- B65B51/07 . . Sewing or stitching
- B65B51/08 . . Applying binding material, e.g. to twisted bag necks
  
- B65B51/10 . Applying or generating heat or pressure or combinations thereof [N: (welding of plastics per se B29C65/02; closing plastic tube ends in general B29C57/10)] [N1204]
- B65B51/12 . . by resilient means, e.g. brushes
- B65B51/14 . . by reciprocating or oscillating members ([B65B51/14T takes precedence](#)) [C0312]
- B65B51/14B . . . [N: Closing bottle necks or tubes]
- B65B51/14C . . . [N: Closing paperboard containers]
- B65B51/14D . . . [N: Closing bags]
- B65B51/14T . . . [N: Hand-operated members] [N0312]
- B65B51/16 . . by rotary members
- B65B51/18 . . by endless bands or chains
- B65B51/20 . . by fluid pressure acting directly on folds or on opposed surfaces, e.g. using hot-air jets ([shrinking wrappers by heating B65B53/02](#))
- B65B51/22 . . by friction or ultrasonic or high-frequency electrical means, [N: i.e. by friction or ultrasonic or induction welding]
- B65B51/22B . . . [N: by friction welding]
- B65B51/22C . . . [N: by ultrasonic welding]
- B65B51/22D . . . [N: by induction welding]
- B65B51/24 . . to produce bead seals ([combined with severing by heated wires or rods B65B61/10](#))
- B65B51/26 . . Devices specially adapted for producing transverse or longitudinal seams in webs or tubes
- B65B51/28 . . . Rollers for producing longitudinal and transverse seams simultaneously
- B65B51/30 . . . Devices, e.g. jaws, for applying pressure and heat, e.g. for subdividing filled tubes ([for subdividing filled tubes involving displacement of contents B65B9/12](#))
- B65B51/30B . . . . [N: reciprocating along only one axis] [C9811]
- B65B51/30C . . . . [N: Counter-rotating devices] [N9410]
  
- B65B51/32 . Cooling, or cooling and pressing, package closures after heat-sealing
  
- B65B53/00 Shrinkers, wrappers, containers, or container covers during or after packaging**
  
- B65B53/02 . by heat

- B65B53/04 . . . supplied by liquids
- B65B53/06 . . . supplied by gases, e.g. hot-air jets
- B65B53/06B . . . [N: Tunnels]
- B65B53/06C . . . [N: Mobile frames, hoods, posts or the like]
  
- B65B55/00** **Preserving, protecting, or purifying packages or package contents in association with packaging** (by packaging under special atmospheric or gaseous conditions [B65B31/00](#); devices for placing protecting sheets, plugs, or wads over contents [B65B61/22](#); if not restricted to packaging [A23L](#), [A61L](#))
  
- B65B55/02 . . . Sterilising, e.g. of complete packages
- B65B55/02B . . . [N: of flexible containers having a filling and dispensing spout, e.g. containers of the "bag-in-box"-type ([B65B55/02C](#), [B65B55/02D](#) take precedence)] [C9608]
- B65B55/02C . . . [N: Packaging in aseptic tunnels] [N9608]
- B65B55/02D . . . [N: Packaging in aseptic chambers] [N9608]
- B65B55/04 . . . Sterilising wrappers or receptacles prior to, or during, packaging [N: (sterilising bottles [B67C7/00](#))] [N9608] [C0110]
- B65B55/06 . . . . by heat
- B65B55/08 . . . . by irradiation
- B65B55/10 . . . . by liquids or gases [C0312]
- B65B55/10B . . . . . [N: Sterilising flat or tubular webs]
- B65B55/10C . . . . . [N: Sterilising connected bags]
- B65B55/12 . . . Sterilising contents prior to, or during, packaging
- B65B55/14 . . . . by heat
- B65B55/16 . . . . by irradiation
- B65B55/18 . . . . by liquids or gases ([B65B55/14](#) takes precedence)
- B65B55/19 . . . . by adding materials intended to remove free oxygen or to develop inhibitor gases, e.g. vapour phase inhibitors
  
- B65B55/20 . . . Embedding contents in shock-absorbing media, e.g. plastic foam, granular material
  
- B65B55/22 . . . Immersing contents in protective liquids
  
- B65B55/24 . . . Cleaning of, or removing dust from, containers, wrappers, or packaging; [N: Preventing of fouling] [C0110]
  
- B65B57/00** **Automatic control, checking, warning, or safety devices** (registering wrapping or container-forming material fed from rolls [B65B41/18](#); accident-prevention measures applicable for general use [F16P](#); [N: factory control systems [G05B19/418](#); operation of audible or visible signals besides this application [G08G](#)]; photoelectric cells [H01J](#), [H01L](#); such devices in general see the relevant classes) [C0110]
  
- B65B57/00B . . . [N: Safety-devices ([B65B57/18](#) takes precedence)] [N9502]
  
- B65B57/02 . . . responsive to absence, presence, abnormal feed, or misplacement of binding or wrapping material, containers, or packages
  
- B65B57/04 . . . and operating to control, or to stop, the feed of such material, containers, or packages

- B65B57/06
  - . . and operating to control, or to stop, the feed of articles or material to be packaged
- B65B57/08
  - . . and operating to stop, or to control the speed of, the machine as a whole
- B65B57/10
  - . responsive to absence, presence, abnormal feed, or misplacement of articles or materials to be packaged
- B65B57/12
  - . . and operating to control, or stop, the feed of wrapping materials, containers, or packages
- B65B57/14
  - . . and operating to control, or stop, the feed of articles or material to be packaged
- B65B57/14F
  - . . . [N: for fluent material] [N9608]
- B65B57/16
  - . . and operating to stop, or to control the speed of, the machine as a whole
- B65B57/18
  - . causing operation of audible or visible alarm signals
- B65B57/20
  - . Application of counting devices for controlling the feed of articles (other applications [B65B65/08](#))
- B65B59/00**

**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**
- B65B59/00C
  - . [N: Adjustable conveying means ([B65B59/02](#) takes precedence)] [N9502]
- B65B59/02
  - . Arrangements to enable adjustments to be made while the machine is running (weight or volumetric adjustment of material to be packaged [B65B1/30](#), [B65B3/26](#))
- B65B59/04
  - . Machines constructed with readily-detachable units or assemblies, e.g. to facilitate maintenance
- B65B61/00**

**Miscellaneous auxiliary devices operating on sheets, blanks, webs, binding material, containers, or packages, and not otherwise provided for (operating on articles or materials to be packaged and not otherwise provided for [B65B63/00](#))**
- B65B61/00B
  - . [N: for drying glued or sealed packages]
- B65B61/00C
  - . [N: for removing material by cutting]
- B65B61/00D
  - . [N: Perforating strips of completed packages] [N0110]
- B65B61/02
  - . for perforating, scoring, [N: slitting,] or applying code or date marks on material prior to packaging [N: (scoring ampoules [B65B3/00B1](#))]
- B65B61/02B
  - . . [N: for applying, e.g. printing, code or date marks on material prior to packaging]
- B65B61/04
  - . for severing webs, or for separating joined packages
- B65B61/06
  - . . by cutting
- B65B61/06B
  - . . . [N: by punching out]
- B65B61/08
  - . . . using rotary cutters
- B65B61/10
  - . . . using heated wires or cutters
- B65B61/12
  - . . by tearing along perforations or lines of weakness
- B65B61/14
  - . for incorporating, or forming and incorporating, handles or suspension means in



- packages (attaching, or forming and attaching, string handles or tags to tea-bags [B65B29/04](#))
- B65B61/16
    - . . Forming suspension apertures in packages
  - B65B61/18
    - . for making package-opening or unpacking elements [C0404]
  - B65B61/18B
    - . . [N: by applying tear-strips or tear-tapes] [C0404]
  - B65B61/18C
    - . . [N: by applying tabs over discharge openings, e.g. over discharge openings defined by tear or score lines] [C0404]
  - B65B61/18D
    - . . [N: by applying or incorporating rigid fittings, e.g. discharge spouts] [C0404]
  - B65B61/18E
    - . . [N: by applying or incorporating profile-strips, e.g. for reclosable bags] [C0404]
  - B65B61/20
    - . for adding cards, coupons, or other inserts to package contents [N: e.g. for adding or applying accessories or inserts to the inside or the outside of a container] (adding unpacking elements [B65B61/18](#); labelling [B65C](#))
  - B65B61/20B
    - . . [N: for attaching articles to the outside of a container ([B65B61/20C](#) takes precedence)]
  - B65B61/20C
    - . . [N: for adding drinking straws to a container]
  - B65B61/20D
    - . . [N: for inserting partitions between package contents]
  - B65B61/22
    - . . for placing protecting sheets, plugs, or wads over contents, e.g. cotton-wool in bottles of pills
  - B65B61/24
    - . for shaping or reshaping completed packages
  - B65B61/26
    - . for marking or coding completed packages
  - B65B61/28
    - . for discharging completed packages from machines
  - B65B63/00**

**Miscellaneous auxiliary devices operating on articles or materials to be packaged and not otherwise provided for** (operating on sheets, blanks, webs, binding material, or packages, and not otherwise provided for [B65B61/00](#))
  - B65B63/00B
    - . [N: for marking or coding articles prior to packaging] [N0110]
  - B65B63/02
    - . for compressing or compacting articles or materials prior to wrapping or insertion in containers or receptacles (tableting or compressing of powders [B30B11/00](#))
  - B65B63/02B
    - . . [N: using compressing chambers or plates moving in an endless path] [N9502]
  - B65B63/02C
    - . . [N: for compressing by winding] [N9502]
  - B65B63/02D
    - . . [N: for compressing by feeding articles through a narrowing space] [C0110]
  - B65B63/02P
    - . . [N: by pneumatic means]
  - B65B63/04
    - . for folding or winding articles, e.g. gloves, stockings ([N: B65B63/02C takes precedence;] folding or winding webs or filamentary material in general [B65H4w5/00](#), [B65H54/00](#); folding textile articles in connection with laundering preparatory to packaging [D06F89/00](#) ) [N1204]
  - B65B63/04B
    - . . [N: for folding garments, e.g. stockings, shirts] [N9608]
  - B65B63/06
    - . . Forming elongated hanks, e.g. of shoe laces
  - B65B63/08
    - . for heating or cooling articles or materials to facilitate packaging

**B65B65/00** Details peculiar to packaging machines and not otherwise provided for;  
Arrangements of such details

- B65B65/00B . [N: Packaging lines, e.g. general layout] [N0110] [M1104]
- B65B65/00B1 . . [N: Multiple parallel packaging lines] [N1104]
- B65B65/02 . Driving gear
- B65B65/04 . Mechanisms for converting a continuous rotary motion to intermittent rotary motion, e.g. Geneva drives
- B65B65/06 . coated or treated with anti-friction or anti-sticking materials, e.g. polytetrafluoroethylene
- B65B65/08 . Devices for counting or registering the number of articles handled, or the number of packages produced by the machine

**B65B67/00** Apparatus or devices facilitating manual packaging operations; Sack holders

- B65B67/02 . Packaging of articles or materials in containers
- B65B67/04 . . Devices facilitating the insertion of articles or materials into bags [N: e.g. guides or chutes (sack holders [B65B67/12](#))] [C0312]
- B65B67/06 . . Manually-operable devices for closing bag necks, by applying and securing lengths of string, wire or tape
- B65B67/08 . Wrapping of articles
- B65B67/08B . . [N: using hand-held dispensers for stretch films] [N9505]
- B65B67/10 . . Wrapping-tables
- B65B67/12 . Sack holders, i.e. stands or frames with means for supporting sacks in the open condition to facilitate filling with articles or materials [N: (nozzles, funnels or guides adapted to support sacks [B65B39/06](#))]
- B65B67/12B . . [N: collapsible or foldable ([B65B67/12D](#), [B65B67/12G](#), [B65B67/12H](#) take precedence)]
- B65B67/12C . . [N: characterised by mechanisms for moving, e.g. pivoting, lids or frame parts, e.g. pedal-operated ([B65B67/12D](#) takes precedence; pedal-operated mechanisms for opening or closing container lids [B65D43/26](#))]
- B65B67/12D . . [N: co-operating with the door of a cabinet or the like]
- B65B67/12E . . [N: characterised by means for suspending sacks, e.g. pedal-operated]
- B65B67/12E2 . . . [N: only by a part of the periphery, e.g. by single points or handles, or by one side or two opposite sides only (B65B67/12G takes precedence)] [N1204]
- B65B67/12E3 . . . [N: Clamping or holding means]
- B65B67/12F . . [N: Inserts or external supports, e.g. baskets, for stiffening sacks in the open condition]
- B65B67/12G . . [N: characterised by mechanisms for temporarily closing the mouth of the sack, e.g. pedal-operated ([B65B67/12C](#), [B65B67/12H](#) take precedence; final closing or sealing of sacks [B65B7/02](#), [B65B51/00](#))]
- B65B67/12G2 . . . [N: comprising resilient closing elements, e.g. inserts, cooperating with the mouth of the sack]

- B65B67/12H . . [N: characterised by positively acting means for stretching the mouth of the sack into the open condition, e.g. using springs]
- B65B67/12M . . [N: specially adapted for storing or dispensing sacks from a supply]
- B65B67/12M2 . . . [N: for dispensing flexible tubular material gathered up in the shape of a ring]
  
- B65B69/00                    Unpacking of articles or materials, not otherwise provided for**
  
- B65B69/00A . [N: Opening and emptying bags]
- B65B69/00A2 . . [N: for urine bags or medical drainage bags]
  
- B65B69/00B . [N: Removing or cutting binding material, e.g. straps or bands]
  
- B65B69/00C . [N: by cutting ([B65B69/00A-B65B69/00B](#) take precedence)]
- B65B69/00C1 . . [N: by puncturing]
  
- B65B69/00D . [N: by expelling contents, e.g. by squeezing the container]
- B65B69/00D1 . . [N: Solid contents]
  
- B65B69/00E . [N: Heating materials to facilitate their unpacking]
  
- B65B69/00F . [N: Emptying systems for flexible intermediate bulk containers (FIBC)] [N0007]
- B65B69/00F1 . . [N: using frames whereby the container is only suspended] [N0007]
- B65B69/00F2 . . [N: using frames whereby the container is bottom supported] [N0007]