**B67**  OPENING OR CLOSING BOTTLES, JARS OR SIMILAR CONTAINERS; LIQUID HANDLING
(nozzles in general B05B; packaging liquids B65B, e.g. B65B 3/00; pumps in general F04; siphons F04F 10/00; valves F16K; handling liquefied gases F17C)

**B67B**  APPLYING CLOSURE MEMBERS TO BOTTLES, JARS, OR SIMILAR CONTAINERS (opening or closing devices attached to, or incorporated in, containers or container closures B65D)

1/00  Closing bottles, jars, or similar containers by applying stoppers (stoppers per se B65D 39/00)
1/03  .  Pretreatment of stoppers, e.g. cleaning, steaming, heating, impregnating or coating; Applying resilient rings to stoppers (mechanical working of cork B27J 5/00) [5]
1/04  .  by inserting threadless stoppers, e.g. corks
1/06  .  by inserting and rotating screw stoppers
1/08  .  Securing stoppers, e.g. swing stoppers, which are held in position by associated pressure-applying means coating with the bottle neck
1/10  .  by inserting disc closures [6]
3/00  Closing bottles, jars, or similar containers by applying caps (caps per se B65D 41/00)
3/02  .  by applying flanged caps, e.g. crown caps, and securing by deformation of flanges
3/04  .  Cutting caps from strip material in capping machines (devices for registering moving strip material B65H 23/00)
3/06  .  Feeding caps to capping heads
3/062 .  .  from a magazine
3/064 .  .  from a hopper
3/10  .  Capping heads for securing caps
3/12  .  .  characterised by being movable axially relative to cap to deform flanges thereof, e.g. to press projecting flange rims inwardly
3/14  .  .  characterised by having movable elements, e.g. hinged fingers, for applying radial pressure to the flange of the cap (B67B 3/16, B67B 3/18 takes precedence) [5]
3/16  .  .  characterised by having resilient deforming elements, e.g. resilient sleeves or collars (B67B 3/18 takes precedence) [5]
3/18  .  .  characterised by being rotatable, e.g. for forming screw threads in situ [5]
3/22  .  by applying snap-on caps
3/24  .  Special measures for applying and securing caps under vacuum
3/26  .  Applications of control, warning, or safety devices in capping machinery

5/00  Applying protective or decorative covers to closures; Devices for securing bottle closures with wire (infant-feeding teats with means for fastening to bottles A61F 11/04) [6]
5/03  .  Applying protective or decorative covers to closures, e.g. by forming in situ [3]
5/05  .  .  by applying liquids, e.g. by dipping [3]
5/06  .  .  Devices for securing bottle closures with wire (B67B 1/08 takes precedence)

6/00  Closing bottles, jars or similar containers by applying closure members, not provided for in groups B67B 1/00 to B67B 5/00 [2009.01]

7/00  Hand- or power-operated devices for opening closed containers (nail pullers or extractors B25C 11/00; attached to, or incorporated in, containers or container closures B65D)
7/02  .  .  for removing stoppers
7/04  .  .  Cork-screws
7/06  .  .  Other cork removers
7/08  .  .  .  using air or gas pressure
7/10  .  .  .  with means for retrieving stoppers from the interior of the container
7/12  .  .  for removing disc-closures
7/14  .  .  for removing tightly-fitting lids or covers, e.g. of shoe-polish tins, by gripping and rotating
7/15  .  .  .  finger grapple type [5]
7/16  .  .  for removing flanged caps, e.g. crown caps
7/18  .  .  for removing threaded caps (B67B 7/14 takes precedence; wrenches B25B 13/00) [2]
7/20  .  .  for breaking vacuum seals between lids or covers and bodies of preserving jars, e.g. by wedge action
7/22  .  .  .  incorporating loops, e.g. of wire, which are tightened around seal
7/40  .  .  Devices for engaging tags, strips, or tongues for opening by tearing, e.g. slotted keys for opening sardine tins
7/42  .  .  Devices for removing barrel bungs
7/44  .  .  Combination tools, e.g. comprising cork-screws, can piercers, crown-cap removers (combinations of opening devices with cutting tools B26, with devices serving other purposes, see the appropriate places, e.g. B25F, B43K 29/00)
7/46  .  .  Cutting devices, i.e. devices including at least one cutting element having one or more cutting edges for piercing through the wall of a closed container, e.g. can openers (B67B 7/44 takes precedence; machines for domestic use with a plurality of interchangeable units A47J 43/06, A47J 44/00; hand-held cutting tools, cutting, severing, in general B26) [4]
7/48  .  .  .  punch type, i.e. the cutting element including at least one sharp cutting edge adapted to pierce through the container wall in, ordinarily, a single operating stroke [4]
7/50  .  .  .  with fulcrum, i.e. a lever-like actuating handle with provision to establish a pivot point [4]
7/52  .  .  .  Plural spaced cutting edges adapted to pierce the container during a single operating stroke [4]
7/54  .  .  .  sweep cutter type, i.e. an opening device including means to establish a pivot point between the cutting element and the container and having means to move the cutting element about the pivot point [4]
Bottling liquids or semiliquids; Filling jars or cans with liquids or semiliquids using bottling or like apparatus; Filling casks or barrels with liquids or semiliquids; Combined operations.

3/00 Bottling liquids or semiliquids; Filling jars or cans with liquids or semiliquids using bottling or like apparatus; Filling casks or barrels with liquids or semiliquids (filling containers with liquids or semiliquids using apparatus other than bottling or like apparatus B65B 3/00)

3/02 Bottling liquids or semiliquids; Filling jars or cans with liquids or semiliquids using bottling or like apparatus

3/04 without applying pressure

3/06 using counterpressure, i.e. filling while the container is under pressure

3/08 and subsequently lowering the counterpressure

3/10 preliminary filling with inert gases, e.g. carbon dioxide

3/12 Pressure-control devices

3/14 specially adapted for filling with hot liquids

3/16 using suction

3/18 using siphoning arrangements

3/20 with provision for metering the liquids to be introduced, e.g. when adding syrups (measuring volume, or volume flow, in general G01F)

3/22 Details

3/24 Devices for supporting or handling bottles (transport or storing devices in general B65G)
B67D  DISPENSING, DELIVERING, OR TRANSFERRING LIQUIDS, NOT OTHERWISE PROVIDED FOR (cleaning pipes or tubes of systems of pipes or tubes B08B 9/02; emptying or filling of bottles, jars, cans, casks, barrels, or similar containers, not otherwise provided for B67C; water supply E03; pipe systems F17D; domestic hot-water supply systems F24D; measuring volume, volume flow, mass flow or liquid level, metering by volume G01F; coin-free or like apparatus G07F) [5]

3/02  . . . Arrangements of hoses, e.g. operative connection with pump motor (hoses in general F16L) [2010.01]
3/04  . . . with means for resetting or zeroing means [2010.01]
3/28  . . . with automatic means for reducing or intermittently interrupting flow before completion of delivery, e.g. to produce dribble feed [2010.01]
7/00  . . . Arrangements of devices for controlling, indicating, metering or registering quantity or price of liquid transferred (arrangement of flow- or pressure-control valves B67D 7/36; computing, calculating, counting G06; coin-free apparatus for dispensing fluids G07F 13/00; prepayment devices for metering liquids G07F 15/00) [2010.01]
7/10  . . . operated by keys, push-buttons or cash registers [2010.01]
7/12  . . . operated by movement of delivery hose or nozzle or by devices associated therewith [2010.01]
7/14  . . . responsive to input of recorded programmed information, e.g. on punched cards [2010.01]
7/16  . . . Arrangements of liquid meters [2010.01]
7/18  . . . . . . . . . . . . . . of piston type [2010.01]
7/20  . . . . . . . . . . . . . . of rotary type [2010.01]
7/22  . . . . . Arrangements of indicators or registers (indicating or recording in fluid meters G01F 15/06) [2010.01]
7/24  . . . . . . . . . . . . . . with means for producing or issuing a receipt or record of sale [2010.01]
7/26  . . . . . . . . . . . . . . with resetting or zeroing means [2010.01]
7/28  . . . . . . . . . . . . . . with automatic means for reducing or intermittently interrupting flow before completion of delivery, e.g. to produce dribble feed [2010.01]
7/30  . . . . . . . . . . . . . . with means for predetermining quantity of liquid to be transferred (B67D 7/10, B67D 7/14 take precedence) [2010.01]
7/32  . . . . Arrangements of safety or warning devices; Means for preventing unauthorised delivery of liquid [2010.01]
7/34  . . . . . . . . . . . . . . Means for preventing unauthorised delivery of liquid [2010.01]
7/36  . . . . Arrangements of flow- or pressure-control valves (associated with nozzles B67D 7/42) [2010.01]
7/38  . . . . Arrangements of hoses, e.g. operative connection with pump motor (hoses in general F16L 11/00) [2010.01]
7/40  . . . . Suspending, reeling or storing devices (supports for storing lengths of hoses, in general B65H 75/34) [2010.01]
7/42  . . . . Filling nozzles [2010.01]
automatically closing when liquid in container to be filled reaches a predetermined level
by making use of air suction through an opening closed by the rising liquid and provided with an additional hand lever and provided with additional flow-controlling valve means with means for preventing escape of liquid or vapour or for recovering escaped liquid or vapour (B67D 7/44 takes precedence) Arrangements of flow-indicators, e.g. transparent compartments, windows, rotary vanes (indicating or recording presence, absence or direction of movement G01P 13/00) Arrangements of pumps manually operable power operated of piston type of rotary type submerged in storage tank or reservoir of two or more pumps in series or parallel Devices for applying air or other gas pressure for forcing liquid to delivery point Devices for mixing two or more different liquids to be transferred (coin-freed apparatus G07F 13/06) Arrangements of devices for purifying liquids to be transferred, e.g. of filters, of air or water separators Arrangements of storage tanks, reservoirs or pipelines Arrangements of heating or cooling devices for liquids to be transferred Heating only Casings, cabinets or frameworks; Trolleys or like movable supports Illuminating arrangements Apparatus or devices for transferring liquids when loading or unloading ships (ship-based equipment B63B 27/00) using articulated pipes Subject matter not provided for in other groups of this subclass