CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B67 OPENING, CLOSING {OR CLEANING} BOTTLES, JARS OR SIMILAR CONTAINERS; LIQUID HANDLING

B67C CLEANING, FILLING WITH LIQUIDS OR SEMILIQUIDS, OR EMPTYING, OF BOTTLES, JARS, CANS, CASKS, BARRELS, OR SIMILAR CONTAINERS, NOT OTHERWISE PROVIDED FOR; FUNNELS

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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

3/001 . . . [Cleaning of filling devices]
3/002 . . . [using cups or dummies to be placed under the filling heads]
3/004 . . . [permanently attached to the filling machine and movable between a rest and a working position]
3/005 . . . [Cleaning outside parts of filling devices]
3/007 . . . [Applications of control, warning or safety devices in filling machinery (flow-control B67C 3/28)]
3/008 . . . [Bottling or like apparatus specially adapted to be transported, e.g. positioned on a truck or in a container]
3/02 . . . Bottling liquids or semiliquids; Filling jars or cans with liquids or semiliquids using bottling or like apparatus

3/023 . . . [Filling multiple liquids in a container (B67C 3/208 takes precedence)]
3/026 . . . [Filling the liquids simultaneously]
3/04 . . . without applying pressure
3/045 . . . [Apparatus specially adapted for filling bottles with hot liquids]
3/06 . . . using counterpressure, i.e. filling while the container is under pressure
3/065 . . . [Filling siphons, e.g. carbonating beverages during filling (siphons B67D 1/0456)]
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)
3/202 . . . [by weighing]
3/204 . . . [using dosing chambers]

3/023 . . . [using arrangements of cylinders and pistons (B67C 3/208 takes precedence)]
3/026 . . . [specially adapted for adding small amounts of additional liquids, e.g. syrup]
3/028 . . . [Apparatus specially adapted for filling bottles with hot liquids]
3/045 . . . [Bottling or like apparatus specially adapted to be transported, e.g. positioned on a truck or in a container]
3/065 . . . [Filling siphons, e.g. carbonating beverages during filling (siphons B67D 1/0456)]
3/07 . . . [Applications of control, warning or safety devices in filling machinery (flow-control B67C 3/28)]
3/08 . . . [Head-space air removing devices, e.g. by inducing foam]
3/09 . . . [Means for filling simultaneously, e.g. in a rotary filling apparatus or multiple rows of containers]
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)
3/202 . . . [by weighing]
3/204 . . . [using dosing chambers]

2003/221 . . . [Automatic exchange of components]
2003/222 . . . [Head-space air removing devices, e.g. by inducing foam]
2003/223 . . . [by squeezing the container elastically]
2003/225 . . . [Means for filling simultaneously, e.g. in a rotary filling apparatus or multiple rows of containers]
2003/226 . . . [Additional process steps or apparatuses related to filling with hot liquids, e.g. after-treatment]
2003/227 . . . [Additional apparatus related to blow-moulding of the containers, e.g. a complete production line forming filled containers from preforms]
2003/228 . . . [Aseptic features]
2003/229 . . . [Details of vent-tubes]
2003/230 . . . [Piston-like check valves]
2003/231 . . . [Comprising anti-dripping means]
2003/232 . . . [to prevent dripping from sources other than the filling product, e.g. deflectors for vapours condensed on the outer surface of the filling device]
2003/233 . . . [specially adapted for counter-pressure filling]
{ Means for filling containers in defined liquid }
{ Means for preventing foaming of the various sizes of containers }
{ Means for adapting the filling head to given position once engaged by a container }
{ Means for locking the filling head in a filling head }
{ Means for centering the container with the tube }
{ The liquid valve being carried by the vent bottle necks or bodies }
{ Inflatable gaskets for sealingly engaging screens }
{ Means to avoid overfilling by preventing filling specially adapted for sterilising prior to filling }

7/00 Concurrent cleaning, filling, and closing of bottles; Processes or devices for at least two of these operations

7/006 {Conveying; Synchronising}
7/0013 {Synchronising}
7/002 {General lay-out of bottle-handling machines}
7/0026 {the containers travelling along a linear path}
7/0033 {the operation being performed batch-wise}
7/004 {the containers travelling along a circular path}
7/0046 {Infeed and outfeed devices}
7/0053 {using grippers (for supporting bottle necks during filling B67C 3/242)}

2007/006 {Devices particularly adapted for container filling}
2007/0066 {Devices particularly adapted for container closing}
7/0073 {Sterilising, aseptic filling and closing (B67C 3/2642 takes precedence)}
7/008 {comprising a cleaning step between two closing steps}
7/0086 {Sterilisation being restricted to the area of application of the closure}
7/0093 {Lever action devices operated by hand or foot}

9/00 Devices for emptying bottles, not otherwise provided for (during preparation of alcoholic beverages except beer C12G 1/00)

11/00 Funnels, e.g. for liquids (filter funnels B01D 23/28; volume flow-meters G01F)

11/02 {without discharge valves}
2011/022 {for draining oil from engines}
2011/025 {with integral tool for opening the draining plug}
2011/027 {for filling oil into engines}
11/04 {with non-automatic discharge valves}
11/06 {with automatic discharge valves}
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>11/063</td>
<td>(for preventing spilling or dripping)</td>
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<tr>
<td>11/066</td>
<td>(for preventing overflow of the filled container)</td>
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<tr>
<td>2011/20</td>
<td>(comprising closures, e.g. stoppers, caps or lids)</td>
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<tr>
<td>2011/30</td>
<td>(comprising venting means)</td>
</tr>
<tr>
<td>2011/40</td>
<td>(comprising level indicating means)</td>
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