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

Definition statement
This place covers:
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).

Concurrent cleaning (or sterilizing), filling, and closing of bottles; Processes or devices for at least two of these operations.

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

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

References
Limiting references
This place does not cover:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat treatment of liquids, i.e. pasteurising or sterilising</td>
<td>A23L 3/00</td>
</tr>
<tr>
<td>Disinfecting or sterilising as such of objects</td>
<td>A61L 2/00</td>
</tr>
<tr>
<td>Mixing of liquids</td>
<td>B01F</td>
</tr>
<tr>
<td>Filling bags, sacks, cartons, pouches, cups, etc.</td>
<td>B65B</td>
</tr>
<tr>
<td>Filling medical containers such as ampoules, vials, syringes or the like</td>
<td>B65B 3/003</td>
</tr>
<tr>
<td>Forming and filling of bottles in a mould</td>
<td>B65B 3/022</td>
</tr>
<tr>
<td>Devices for transferring samples or any liquids to, in, or from, the analysis apparatus, e.g. suction devices, injection devices</td>
<td>G01N 35/00</td>
</tr>
</tbody>
</table>

Informative references
Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasteurising or sterilising of liquids</td>
<td>A23L 3/00</td>
</tr>
<tr>
<td>Sterilising or disinfecting of objects:</td>
<td>A61L 2/00, A61L 2202/23</td>
</tr>
<tr>
<td>Sorting containers according to e.g. fill level</td>
<td>B07C 5/3404</td>
</tr>
<tr>
<td>Forming and filling of bottles in a mould</td>
<td>B65B 3/022</td>
</tr>
<tr>
<td>Pressurizing filled containers</td>
<td>B65B 31/04</td>
</tr>
<tr>
<td>Nozzles with flow cut-off means</td>
<td>B65B 39/001</td>
</tr>
<tr>
<td>Preservation of foods in combination with packaging</td>
<td>B65B 55/00</td>
</tr>
<tr>
<td>Grippers</td>
<td>B65G 47/847, B65G 47/90, B08B 9/426, B29C 49/4205</td>
</tr>
<tr>
<td>Safety devices for opening doors or panels</td>
<td>F16P 3/08</td>
</tr>
<tr>
<td>Filling of gas bottles</td>
<td>F17C 13/00</td>
</tr>
</tbody>
</table>
Liquid level control in general  
Measuring volume, or volume flow, in general  
Weighing of fluids  
Detection/Investigating the presence of flaws or contamination in a container or its contents  
Total factory automation  
Vending machines including the filling of containers (e.g. WO2008037974)

**B67C 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**

**Definition statement**

*This place covers:*

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.

Concurrent cleaning (or sterilizing), filling, and closing of bottles; Processes or devices for at least two of these operations.

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

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

**References**

**Limiting references**

*This place does not cover:*

Filling containers with liquids or semi-liquids using apparatus other than bottling or like apparatus  
Detection/Investigating the presence of flaws or contamination in a container or its contents

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Pasteurising or sterilising of liquids  
Sterilising or disinfecting of objects  
Mixing of liquids  
Sorting containers according to e.g. fill level  
Grippers
<table>
<thead>
<tr>
<th>Category</th>
<th>Classification</th>
</tr>
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<tr>
<td>Filling bags, sacks, cartons, pouches, cups, etc.</td>
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</tbody>
</table>

**Special rules of classification**

Pressure-control in counter-pressure filling classified in B67C 3/12.


Filling heads specially adapted for filling cans are also classified in B67C 2003/2657.

Constructional details of bottling equipment or filling machines are classified in B67C 3/22, e.g. frame or support details, or B67C 3/22, e.g. automatic exchange of components.

Constructional details of filling heads are also classified in B67C 3/26.

Classes B67C 3/2617 and B67C 3/2625 and subgroups also comprise documents not explicitly directed to counter-pressure filling.
B67C 3/001
{Cleaning of filling devices}

Definition statement

*This place covers:*

![Diagram of cleaning of filling devices]
B67C 3/002

{using cups or dummies to be placed under the filling heads}

Definition statement

This place covers:
B67C 3/004

{permanently attached to the filling machine and movable between a rest and a working position}

Definition statement

This place covers:
B67C 3/005
{Cleaning outside parts of filling devices}

Definition statement

This place covers:
B67C 3/007

{Applications of control, warning or safety devices in filling machinery (flow-control B67C 3/28)}

Definition statement

This place covers:

FIG. 1

Fig. 1

Fig. 2
B67C 3/008

{Bottling or like apparatus specially adapted to be transported, e.g. positioned on a truck or in a container}

Definition statement

This place covers:
B67C 3/02
Bottling liquids or semiliquids; Filling jars or cans with liquids or semiliquids using bottling or like apparatus

Definition statement
This place covers:
B67C 3/023
{Filling multiple liquids in a container (B67C 3/208 takes precedence)}

Definition statement

This place covers:
B67C 3/026
{Filling the liquids simultaneously}

Definition statement
This place covers:
B67C 3/04
without applying pressure

Definition statement

This place covers:
Definition statement

This place covers:

- Empty container
- Fill (hot-fill optional)
- Filled container
- Filled container with moveable primary seal applied
- Secondary seal applied (optional)
- Secondary seal applied (optional)
- Primary seal expanded
- Vacuum cool (optional)
- Heat seal (optional)
B67C 3/06

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

Definition statement

*This place covers:*

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B67C 3/065

{Filling siphons, e.g. carbonating beverages during filling (siphons B67D 1/0456)}

Definition statement

*This place covers:*

---
B67C 3/08
and subsequently lowering the counterpressure

Definition statement

This place covers:
**B67C 3/10**

preliminary filling with inert gases, e.g. carbon dioxide

**Definition statement**

*This place covers:*
**B67C 3/12**

Pressure-control devices

**Definition statement**

This place covers:

---

**B67C 3/14**

specially adapted for filling with hot liquids

**Definition statement**

This place covers:
**B67C 3/16**

**using suction**

**Definition statement**

*This place covers:*
**B67C 3/18**

**using siphoning arrangements**

**Definition statement**

*This place covers:*

---

**B67C 3/20**

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

**Definition statement**

*This place covers:*

---
**B67C 3/202**

{by weighing}

**Definition statement**

*This place covers:*

![FIG_1](image1)

**B67C 3/204**

{using dosing chambers}

**Definition statement**

*This place covers:*

![FIG_1](image2)  
![FIG_2](image3)  
![FIG_3](image4)  
![FIG_4](image5)
B67C 3/206
{using arrangements of cylinders and pistons (B67C 3/208 takes precedence)}

Definition statement

This place covers:
B67C 3/208
{specially adapted for adding small amounts of additional liquids, e.g. syrup}

Definition statement

This place covers:
B67C 3/22

Definition statement

This place covers:

{Head-space air removing devices, e.g. by inducing foam}

Definition statement

This place covers:
References
Informative references
Attention is drawn to the following places, which may be of interest for search:

| Topping-up containers or receptacles to ensure complete filling | B65B 3/24 |
| Adding fluids for preventing deformation of filled and closed containers | B65B 31/006 |

B67C 3/223
{by squeezing the container elastically}

Definition statement
This place covers:

![Diagram of the process involving containers and fluid handling](image-url)
B67C 3/225
{Means for filling simultaneously, e.g. in a rotary filling apparatus or multiple rows of containers}

Definition statement
This place covers:

FIG. 3
B67C 3/24
Devices for supporting or handling bottles (transport or storing devices in general B65G)

Definition statement
This place covers:

Fig. 2

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

Pucks used as container carrier in handling devices such as conveyors B65G 2201/0261
**B67C 3/242**

{engaging with bottle necks (B67C 3/26 takes precedence)}

**Definition statement**

*This place covers:*
B67C 3/244

{Bottle lifting devices actuated by jacks, e.g. hydraulic, pneumatic (B67C 3/242 takes precedence)}

Definition statement

This place covers:

![Diagram of bottle lifting devices](Fig. 2a)

![Diagram of bottle lifting devices](Fig. 2b)
B67C 3/246

{Bottle lifting devices actuated by cams (B67C 3/242 takes precedence)}

Definition statement

This place covers:
**B67C 3/248**

{Bottle lifting devices actuated by threads (B67C 3/242 takes precedence)}

**Definition statement**

*This place covers:*

![Diagram](image1)

**B67C 3/26**

Filling-heads; Means for engaging filling-heads with bottle necks

**Definition statement**

*This place covers:*

![Diagram](image2)
B67C 3/2608
{comprising anti-dripping means}

Definition statement
This place covers:

B67C 3/2611
{to prevent dripping from sources other than the filling product, e.g. deflectors for vapours condensed on the outer surface of the filling device}

Definition statement
This place covers:
B67C 3/2614
{specially adapted for counter-pressure filling}

Definition statement
This place covers:

B67C 3/2617
{the liquid valve being opened by mechanical or electrical actuation}

Definition statement
This place covers:
B67C 3/262

{and the filling operation stopping when the liquid rises to a level at which it closes a vent opening}

Definition statement

This place covers:
B67C 3/2622

{and the filling operation stopping when probes, e.g. electrical or optical probes, sense the wanted liquid level (level control in general G01F)}

Definition statement

This place covers:
B67C 3/2625
{the liquid valve being opened automatically when a given counter-pressure is obtained in the container to be filled}

Definition statement

This place covers:
B67C 3/2628

{and the filling operation stopping when the liquid rises to a level at which it closes a vent opening}

Definition statement

This place covers:
B67C 3/2631

{and the filling operation stopping when probes, e.g. electrical or optical probes, sense the wanted liquid level (level control in general G01F)}

Definition statement

This place covers:

B67C 3/2634
{specially adapted for vacuum or suction filling}

Definition statement
This place covers:
**B67C 3/2637**

{comprising a liquid valve opened by relative movement between the container and the filling head}

**Definition statement**

*This place covers:*

---

**FIG. 4A**

**FIG. 4B**
B67C 3/264
{and the filling operation being carried out manually}

Definition statement

This place covers:
B67C 3/2642
{specially adapted for sterilising prior to filling}

Definition statement

This place covers:
B67C 3/28
Flow-control devices, e.g. using valves (B67C 3/2617, B67C 3/2625, B67C 3/2637 take precedence); valves in general F16K

Definition statement
This place covers:

FIG. 3

FIG. 2b
B67C 3/281
{Profiled valve bodies for smoothing the flow at the outlet of the filling nozzle}

Definition statement

This place covers:
B67C 3/283
(using pressure sensing means)

Definition statement

This place covers:
**B67C 3/284**
{using non-liquid contact sensing means (B67C 3/283 takes precedence)}

**Definition statement**

This place covers:
B67C 3/285
{using liquid contact sensing means (B67C 3/283 takes precedence)}

Definition statement
This place covers:

B67C 3/286
{related to flow rate control, i.e. controlling slow and fast filling phases}

Definition statement
This place covers:
B67C 3/287

{related to flow control using predetermined or real-time calculated parameters}

Definition statement

This place covers:
B67C 3/288
{using master-slave controls}

Definition statement
This place covers:
**B67C 3/30**

**Filling of barrels or casks**

**Definition statement**

*This place covers:*
**B67C 3/32**

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

**Definition statement**

*This place covers:*
B67C 3/34
Devices for engaging filling-heads with filling-apertures

Definition statement
This place covers:

B67C 7/00
Concurrent cleaning, filling, and closing of bottles; Processes or devices for at least two of these operations

Definition statement
This place covers:
Details of conveying or synchronising.
Sterilising, aseptic filling and closing.
Lever action devices operated by hand or foot.

References
Limiting references
This place does not cover:

<table>
<thead>
<tr>
<th>Heat treatment of liquids, i.e. pasteurising or sterilising</th>
<th>A23L 3/00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details about sterilising processes or apparatuses as such, only in combination with some form of subsequent process in/of a bottling line</td>
<td>A61L 2/00</td>
</tr>
<tr>
<td>Disinfecting or sterilising as such of objects</td>
<td>A61L 2/00</td>
</tr>
<tr>
<td>Mixing of liquids</td>
<td>B01F</td>
</tr>
</tbody>
</table>
Informative references

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Type of Process</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasteurising or sterilising of liquids</td>
<td>A23L 3/00</td>
</tr>
<tr>
<td>Sterilising or disinfecting of objects</td>
<td>A61L 2/00</td>
</tr>
<tr>
<td>Cleaning in general</td>
<td>B08B</td>
</tr>
<tr>
<td>Cleaning of containers</td>
<td>B08B 9/20</td>
</tr>
<tr>
<td>Details related to subsequent processes of blow moulding and filling</td>
<td>B29C 49/00</td>
</tr>
<tr>
<td>Preservation of foods in combination with packaging</td>
<td>B65B 55/00</td>
</tr>
<tr>
<td>Packaging in aseptic tunnels</td>
<td>B65B 55/025</td>
</tr>
<tr>
<td>Packaging in aseptic chambers</td>
<td>B65B 55/027</td>
</tr>
<tr>
<td>Conveying of containers in general</td>
<td>B65G</td>
</tr>
<tr>
<td>Grippers</td>
<td>B65G 47/847,</td>
</tr>
<tr>
<td></td>
<td>B65G 47/90,</td>
</tr>
<tr>
<td></td>
<td>B08B 9/426,</td>
</tr>
<tr>
<td></td>
<td>B29C 49/4205</td>
</tr>
</tbody>
</table>

B67C 7/0006

{Conveying; Synchronising}

Definition statement

This place covers:
B67C 7/0013
{Synchronising}

Definition statement
This place covers:

B67C 7/002
{General lay-out of bottle-handling machines}

Definition statement
This place covers:
B67C 7/0026
{the containers travelling along a linear path}

Definition statement
This place covers:

B67C 7/0033
{the operation being performed batch-wise}

Definition statement
This place covers:
B67C 7/004
{the containers travelling along a circular path}

Definition statement
This place covers:

![Diagram of containers travelling along a circular path]

B67C 7/0046
{Infeed and outfeed devices}

Definition statement
This place covers:

![Diagram of infeed and outfeed devices]
B67C 7/0053
{using grippers (for supporting bottle necks during filling B67C 3/242)}

Definition statement

This place covers:

--- Fig 1 ---
B67C 7/0073
{Sterilising, aseptic filling and closing (B67C 3/2642 takes precedence)}

Definition statement
This place covers:

B67C 7/008
{comprising a cleaning step between two closing steps}

Definition statement
This place covers:
B67C 7/0086
{Sterilisation being restricted to the area of application of the closure}

Definition statement
This place covers:

B67C 7/0093
{Lever action devices operated by hand or foot}

Definition statement
This place covers:
B67C 9/00

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

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:
B67C 11/00
Funnels, e.g. for liquids (filter funnels B01D 23/28; volume flow-meters G01F)

Definition statement
This place covers:
Funnels without discharge valves.
Funnels with non-automatic discharge valves.
Funnels with automatic discharge valves.

References
Informative references
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<table>
<thead>
<tr>
<th>Devices for aerating of wine</th>
<th>B01F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funnels for introducing articles or materials in containers or wrappers</td>
<td>B65B 39/00</td>
</tr>
<tr>
<td>Filling or draining lubricant of or from machines or engines</td>
<td>F01M 11/04</td>
</tr>
<tr>
<td>Measuring spoons or scoops</td>
<td>G01F 19/002</td>
</tr>
</tbody>
</table>

B67C 11/02
without discharge valves

Definition statement
This place covers:

Fig. 1B
B67C 11/04
with non-automatic discharge valves

Definition statement
This place covers:
B67C 11/06

with automatic discharge valves

**Definition statement**

*This place covers:*

---

**FIG. 1**

---

**FIG. 2**
B67C 11/063
{for preventing spilling or dripping}

Definition statement

This place covers:
B67C 11/066
{for preventing overflow of the filled container}

Definition statement

This place covers: