

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### TRANSPORTING

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

**B67D DISPENSING, DELIVERING OR TRANSFERRING LIQUIDS, NOT OTHERWISE PROVIDED FOR** (cleaning pipes or tubes or 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-freed or like apparatus [G07F](#))

#### 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.

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|---------------|---|---------------|--|
| <b>1/00</b>   | <b>Apparatus or devices for dispensing beverages on draught</b> ( <a href="#">B67D 3/00</a> takes precedence; apparatus for making beverages <a href="#">A47J 31/00</a> ) | <b>1/0021</b> | . . {the components being mixed at the time of dispensing, i.e. post-mix dispensers}   |
| <b>1/0001</b> | . {by squeezing collapsible or flexible storage containers ( <a href="#">B67D 1/0462</a> takes precedence)}   | <b>1/0022</b> | . . . {the apparatus comprising means for automatically controlling the amount to be dispensed}                              |
| <b>1/0002</b> | . {specially adapted to be used in microgravity conditions, e.g. in outer space}  | <b>1/0023</b> | . . . . {control of the amount of the mixture, i.e. after mixing}  |
| <b>1/0003</b> | . {the beverage being a single liquid ( <a href="#">B67D 1/02</a> , <a href="#">B67D 1/04</a> take precedence; drinking fountains <a href="#">E03B 9/20</a> )}            | <b>1/0024</b> | . . . . . {based on the timed opening of a valve}  |
| <b>1/0004</b> | . . {the beverage being stored in a container, e.g. bottle, cartridge, bag-in-box, bowl}  | <b>1/0025</b> | . . . . . {based on volumetric dosing}   |
| <b>1/0005</b> | . . . {the apparatus comprising means for automatically controlling the amount to be dispensed}   | <b>1/0026</b> | . . . . . {based on weighing}  |
| <b>1/0006</b> | . . . . {based on the timed opening of a valve}   | <b>1/0027</b> | . . . . {control of the amount of one component, the amount of the other component(s) being dependent on that control}       |
| <b>1/0007</b> | . . . . {based on volumetric dosing}  | <b>1/0028</b> | . . . . . {based on the timed opening of a valve}  |
| <b>1/0008</b> | . . . . {based on weighing}   | <b>1/0029</b> | . . . . . {based on volumetric dosing}   |
| <b>1/0009</b> | . . {the beverage being stored in an intermediate container connected to a supply}  | <b>1/003</b>  | . . . . . {by means of a dosing chamber}   |
| <b>1/001</b>  | . . . {the apparatus comprising means for automatically controlling the amount to be dispensed}   | <b>1/0031</b> | . . . . . {in the form of a metering pump}   |
| <b>1/0011</b> | . . . . {based on the timed opening of a valve}   | <b>1/0032</b> | . . . . . {using flow-rate sensors}  |
| <b>1/0012</b> | . . . . {based on volumetric dosing}  | <b>1/0033</b> | . . . . . {based on weighing}  |
| <b>1/0013</b> | . . . . {based on weighing}   | <b>1/0034</b> | . . . . {for controlling the amount of each component}   |
| <b>1/0014</b> | . . {the beverage being supplied from water mains}  | <b>1/0035</b> | . . . . . {the controls being based on the same metering technics}   |
| <b>1/0015</b> | . {the beverage being prepared by mixing at least two liquid components}  | <b>1/0036</b> | . . . . . {based on the timed opening of valves}   |
| <b>1/0016</b> | . . {the beverage being stored in an intermediate container before dispensing, i.e. pre-mix dispensers}   | <b>1/0037</b> | . . . . . {based on volumetric dosing}   |
| <b>1/0017</b> | . . . {the apparatus comprising means for automatically controlling the amount to be dispensed}   | <b>1/0038</b> | . . . . . {based on weighing}  |
| <b>1/0018</b> | . . . . {based on the timed opening of a valve}   | <b>1/0039</b> | . . . . . {the controls involving at least two different metering technics}  |
| <b>1/0019</b> | . . . . {based on volumetric dosing}  | <b>1/004</b>  | . . {the diluent being supplied from water mains}  |
| <b>1/002</b>  | . . . . {based on weighing}   | <b>1/0041</b> | . {Fully automated cocktail bars, i.e. apparatuses combining the use of packaged beverages, pre-mix and post-mix dispensers} |
|               |   | <b>1/0042</b> | . {Details of specific parts of the dispensers}  |
|               |   | <b>1/0043</b> | . . {Mixing devices for liquids}   |
|               |   | <b>1/0044</b> | . . . {for mixing inside the dispensing nozzle}  |
|               |   | <b>1/0045</b> | . . . . {Venturi arrangements; Aspirators; Eductors}   |

- 1/0046 . . . . {Mixing chambers}
- 1/0047 . . . . . {with movable parts, e.g. for stirring}
- 1/0048 . . . . . {with baffles}
- 1/0049 . . . . . {with means for diverging streams}
- 1/005 . . . . . {with means for converging streams}
- 1/0051 . . . {for mixing outside the nozzle}
- 1/0052 . . . . {by means for directing respective streams together}
- 1/0053 . . . . {by stirring in the cup}
- 1/0054 . . . {Recirculation means}
- 1/0055 . . . . {with fountain effect}
- 1/0056 . . . . . {with illumination}
- 1/0057 . . {Carbonators}
- 1/0058 . . . {In-line carbonators}
- 1/0059 . . . . {in combination with a mixer tap  
([constructional features of the tap E03C 1/04](#))}
- 1/006 . . . {Conventional carbonators}
- 1/0061 . . . {with cooling means}
- 1/0062 . . . . {inside the carbonator}
- 1/0063 . . . . . {Cooling coil}
- 1/0064 . . . . . {Cold plate}
- 1/0065 . . . . . {Ice bank}
- 1/0066 . . . . {outside the carbonator}
- 1/0067 . . . . . {Cooling coil}
- 1/0068 . . . . . {Cooling bath}
- 1/0069 . . . {Details}
- 1/007 . . . . {Structure of the carbonating chamber}
- 1/0071 . . . . {Carbonating by injecting CO<sub>2</sub> in the liquid}
- 1/0072 . . . . . {through a diffuser, a bubbler}
- 1/0073 . . . . {Carbonating by spraying the liquid}
- 1/0074 . . . . {Automatic carbonation control}
- 1/0075 . . . . . {by sensing gas pressure}
- 1/0076 . . . . . {by sensing temperature}
- 1/0077 . . . . {Carbonator being specially adapted for adding a second gas to the CO<sub>2</sub>}
- 1/0078 . . {Ingredient cartridges}
- 1/0079 . . . {having their own dispensing means}
- 1/008 . . . {Gas cartridges or bottles}
- 1/0081 . . {Dispensing valves}
- 1/0082 . . . {entirely mechanical}
- 1/0083 . . . . {with means for separately dispensing a single or a mixture of drinks}
- 1/0084 . . . . . {Hand-held gun type valves}
- 1/0085 . . . {electro-mechanical}
- 1/0086 . . . . {Hand-held gun type valves}
- 2001/0087 . . . {being mounted on the dispenser housing}
- 2001/0088 . . . . {operated by push buttons}
- 2001/0089 . . . . {operated by lever means}
- 2001/009 . . . . {operated by cup detection}
- 2001/0091 . {Component storage means}
- 2001/0092 . . {Containers for gas, for, e.g. CO<sub>2</sub>, N<sub>2</sub>}
- 2001/0093 . {Valves}
- 2001/0094 . . {Valve mountings in dispensers}
- 2001/0095 . {Constructional details}
- 2001/0096 . . {Means for pressurizing liquid}
- 2001/0097 . . . {using a pump}
- 2001/0098 . . . {using a gas}
- 1/02 . . Beer engines or like manually-operable pumping apparatus
- 1/025 . . {with means for carbonating the beverage, or for maintaining its carbonation}
- 1/04 . . Apparatus utilising compressed air or other gas acting directly or indirectly on beverages in storage containers
- 1/0406 . . {with means for carbonating the beverage, or for maintaining its carbonation ([B67D 1/0418 takes precedence](#))}
- 1/0412 . . {the whole dispensing unit being fixed to the container}
- 1/0418 . . . {comprising a CO<sub>2</sub> cartridge for dispensing and carbonating the beverage}
- 1/0425 . . . {comprising an air pump system}
- 1/0431 . . . . {power-operated}
- 1/0437 . . . {comprising a gas pressure space within the container for the liquid}
- 1/0443 . . . {comprising a gas generator ([apparatus for generating gases in general B01J 7/00](#))}
- 1/045 . . {using elastic bags and pistons actuated by air or other gas}
- 1/0456 . . {Siphons, i.e. beverage containers under gas pressure without supply of further pressurised gas during dispensing}
- 1/0462 . . {Squeezing collapsible or flexible beverage containers, e.g. bag-in-box containers}
- 1/0468 . . {comprising means for the recovery of the gas acting on beverages}
- 2001/0475 . . {Type of gas or gas mixture used, other than pure CO<sub>2</sub>}
- 2001/0481 . . . {Single inert gas, e.g. N<sub>2</sub>}
- 2001/0487 . . . {Mixture of gases, e.g. N<sub>2</sub> + CO<sub>2</sub>}
- 2001/0493 . . . . {Air}
- 1/06 . . Mountings or arrangements of dispensing apparatus in or on shop or bar counters ([shop or bar counters per se A47F 9/00](#))
- 1/07 . . Cleaning beverage-dispensing apparatus  
([B67D 1/0834](#), [B67D 1/0837 take precedence](#))}
- 2001/075 . . {Sanitising or sterilising the apparatus}
- 1/08 . . Details
- 1/0801 . . {of beverage containers, e.g. casks, kegs}
- 1/0802 . . . {Dip tubes}
- 1/0804 . . . {Shape or materials}
- 1/0805 . . . {Openings for filling}
- 1/0807 . . . {Openings for emptying, e.g. taped openings}
- 1/0808 . . . {Closing means, e.g. bungholes, barrel bungs}
- 1/0809 . . . {Opening means, e.g. means for assisting the opening}
- 2001/0811 . . . {provided with coded information}
- 2001/0812 . . . {Bottles, cartridges or similar containers}
- 2001/0814 . . . . {for upside down use}
- 2001/0815 . . . . . {with integral venting tube}
- 2001/0817 . . . . . {with a venting orifice}
- 2001/0818 . . . . {arranged in series}
- 2001/082 . . . . {arranged in parallel}
- 2001/0821 . . . . {having different compartments for different components}
- 2001/0822 . . . {Pressurised rigid containers, e.g. kegs, figals}
- 2001/0824 . . . . {with dip tubes}
- 2001/0825 . . . . {details of dip tube}
- 2001/0827 . . . {Bags in box}
- 2001/0828 . . . . {in pressurised housing}
- 1/0829 . . {Keg connection means}
- 1/0831 . . . {combined with valves}
- 1/0832 . . . . {with two valves disposed concentrically}

- 1/0834 . . . . {and having means for admitting a cleaning fluid}
- 1/0835 . . . . {with one valve}
- 1/0837 . . . . {and having means for admitting a cleaning fluid}
- 1/0838 . . . . {comprising means for preventing blow-out on disassembly of the spear valve}
- 1/0839 . . . {Automatically operating handles for locking or unlocking a connector to or from a keg}
- 1/0841 . . . {Details}
- 1/0842 . . . . {Multiple connectors, e.g. for simultaneously connecting several containers}
- 1/0844 . . . . {for containers in crates}
- 1/0845 . . . . {Security means}
- 1/0847 . . . . {Tamper-evident devices}
- 1/0848 . . . . {Locking means}
- 1/0849 . . . . {provided with means to open the keg valve when gas pressure is applied to it}
- 1/0851 . . . . {composed of a piston and ram assembly, e.g. tappet}
- 1/0852 . . . . {composed of a membrane and ram assembly}
- 1/0854 . . . . {provided with means to open the keg valve when water pressure is applied to it}
- 1/0855 . . {concerning the used flowmeter ([flowmeter per se G01F 1/00, G01F 3/00](#))}
- 1/0857 . . {Cooling arrangements ([cooling systems per se F25B](#))}
- 1/0858 . . . {using compression systems}
- 1/0859 . . . . {the evaporator being in direct heat contact with the beverage, e.g. placed inside a beverage container}
- 1/0861 . . . . {the evaporator acting through an intermediate heat transfer means}
- 1/0862 . . . . . {in the form of a cold plate or a cooling block}
- 1/0864 . . . . . {in the form of a cooling bath}
- 1/0865 . . . . . {by circulating a cooling fluid along beverage supply lines, e.g. pythons}
- 1/0867 . . . . . {the cooling fluid being a liquid}
- 1/0868 . . . . . {the cooling fluid being a gas}
- 1/0869 . . . {using solid state elements, e.g. Peltier cells}
- 1/0871 . . {Level gauges for beverage storage containers ([level indicators in general G01F](#))}
- 1/0872 . . {Aesthetics, advertising}
- 1/0874 . . . {Means for illuminating the handle of taps or faucets}
- 1/0875 . . . {Means for illuminating the beverage to be dispensed}
- 1/0877 . . . {Advertising means ([advertising in general G09F](#))}
- 1/0878 . . {Safety, warning or controlling devices ([B67D 1/12 takes precedence](#))}
- 1/0879 . . . {Doors for protecting the vessel to be filled}
- 1/0881 . . . {Means for counting the doses of dispensed liquid}
- 1/0882 . . . {Devices for controlling the dispensing conditions}
- 1/0884 . . . . {Means for controlling the parameters of the state of the liquid to be dispensed, e.g. temperature, pressure}
- 1/0885 . . . . {Means for dispensing under specific atmospheric conditions, e.g. under inert gas}
- 1/0887 . . . {Sanitary protection means for dispensing nozzles or taps, e.g. outlet closures}
- 1/0888 . . {Means comprising electronic circuitry (e.g. control panels, switching or controlling means)}
- 1/0889 . . {Supports}
- 1/0891 . . . {for the beverage container}
- 1/0892 . . . . {the beverage container being stored in a rack or shelf}
- 1/0894 . . . {for the vessel to be filled}
- 1/0895 . . {Heating arrangements}
- 1/0897 . . . {located in nozzles}
- 1/0898 . . . {Beer warmers ([B67D 1/0897 takes precedence](#))}
- 1/10 . . Pump mechanism ([in general F04](#))
- 1/101 . . . {of the piston-cylinder type}
- 1/102 . . . . {for one liquid component only}
- 1/103 . . . . . {the piston being driven by a liquid or a gas}
- 1/104 . . . . . {by the liquid to be dispensed}
- 1/105 . . . . {for two or more components}
- 1/106 . . . . . {the piston being driven by a liquid or a gas}
- 1/107 . . . . . {by one of the components to be dispensed}
- 1/108 . . . {of the peristaltic type}
- 1/12 . . Flow or pressure control devices or systems {, e.g. valves, gas pressure control, level control in storage containers}
- 1/1202 . . . {Flow control, e.g. for controlling total amount or mixture ratio of liquids to be dispensed}
- 1/1204 . . . . {for ratio control purposes}
- 1/1206 . . . . . {Flow detectors}
- 1/1209 . . . . . {combined with a timer}
- 1/1211 . . . . . {Flow rate sensor}
- 1/1213 . . . . . {combined with a timer}
- 1/1215 . . . . . {combined with a counter}
- 1/1218 . . . . . {modulating the opening of a valve}
- 1/122 . . . . . {modulating a pumping rate}
- 1/1222 . . . . . {Pressure gauges}
- 1/1225 . . . . . {Weighing}
- 1/1227 . . . . . {the cup to be filled}
- 1/1229 . . . . . {the storage container}
- 1/1231 . . . . . {Metering pumps}
- 1/1234 . . . . {to determine the total amount}
- 1/1236 . . . . . {comprising means for detecting the size of vessels to be filled}
- 1/1238 . . . . . {comprising means for detecting the liquid level in vessels to be filled, e.g. using ultrasonic waves, optical reflexion, probes}
- 1/124 . . . . . {the flow being started or stopped by means actuated by the vessel to be filled, e.g. by switches, weighing}
- 1/1243 . . . . . {comprising flow or pressure sensors, e.g. for controlling pumps}
- 1/1245 . . . {Change-over devices, i.e. connecting a flow line from an empty container to a full one}
- 1/1247 . . . {Means for detecting the presence or absence of liquid}
- 1/125 . . . {Safety means, e.g. over-pressure valves}
- 1/1252 . . . {Gas pressure control means, e.g. for maintaining proper carbonation ([for beer engines B67D 1/025](#))}

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| 2001/1254   | . . . . {comprising means for making a mixture of gases}   | 3/0006 | . . {responsive to coded information provided on the neck or spout of the storage container, e.g. bar-code, magnets or transponder}   |
| 1/1256      | . . . {Anti-dripping devices (drip trays <a href="#">B67D 1/16</a> )}  | 3/0009 | . {provided with cooling arrangements ( <a href="#">cooling per se F25</a> )}   |
| 2001/1259   | . . . {Fluid level control devices}  | 3/0012 | . {provided with mixing devices}  |
| 2001/1261   | . . . . {the level being detected mechanically}  | 3/0016 | . . {Mixing valves or taps}   |
| 2001/1263   | . . . . {the level being detected electrically}  | 3/0019 | . {using ingredient cartridges}   |
| 2001/1265   | . . . . . {Pressure switches}  | 3/0022 | . {provided with heating arrangements}  |
| 2001/1268   | . . . . . {Capacitors}   | 3/0025 | . {provided with dispensing valves actuated by the receptacle to be filled ( <a href="#">B67D 3/02 takes precedence</a> )}  |
| 1/127       | . . . {Froth control ( <a href="#">B67D 1/1411 takes precedence</a> )}   | 3/0029 | . {provided with holders for bottles or similar containers}   |
| 1/1272      | . . . . {preventing froth}   | 3/0032 | . . {the bottle or container being held upside down and provided with a closure, e.g. a cap, adapted to cooperate with a feed tube}   |
| 1/1275      | . . . . {promoting froth}  | 3/0035 | . . {the bottle or container being held upside down and not provided with a closure, e.g. a bottle screwed onto a base of a dispenser}  |
| 1/1277      | . . . {Flow control valves}  | 3/0038 | . {the liquid being stored in an intermediate container prior to dispensing}  |
| 1/1279      | . . . . {regulating the flow}  | 3/0041 | . {with provisions for metering the liquid to be dispensed}   |
| 1/1281      | . . . . . {responsive to pressure}   | 3/0045 | . . {by filling a predetermined volume before dispensing}   |
| 1/1284      | . . . {Ratio control}  | 3/0048 | . {using siphoning arrangements}  |
| 1/1286      | . . . . {by mechanical construction}   | 3/0051 | . {dispensing by tilting}   |
| 1/1288      | . . . . . {Multi-chamber piston pumps ( <a href="#">construction of pumps: B67D 1/10</a> )}  | 3/0054 | . {Mounting or arrangements of dispensing apparatus in shops or bar counters}   |
| 1/129       | . . . . . {Means for changing the ratio by acting on structural parts}   | 3/0058 | . {Details}   |
| 1/1293      | . . . . . {Means for changing the ratio by acting on commands}   | 3/0061 | . . {of liquid containers, e.g. filling, emptying, closing or opening means}  |
| 1/1295      | . . . . {Ratio defined by setting flow controllers}  | 3/0064 | . . . {Dip tubes}   |
| 1/1297      | . . . . {Ratio defined by setting of timers}   | 3/0067 | . . . {relating to shape or materials, e.g. bag-in-box packages [BIB], pouches}   |
| 1/14        | . . . Reducing valves or control taps  | 3/007  | . . . {containers with adjustable volume}   |
| 1/1405      | . . . . {Control taps}   | 3/0074 | . . {Safety or warning devices}   |
| 1/1411      | . . . . . {Means for controlling the build-up of foam in the container to be filled}   | 3/0077 | . . {Electronic circuitry}  |
| 1/1416      | . . . . . . {comprising foam inducing means}   | 3/008  | . . {Supports}  |
| 1/1422      | . . . . . . {comprising foam avoiding means}   | 3/0083 | . . . {for the liquid container}  |
| 1/1427      | . . . . . . {by rotating the container to be filled}   | 3/0087 | . . . . {the beverage container being stored in a rack or shelf}  |
| 1/1433      | . . . . . . {by delivering the beverage using a helical movement}  | 3/009  | . . . {for the vessel to be filled}   |
| 1/1438      | . . . . . {comprising a valve shutter movable in a direction parallel to the valve seat, e.g. sliding or rotating}   | 3/0093 | . . {Level indicators}  |
| 1/1444      | . . . . . . {the valve shutter being rotated}  | 3/0096 | . . {Aesthetics, advertising}   |
| 1/145       | . . . . . {comprising a valve shutter movable in a direction perpendicular to the valve seat}  | 3/02   | . Liquid-dispensing valves having operating members arranged to be pressed upwards, e.g. by the rims of receptacles held below the delivery orifice   |
| 1/1455      | . . . . . . {the valve shutter being opened in the same direction as the liquid flow}  | 3/04   | . Liquid-dispensing taps or cocks adapted to seal and open tapping holes of casks, e.g. for beer ( <a href="#">closures with filling and discharging devices for containers B65D 47/00</a> )} |
| 1/1461      | . . . . . . . {the valve shutter being integral with a compensator}  | 3/041  | . . {operated by pinching action on flexible tubes}   |
| 1/1466      | . . . . . . . {the valve shutter being opened in a direction opposite to the liquid flow}  | 3/042  | . . {operated by deforming a membrane-like closing element}   |
| 1/1472      | . . . . . . . {the valve shutter being integral with a compensator}  | 3/043  | . . {with a closing element having a linear movement, in a direction perpendicular to the seat}   |
| 1/1477      | . . . . . {Devices for assisting tap handling, e.g. levers}  | 3/044  | . . . {and venting means operated automatically with the tap}   |
| 2001/1483   | . . . . {electrically or electro-mechanically operated}  | 3/045  | . . {with a closing element having a linear movement, in a direction parallel to the seat}  |
| 2001/1488   | . . . . {pneumatically operated}   |        |   |
| 2001/1494   | . . . . {Taps with means for adjusting the position of a compensator from outside}   |        |   |
| 1/16        | . . Devices for collecting spilled beverages   |        |   |
| 1/165       | . . . {and re-injecting them in the dispensing line}   |        |   |
| <b>3/00</b> | <b>Apparatus or devices for controlling flow of liquids under gravity from storage containers for dispensing purposes (<a href="#">separating and dispensing metered quantities of liquids G01F</a>)</b> |        |   |
| 3/0003      | . {provided with automatic fluid control means}  |        |   |



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| 3/046     | . . . {and venting means operated automatically with the tap}  | 2007/0415 | . . . . . {for filler caps}   |
| 3/047     | . . {with a closing element having a rotational movement}  | 2007/0417 | . . . . . {Manipulator arms}  |
| 3/048     | . . . {and venting means operated automatically with the tap}  | 2007/0419 | . . . . . {Fuelling nozzles}  |
|           |  | 2007/0421 | . . . . . {with locking devices}  |
|           |  | 2007/0423 | . . . . . {Fuelling hoses}  |
|           |  | 2007/0425 | . . . . . {comprising a single hose for several fuels}  |
| 7/00      | <b>Apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or into portable containers, e.g. for retail sale purposes</b> (general disposition of plant in stations for supplying fuel to vehicles <a href="#">B60S 5/02</a> ; for filling or emptying locomotive water tanks, e.g. water columns, <a href="#">B61K 11/00</a> ; for refuelling aircraft during flight <a href="#">B64D 39/00</a> ; liquid- handling ground installations specially adapted for fuelling stationary aircraft <a href="#">B64F 1/28</a> ) | 2007/0426 | . . . . . {comprising several hoses for several fuels}  |
|           |  | 2007/0428 | . . . . . {having devices to avoid a mix up of different fuels}   |
| 7/002     | . {using articulated pipes}  | 2007/043  | . . . . . {Moveable}  |
| 7/005     | . {Spouts}   | 2007/0432 | . . . . . {according to a planar coordinate system}   |
| 7/007     | . {using siphoning arrangements}   | 2007/0434 | . . . . . {with the ability to compensate movements of the car during filling}  |
| 7/02      | . for transferring liquids other than fuel or lubricants   | 2007/0436 | . . . . . {according to a spatial coordinate system}  |
| 7/0205    | . . {by manually operable pumping apparatus (hand-held apparatus with pumps for dispensing or spraying liquids or fluent materials <a href="#">B05B 11/00</a> )}   | 2007/0438 | . . . . . {with the ability to compensate movements of the car during filling}  |
| 7/0211    | . . . {with pump locking means}  | 2007/044  | . . . {Customer interfaces}   |
| 7/0216    | . . {by squeezing collapsible or flexible storage containers ( <a href="#">B67D 7/0255</a> takes precedence; for dispensing beverages on draught <a href="#">B67D 1/0001</a> )}  | 2007/0442 | . . . . . {interface for orders and payments}   |
| 7/0222    | . . . {the dispensed quantity of liquid being replaced by air sucked through the dispensing opening}   | 2007/0444 | . . . {Sensors}   |
| 7/0227    | . . {by an ejection plunger ( <a href="#">B67D 7/0238</a> takes precedence)}   | 2007/0446 | . . . . . {measuring physical properties of the fluid to be dispensed}  |
| 7/0233    | . . . {the plunger being gas driven}   | 2007/0448 | . . . . . {Density}   |
| 7/0238    | . . {utilising compressed air or other gas acting directly or indirectly on liquids in storage containers (for dispensing beverages on draught <a href="#">B67D 1/04</a> )}  | 2007/0449 | . . . . . {Viscosity}   |
|           |  | 2007/0451 | . . . . . {Temperature}   |
| 7/0244    | . . . {by using elastic expandable bags}   | 2007/0453 | . . . . . {recognising the fuel to be dispensed}  |
| 7/025     | . . . . {specially adapted for transferring liquids of high purity}  | 2007/0455 | . . . . . {recognising the position}  |
| 7/0255    | . . . {squeezing collapsible or flexible storage containers (for dispensing beverages on draught <a href="#">B67D 1/0462</a> )}  | 2007/0457 | . . . . . {of the car}  |
| 7/0261    | . . . . {specially adapted for transferring liquids of high purity}  | 2007/0459 | . . . . . {by interrogating a transponder}  |
| 7/0266    | . . . {by gas acting directly on the liquid}   | 2007/0461 | . . . . . {by calculating from a reference position, e.g. the car's silhouette, reference marks}                            |
| 7/0272    | . . . . {specially adapted for transferring liquids of high purity}  | 2007/0463 | . . . . . {optically}   |
| 7/0277    | . . {using negative pressure}  | 2007/0465 | . . . . . {by GPS}  |
| 7/0283    | . . . {specially adapted for transferring liquids of high purity}  | 2007/0467 | . . . . . {of the fuel tank flap and/or fuel tank opening}  |
| 7/0288    | . . {Container connection means (for dispensing beverages on draught <a href="#">B67D 1/0829</a> )}  | 2007/0469 | . . . . . {by interrogating a transponder}  |
| 7/0294    | . . . {Combined with valves}   | 2007/0471 | . . . . . {by calculating from a reference position, e.g. the car's silhouette, reference marks}                            |
| 7/04      | . for transferring fuels, lubricants or mixed fuels and lubricants   | 2007/0473 | . . . . . {optically}   |
| 7/0401    | . . {arrangements for automatically fuelling vehicles, i.e. without human intervention}  | 2007/0474 | . . . . . {of the filling nozzle relative to the fuel tank opening, e.g. engagement between nozzle and tank opening}        |
| 2007/0403 | . . . {Fuelling robots}  | 7/0476    | . . {Vapour recovery systems}   |
| 2007/0405 | . . . . {Opening devices}  | 7/0478    | . . . {constructional features or components (vapour recovery nozzles <a href="#">B67D 7/54</a> )}                          |
| 2007/0407 | . . . . . {for fuel tank flaps}  | 7/048     | . . . . {Vapour flow control means, e.g. valves, pumps}   |
| 2007/0409 | . . . . . {using vacuum cups}  | 7/0482    | . . . . . {using pumps driven at different flow rates}  |
| 2007/0411 | . . . . . {using grippers}   | 7/0484    | . . . . . {Liquid jet pumps, e.g. venturis}   |
| 2007/0413 | . . . . . {using air blast}  | 7/0486    | . . . . . {Pumps driven in response to electric signals indicative of pressure, temperature or liquid flow}                 |
|           |  | 7/0488    | . . . . . {Means for preventing the formation of condensation on, or for removing condensation from, vapour recovery lines} |
|           |  | 7/049     | . . . . . {Vapour recovery methods, e.g. condensing the vapour}   |
|           |  | 7/0492    | . . . . . {Vapour storing means, e.g. dedicated ullage spaces, separate tanks}  |

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| 2007/0494 | . . . . {Means for condensing the vapours and reintroducing them into the storage tanks}   | 7/30     | . . . with means for predetermining quantity of liquid to be transferred ( <a href="#">B67D 7/10</a> , <a href="#">B67D 7/14</a> take precedence)   |
| 7/0496    | . . . {Performance test devices therefor}  | 7/301    | . . . . {using mechanical means ( <a href="#">B67D 7/306</a> takes precedence)}   |
| 7/0498    | . . {Arrangements specially adapted for transferring biofuels, e.g. ethanol-gasoline mixture}  | 7/302    | . . . . {using electrical or electro-mechanical means ( <a href="#">B67D 7/307</a> takes precedence)}   |
| 7/06      | . Details or accessories   | 7/303    | . . . . . {involving digital counting}  |
| 7/061     | . . {Means for transferring liquids from a chosen level of a storage container}  | 7/305    | . . . . . {in function of money to be spent therefor}   |
| 7/062     | . . . {from the free surface level of the liquid}  | 7/306    | . . . . . {using mechanical means}  |
| 7/064     | . . {Drive-off preventing means, e.g. in case of non-payment}  | 7/307    | . . . . . {using electrical or electro-mechanical means}  |
| 7/065     | . . . {acting on the vehicle}  | 7/308    | . . . . . {involving digital counting}  |
| 7/067     | . . . {using communication means}  | 7/32     | . . Arrangements of safety or warning devices; Means for preventing unauthorised delivery of liquid   |
| 7/068     | . . . {using imaging means, e.g. cameras}  | 7/3209   | . . . {relating to spillage or leakage, e.g. spill containments, leak detection ( <a href="#">leak detectors for underground fuel dispensing systems G01M 3/2892</a> )}   |
| 7/08      | . . Arrangements of devices for controlling, indicating, metering or registering quantity or price of liquid transferred ( <a href="#">arrangement of flow- or pressure-control valves B67D 7/36</a> ; <a href="#">computing, calculating, counting G06</a> ; <a href="#">coin-freed apparatus for dispensing fluids G07F 13/00</a> ; <a href="#">prepayment devices for metering liquids G07F 15/00</a> ) | 7/3218   | . . . {relating to emergency shut-off means}  |
| 7/085     | . . . {Testing or calibrating apparatus therefore ( <a href="#">testing or calibrating apparatus for measuring volume flow in general G01F 25/00</a> )}  | 7/3227   | . . . {relating to venting of a container during loading or unloading}  |
| 7/10      | . . . operated by keys, push-buttons or cash registers   | 7/3236   | . . . {relating to electrostatic charges}   |
| 7/103     | . . . . {operated by keys}   | 7/3245   | . . . {relating to the transfer method}   |
| 7/106     | . . . . {operated by push-buttons}   | 7/3254   | . . . . {using a pressurised liquid acting directly or indirectly on the bulk of the liquid to be transferred}  |
| 7/12      | . . . operated by movement of delivery hose or nozzle or by devices associated therewith   | 7/3263   | . . . . {using a pressurised gas acting directly or indirectly on the bulk of the liquid to be transferred ( <a href="#">use of compressed air or gas for transferring liquids B67D 7/0238</a> , <a href="#">B67D 7/72</a> )} |
| 7/14      | . . . responsive to input of recorded programmed information, e.g. on punched cards  | 7/3272   | . . . . {using pumps}   |
| 7/145     | . . . . {by wireless communication means, e.g. RF, transponders or the like}   | 7/3281   | . . . {Details}   |
| 7/16      | . . . Arrangements of liquid meters  | 2007/329 | . . . . {Function indicator devices}  |
| 7/163     | . . . . {of fixed measuring chamber type}  | 7/34     | . . . Means for preventing unauthorised delivery of liquid  |
| 7/166     | . . . . . {comprising at least two chambers}   | 7/342    | . . . . {by discriminating the kind of liquid by analysis or by physical properties, e.g. vapour-pressure}  |
| 7/18      | . . . . of piston type   | 7/344    | . . . . {by checking a correct coupling or coded information}   |
| 7/20      | . . . . of rotary type   | 7/346    | . . . . . {by reading a code}   |
| 7/22      | . . . Arrangements of indicators or registers ( <a href="#">indicating or recording in fluid meters G01F 15/06</a> )   | 7/348    | . . . . . {by interrogating an information transmitter, e.g. a transponder ( <a href="#">B67D 7/145</a> takes precedence)}  |
| 7/221     | . . . . {using electrical or electro-mechanical means ( <a href="#">B67D 7/224</a> takes precedence)}  | 7/36     | . . Arrangements of flow- or pressure-control valves ( <a href="#">associated with nozzles B67D 7/42</a> )  |
| 7/222     | . . . . . {involving digital counting}   | 7/362    | . . . {combined with over-fill preventing means ( <a href="#">indicating or measuring liquid level G01F 23/00</a> ; <a href="#">level control G05D 9/00</a> )}  |
| 7/224     | . . . . . {involving price indicators}   | 7/365    | . . . . {using floats}  |
| 7/225     | . . . . . {combined with variators}  | 7/367    | . . . . . {the float acting pneumatically on a shut-off valve}  |
| 7/227     | . . . . . {using electrical or electro-mechanical means}   | 7/38     | . . Arrangements of hoses, e.g. operative connection with pump motor ( <a href="#">hoses in general F16L 11/00</a> )  |
| 7/228     | . . . . . {using digital counting}   | 7/40     | . . . Suspending, reeling or storing devices ( <a href="#">supports for storing lengths of hoses, in general B65H 75/34</a> )   |
| 7/24      | . . . . with means for producing or issuing a receipt or record of sale  | 7/403    | . . . . {the hose carrier comprising a sliding unit}  |
| 7/243     | . . . . . {using electrical or electro-mechanical means}   | 7/406    | . . . . {the hose carrier comprising a pivoting unit}   |
| 7/246     | . . . . . {involving digital counting}   | 7/42     | . . Filling nozzles   |
| 7/26      | . . . . with resetting or zeroing means  |          |   |
| 7/263     | . . . . . {using electrical or electro-mechanical means}   |          |   |
| 7/266     | . . . . . {involving digital counting}   |          |   |
| 7/28      | . . . with automatic means for reducing or intermittently interrupting flow before completion of delivery, e.g. to produce dribble feed  |          |   |

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| 7/421    | . . . {comprising protective covers, e.g. anti-splash attachments}   | 7/76           | . . Arrangements of devices for purifying liquids to be transferred, e.g. of filters, of air or water separators  |
| 7/423    | . . . {specially adapted for blending several fluids (mixing devices <a href="#">B67D 7/74</a> )}  | 7/763          | . . . {of air separators}   |
| 7/425    | . . . {including components powered by electricity or light}   | 7/766          | . . . {of water separators}   |
| 7/426    | . . . {including means for displaying information, e.g. for advertising ( <a href="#">B67D 7/425</a> takes precedence)}  | 7/78           | . . Arrangements of storage tanks, reservoirs or pipe-lines   |
| 7/428    | . . . {for delivering at least two different liquids into separate containers}   | 7/80           | . . Arrangements of heating or cooling devices for liquids to be transferred  |
| 7/44     | . . . automatically closing  | 7/82           | . . . Heating only  |
| 7/445    | . . . . {after a predetermined time}   | 7/84           | . . Casings, cabinets or frameworks; Trolleys or like movable supports  |
| 7/46     | . . . . when liquid in container to be filled reaches a predetermined level  | 7/845          | . . . {Trolleys or like movable supports}   |
| 7/465    | . . . . . {Electrical probes sensing the level of the liquid}  | 7/86           | . . Illuminating arrangements   |
| 7/48     | . . . . . by making use of air suction through an opening closed by the rising liquid  | <b>9/00</b>    | <b>Apparatus or devices for transferring liquids when loading or unloading ships (ship-based equipment <a href="#">B63B 27/00</a>)</b>  |
| 7/50     | . . . . and provided with an additional hand lever   | 9/02           | . using articulated pipes   |
| 7/52     | . . . . and provided with additional flow-controlling valve means  | <b>99/00</b>   | <b>Subject matter not provided for in other groups of this subclass</b>   |
| 7/54     | . . . with means for preventing escape of liquid or vapour or for recovering escaped liquid or vapour ( <a href="#">B67D 7/44</a> takes precedence)  | <b>2210/00</b> | <b>Indexing scheme relating to aspects and details of apparatus or devices for dispensing beverages on draught or for controlling flow of liquids under gravity from storage containers for dispensing purposes</b> |
| 2007/545 | . . . . {Additional means for preventing dispensing of liquid by incorrect sealing engagement with the tank opening of the vapour recovering means, e.g. bellows, shrouds}                 | 2210/00002     | . Purifying means   |
| 7/56     | . . Arrangements of flow-indicators, e.g. transparent compartments, windows, rotary vanes (indicating or recording presence, absence or direction of movement <a href="#">G01P 13/00</a> ) | 2210/00005     | . . Filters   |
| 7/565    | . . . {for indicating end of flow, e.g. by optical or audible signals}   | 2210/00007     | . . . for gas   |
| 7/58     | . . Arrangements of pumps  | 2210/0001      | . . . for liquid  |
| 7/60     | . . . manually operable  | 2210/00013     | . . Sterilising means   |
| 7/62     | . . . power operated   | 2210/00015     | . . . UV radiation  |
| 7/64     | . . . . of piston type   | 2210/00018     | . . . Membranes   |
| 7/645    | . . . . . {Barrel pumps}   | 2210/0002      | . . . Distillators  |
| 7/66     | . . . . of rotary type   | 2210/00023     | . . . Oxygenators   |
| 7/68     | . . . submerged in storage tank or reservoir   | 2210/00026     | . . . Heaters   |
| 7/70     | . . . of two or more pumps in series or parallel   | 2210/00028     | . Constructional details  |
| 7/72     | . . Devices for applying air or other gas pressure for forcing liquid to delivery point  | 2210/00031     | . . Housing   |
| 7/725    | . . . {using negative pressure}  | 2210/00034     | . . . Modules   |
| 7/74     | . . Devices for mixing two or more different liquids to be transferred ( <a href="#">coin-freed apparatus G07F 13/06</a> )   | 2210/00036     | . . . . for use with or in refrigerators  |
| 7/741    | . . . {mechanically operated}  | 2210/00039     | . . . Panels  |
| 7/742    | . . . . {involving mechanical counters, e.g. of clock-work type}   | 2210/00041     | . . . Doors   |
| 7/743    | . . . {electrically or electro-mechanically operated}  | 2210/00044     | . . . Insulation  |
| 7/744    | . . . . {involving digital counting}   | 2210/00047     | . . Piping  |
| 2007/745 | . . . {for obtaining fuel of a given octane level}   | 2210/00049     | . . . Pipes   |
| 2007/746 | . . . . {by mixing different fuel grades or fuel and oil}  | 2210/00052     | . . . . with flow tranquilisers   |
| 2007/747 | . . . . . {involving means responsive to the octane level, e.g. octane sensor, knock engine}   | 2210/00055     | . . . . with turbulent flow generators, e.g. vortices   |
| 2007/748 | . . . . {by mixing fuel with additives, e.g. anti-knocking agents}   | 2210/00057     | . . . . adapted for being easily cleaned  |
| 2007/749 | . . . . . {involving means responsive to the octane level, e.g. octane sensor, knock engine}   | 2210/0006      | . . . Manifolds   |
|          |  | 2210/00062     | . . . Pipe joints   |
|          |  | 2210/00065     | . . related to the use of drinking cups or glasses  |
|          |  | 2210/00068     | . . . Means for filling simultaneously a plurality of cups  |
|          |  | 2210/0007      | . . . For use with partially pre-filled cups  |
|          |  | 2210/00073     | . . . Cup cleaning devices  |
|          |  | 2210/00076     | . . . Cup conveyors   |
|          |  | 2210/00078     | . . . Cup dispensers  |
|          |  | 2210/00081     | . . related to bartenders   |
|          |  | 2210/00083     | . . . Access code recognition means   |
|          |  | 2210/00086     | . . . Selector circuits   |
|          |  | 2210/00089     | . . . Remote control means, e.g. by electromagnetic signals   |

## B67D

- 2210/00091 . . . Bar management means
- 2210/00094 . . Ergonomics
- 2210/00097 . . . Handling of storage containers
- 2210/00099 . . Temperature control
- 2210/00102 . . . Heating only
- 2210/00104 . . . Cooling only
- 2210/00107 . . . . by spraying fluids on the inner or outer surfaces of the receptacles to be filled
- 2210/00111 . . . . . The sprayed fluid being a liquid
- 2210/00112 . . . . . The sprayed fluid being a gas
- 2210/00115 . . . . . The sprayed fluid being a cryogen
- 2210/00118 . . . Heating and cooling
- 2210/0012 . . related to concentrate handling
- 2210/00123 . . . Preparing a mix of concentrates
- 2210/00125 . . . Treating or conditioning the concentrate, e.g. by heating, freezing
- 2210/00128 . . relating to outdoor use; movable; portable
- 2210/00131 . . . wearable by a person, e.g. as a backpack or helmet
- 2210/00133 . . . wheeled
- 2210/00136 . . . . vehicle carried
- 2210/00139 . . . . Trolleys
- 2210/00141 . . Other parts
- 2210/00144 . . . Magnets, e.g. used in valves or for stirring
- 2210/00146 . Component storage means
- 2210/00149 . . Fixed containers to be filled in situ
- 2210/00152 . . . Automatically
- 2210/00154 . . . . Level detected by a float
- 2210/00157 . . . . Level detected electrically by contact with sensors
- 2210/0016 . . Adapted for dispensing high viscosity products
- 2210/00163 . . Agitators
- 2210/00166 . . Heated tubes