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(71) Applicant: **CELLI S.p.A.**
47842 San Giovanni in Marignano (RN) (IT)

(72) Inventors:
- **TONONI, Andrea**
  47842 SAN GIOVANNI IN MARIGNANO (RN) (IT)
- **CECCARINI, Daniele**
  47842 SAN GIOVANNI IN MARIGNANO (RN) (IT)
- **PALOPOLI, Andrea Maria**
  47842 SAN GIOVANNI IN MARIGNANO (RN) (IT)

(74) Representative: **Ferriero, Paolo et al**
Barzanò & Zanardo Roma S.p.a.
Via Piemonte 26
00187 Roma (IT)

(54) BEVERAGE TAPPING UNIT WITH SEPARATE FOAM TAPPING VALVE

(57) The present invention relates a tapping unit (1) for tapping a beverage (B) with foam (F), in particular beer (B) with foam (F).

Said tapping unit (1) comprises a first line (L1), having an inlet (L11) for receiving a quantity of beverage (B) and an outlet (L12), a second line (L2), different from the first line (L1), having an inlet (L21) for receiving a quantity of beverage (B) and an outlet (L22), a first valve (V1), arranged on the first line (L1), a second valve (V2), arranged on the second line (L2), as well as a logic control unit (U) configured to send a first control signal for opening the first valve (V1) so that at least a quantity of beverage (B) is present at the outlet (L12) of the first line (L1), and to send a second control signal for opening the second valve (V2) so that at least a quantity of foam (F) is present at the outlet (L22) of the second line (L2).

The present invention also relates to a method for tapping a beverage with foam.

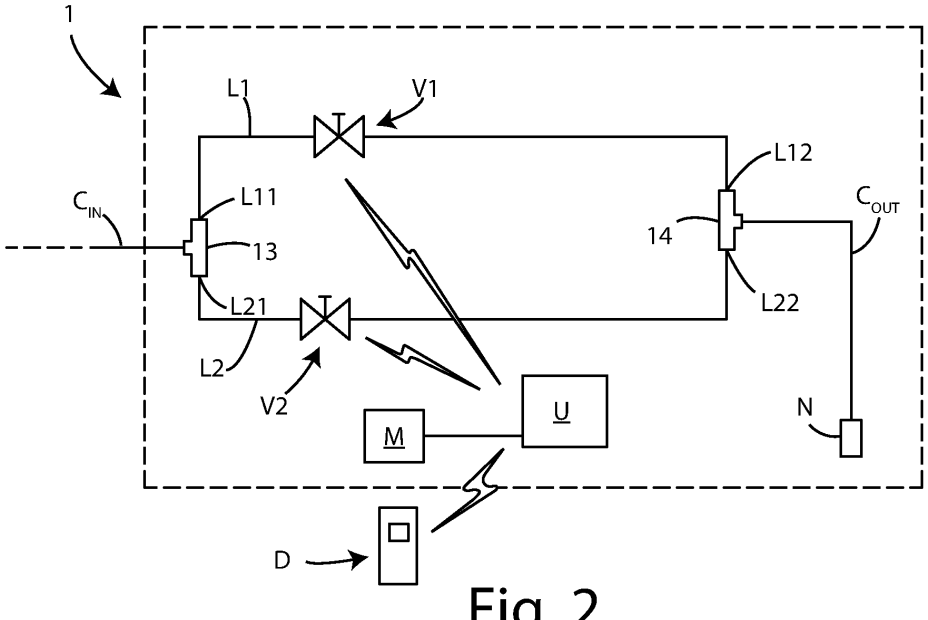

Fig. 2

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Description

[0001] The present invention relates to the sector of systems for tapping a beverage with foam and in particular relates to a tapping unit for tapping a beverage with foam.

[0002] More in particular, the present invention relates to the structure of said tapping unit conceived to comprise two separate lines, i.e. a first line and a second line for the transit of a respective quantity of beverage, in which each line has a respective inlet and a respective outlet, and a first valve and a second valve, each of which is arranged on a respective line and is controlled by a logic control unit configured to control the first valve so that at least a quantity of beverage is present at the outlet of the first line and to control the second valve so that at least a quantity of foam is present at the outlet of the second line.

[0003] In other words, the tapping unit comprises a first channel and a second channel (which are different from one another) for the transit of a respective quantity of beverage, and is configured so that at least a quantity of beverage exits the first channel and at least a quantity of foam to exit the second channel, so that the tapping unit taps a beverage with foam.

[0004] The description will relate to a tapping unit for tapping beer with foam.

[0005] Nevertheless, the tapping unit can be used to tap any beverage with foam, without thereby falling outside the scope of the invention.

Prior art

[0006] Enjoying a glass of beer implies savouring an aroma that is often found in the gas bubbles.

[0007] Through fermentation, a quantity of carbon dioxide develops inside the beer and when the beer is tapped, said quantity of carbon dioxide releases a plurality of gas bubbles.

[0008] The gas bubbles tend to rise to the surface, taking with them the resins of the hops and the proteins of the malt, and, by sticking to one another, create the typical foam.

[0009] The foam thus does not only depend on tapping but also on the type of beer.

[0010] An important task of the foam is to protect beer from oxidation.

[0011] Nevertheless, many people do not like the consistency of a glass of beer in which there is a significant quantity of foam (which may be due for example to the fact that the beer is tapped too fast).

[0012] Accordingly, the foam has to be present in a glass of beer in the right proportions.

[0013] Different systems are known for tapping beverages, in particular beer.

[0014] One example of a tapping system of known type comprises a tapping unit.

[0015] Said tapping unit comprises:

- an inlet duct for a beverage to be tapped and an outlet duct for said beverage, and
- a tapping device arranged between the inlet duct and the outlet duct.

[0016] The tapping device comprises a control lever for starting and interrupting the beverage tapping through the tapping unit, and one or more movable seal elements, which are operationally connected to the control lever to place in fluid communication the inlet duct with the outlet duct and cause the opening and closing of the tapping device.

[0017] The control lever is operationally connected to said one or more movable seal elements that are movable by at least one first proportional actuator controlled electronically by an electronic control board configured to manage, proportionally, the beverage tapping methods.

[0018] Each proportional actuator is provided with a respective actuating element that is manufactured with a shape memory, in which said actuating element consists of a wire provided with a contrasting spring.

[0019] The electronic control board manages the current necessary for moving the actuating element and is configured to acquire and process determined physical parameters of the fluid, indirectly and by reading the electrical resistance of the wire when said current is applied, in which said physical parameters are selected from the pressure, flowrate and temperature group.

[0020] Nevertheless, one drawback of such a tapping system of known type lies in the fact that the tapping unit is conceived exclusively for tapping beer.

[0021] Accordingly, to obtain a quantity of foam, it is necessary for an operator to manually act on the control lever, on the basis of his experience, with the risk that said quantity of foam is too much or little.

[0022] In fact, the operator moves said control lever manually in a first direction to tap the beer and in a second direction opposite said first direction, to obtain a quantity of foam.

[0023] It is accordingly not possible to obtain a quantity of foam automatically.

Aim of the invention

[0024] The aim of the present invention is to overcome said drawback, providing a tapping unit for tapping a beverage with foam, in particular beer with foam, wherein the foam is obtained automatically.

[0025] A further aim of the invention is to provide a method for tapping a beverage with foam, in particular beer with foam, wherein the foam is obtained automatically.

Object of the invention

[0026] The object of the invention is a tapping unit for tapping a beverage with foam, in particular beer with

foam, wherein said tapping unit comprises:

- a first line, having an inlet for receiving a quantity of beverage, and an outlet,
- a second line, different from said first line, having an inlet for receiving a quantity of beverage and an outlet,
- a first valve, arranged on said first line,
- a second valve, arranged on said second line,
- a logic control unit, connected to said first valve and to said second valve, and configured to:

    ◦ send a first control signal for opening said first valve so that at least a quantity of beverage is present at the outlet of said first line, and
    ◦ send at least a second control signal to open said second valve so that at least a quantity of foam is present at the outlet of said second line.

[0027] Other preferred embodiments of the tapping unit are described in the appended claims.

[0028] An object of the invention is also a font comprising said tapping unit, and a tapping system comprising said font.

[0029] Further, an object of the invention is a method for tapping a beverage with foam, in particular beer with foam.

List of Figures

[0030] The present invention will now be described, in an illustrative but nonlimiting manner, according to preferred embodiments thereof, with particular reference to the attached figures, wherein:

figure 1 is a schematic view of a tapping unit for tapping a beverage with foam according to the invention;
figure 2 is a schematic view of a first embodiment of the tapping unit for tapping a beverage and foam, according to the invention;
figure 3 is a schematic view of a second embodiment of the tapping unit for tapping a beverage with foam, according to the invention;
figure 4 is a schematic view of a font comprising a tapping unit according to the invention;
figure 5 is a schematic view of a tapping system comprising a font, a container containing beer, connected to said font and a pumping device, connected to said container, for pumping a quantity of beer present in said container in said font.

Detailed description of the invention

[0031] Figure 1 is a schematic view of a tapping unit indicated by the numeric reference 1 for tapping a beverage B with foam F.

[0032] In the example described, the beverage B is beer.

[0033] In figure 1, a glass G is shown containing a quantity of beer B and a quantity of foam F that forms the "head of the beer".

[0034] In a first embodiment shown in figure 2, said tapping unit 1 comprises:

- a first line L1 having an inlet L11 for receiving a quantity of beverage B, and an outlet L12,
- a second line L2, different from said first line L1 and having an inlet L21 for receiving a quantity of beverage B and an outlet L22,
- a first valve V1, arranged on said first line L1, and
- a second valve V2, arranged on said second line L2.

[0035] Further, said tapping unit 1 comprises a logic control unit U, connected to said first valve V1 and to said second valve V2, and is configured to:

    ◦ send a first control signal to said first valve V1 to open said first valve V1 so that at least a quantity of beverage B is present at the outlet L12 of said first line L1, and
    ◦ send a second control signal to the second valve V2 to open said second valve V2 so that at least a quantity of foam F is present at the outlet L22 of said second line L2.

[0036] With reference to the lines mentioned above, in the described embodiment said first line L1 is a duct having a first diameter and said second line L2 is a duct having a second diameter being less than said first diameter.

[0037] Owing to the fact that the second diameter of the second line L2 is less than the first diameter of the first line L1, when the second valve V2 is open, a substantially turbulent motion is generated (i.e. the motion is not a laminar motion) and thus a quantity of foam is generated.

[0038] The expression "substantially turbulent motion" means a transition motion between a laminar motion and a turbulent motion or a turbulent motion.

[0039] The fact that the diameters of the two lines L1, L2 are different enables each of said lines to be respectively adapted to tap beverage B and foam F.

[0040] Further, although not shown, said first line L1 can have a different shape from the shape of the second line L2.

[0041] In other words, the first line L1 can be designed to obtain at the outlet at least a quantity of beverage B and the second line L2 can be designed to obtain at the outlet at least a quantity of foam F.

[0042] In fact, it is not ruled out that at the outlet L12 of the first line L1 a further quantity of foam can be present (in addition to the quantity of beverage B) and that at the outlet L22 of the second line L2 a further quantity of beverage can be present (in addition to the quantity of foam F).

[0043] Further, the inlet L11 of said first line L1 and the inlet L21 of said second line L2 are connected to an inlet duct C_{IN} of a font 2 (described below) by a first connection element 13.

[0044] As shown in figure 2, the two lines L1, L2 are parallel or substantially parallel.

[0045] In each case, as shown in figure 2, the two lines L1, L2 are not coaxial.

[0046] In particular, in the first embodiment described, said connection element 13 is a T-shaped element.

[0047] With reference to the valves mentioned above, in the described embodiment, said first valve V1 is a proportional valve and said second valve V2 is a proportional valve.

[0048] Nevertheless, it is not necessary for both valves to be proportional valves.

[0049] It is sufficient that at least the second valve V2 is a proportional valve.

[0050] Advantageously, using proportional valves enables the logic control unit U to tap a quantity of beverage according to desired features.

[0051] Using two valves arranged on a respective line enables the control by the logic control unit U to be simplified.

[0052] In fact, the logic control unit U is able to control the first valve V1 and the second valve V2 independently of one another.

[0053] Accordingly, it is possible to adjust by the logic control unit the quantity of beverage by unit of time that traverses the first valve V1 independently of the quantity of beverage by unit of time that traverses the second valve V2 to obtain a desired quantity of foam or a desired quantity of foam with desired features, such as for example density and/or dimension of the gas bubbles that form the foam F.

[0054] The logic control unit U is configured to modulate at least the second control signal sent to the second valve V2 to adjust the opening of said second valve V2, so that a predetermined quantity of foam F is present at the outlet L22 of the second line L2.

[0055] The first control signal and the second control signal can be respective voltage signals.

[0056] The second control signal can be modulated by the logic control unit U so that the quantity of foam F at the outlet L22 of the second line L2 is a predetermined quantity of foam.

[0057] Further, the second control signal can be configured to maintain the second valve V2 open for a predetermined time period, so that a predetermined quantity of beverage B is present at the outlet L22 of the second line L2, before said second control signal is modulated by the logic control unit U.

[0058] For this purpose, said tapping unit 1 can comprise storage means M (for example a memory) and said preset period of time can be stored in said storage means M.

[0059] In the described embodiment, the logic control unit U is connected to said storage means M.

[0060] Nevertheless, said storage means M can be included in said logic control unit U, without departing from the scope of the invention.

[0061] It is preferable for said logic control unit U to be configured to close the first valve V1 when the second control signal is modulated by the logic control unit U.

[0062] The tapping unit 1 comprises activating means for activating said logic control unit U.

[0063] In the first embodiment described, said activating means comprises a lever R.

[0064] In a first alternative (not shown), said activating means can comprise a button, without departing from the scope of the invention.

[0065] In a second alternative (not shown), said activating means can comprise a further logic control unit that is connectable to said logic control unit U by a cloud.

[0066] Said further logic control unit can be configured to send one or more signals/control signals (by said cloud) to said logic control unit U and the latter can be configured to receive said one or more signals sent by said further logic control unit.

[0067] Said further logic control unit is configured to access said cloud by an Internet connection and can be arranged inside a computer or a mobile electronic device, like for example a smartphone or a tablet.

[0068] Further, said further logic control unit can be configured to send to said logic control unit U one or more parameters or one or more updated values referring to respective preset parameters and said logic control unit U can be configured to store said parameters and said updated values in said storage means M.

[0069] Further, in the first embodiment described, said tapping unit 1 comprises a level sensor S1 for measuring a value associated with the fill value of a glass G, and said logic control unit U is configured to:

- ◦ acquire said value associated with the fill value of a glass G, and
- ◦ send said value associated with the fill value of a glass G to a mobile terminal D.

[0070] In particular, said level sensor S1 can be a capacitive sensor or an optoelectronic sensor.

[0071] Advantageously, it is possible to control by the level sensor the fill value of the glass, preventing the glass from filling to such a point that the beverage overflows from the glass, with a consequent waste of beverage.

[0072] In addition or alternatively to the aforesaid level sensor S1, said tapping unit 1 can comprise a measuring device S2 for measuring a value associated with the stability of the foam F over time and said logic control unit U can be configured to:

- ◦ acquire said value associated with the stability of the foam F over time, and
- ◦ send said value associated with the stability of the foam F over time to the mobile terminal D.

[0073] In particular, said measuring device S2 can be an Nibem measuring device.

[0074] Thus, using the measuring device S2 it is possible to measure the time of duration of the foam in glass, i.e. the persistence.

[0075] For a beer with foam, the value obtained by this measuring device S2 indicates the capacity of the foam to remain compact for a prolonged time.

[0076] Advantageously, an operator can deliver a glass of beer with foam ensuring that the foam remains compact for a certain time.

[0077] In the first embodiment described, the tapping unit 1 comprises both the level sensor S1 and the measuring device S2 for measuring the stability of the foam over time.

[0078] Further, the value associated with the fill value of a glass G and/or the value associated with the stability of the foam F over time can be sent by the logic control unit to a central control unit (not shown) rather than to a mobile terminal D, without departing from the scope of the invention.

[0079] Advantageously, the fact that the value associated with the fill value of a glass G and/or the value associated with the stability of the foam F can over time be sent to a mobile terminal D or to a central control unit enables said values to be displayed on display means (for example a display) included in said mobile terminal or in said central control unit and preferably stored in further storage means (for example a further memory) arranged in said mobile terminal or in said central control unit enables the fill level and/or the stability of the foam to be monitored over time.

[0080] It is preferable for one or more unique identification codes, each of which is associated with a respective type of beverage B, to be stored in said storage means M of said tapping unit 1 and said logic control unit U to be configured to store in said storage means M said value associated with the fill value of a glass G and/or said value associated with the stability of the foam F over time for each type of beverage B.

[0081] Advantageously, the fact that the value of the fill level of a glass G for each beverage and/or the value of the stability of the foam F over time can be stored offers the operator the possibility to acquire for each beverage information on how much each beverage fills a glass, considering that the volume of tapped beverage is the same, and/or on how the foam of a beverage varies over time.

[0082] As shown in figure 2, in the first embodiment described, said tapping unit 1 comprises a (single) outlet duct C_{OUT} connected to the outlet L12 of the first line L1 and to the outlet L22 of the second line L2.

[0083] The outlet L12 of said first line L1 and the outlet of L22 of said second line L2 are connected to said outlet duct C_{OUT} by a second connection element 14.

[0084] In particular, in the first embodiment described, said second connection element 14 is a T-shaped element.

[0085] Further, as shown in figure 2, a nozzle N is positioned at one end of said outlet duct C_{OUT}.

[0086] Figure 3 shows a second embodiment of the tapping unit 1.

[0087] Unlike the first embodiment, in the second embodiment said tapping unit 1 comprises a respective outlet duct that is connected to a respective line.

[0088] Accordingly, unlike the first embodiment, there is no second connection element 14.

[0089] In particular, said tapping unit 1 comprises:

- a first outlet duct C_{OUT1} for the beverage B, connected to the outlet L12 of the first line L1, and
- a second outlet duct C_{OUT2} for the foam F, connected to the outlet L22 of the second line L2.

[0090] In the second embodiment described, said first outlet duct C_{OUT1} has a diameter that is the same as the first diameter of the first line L1 and said second outlet duct C_{OUT2} has a diameter that is the same as the second diameter of the second line L2.

[0091] Nevertheless, it is not necessary for the diameter of the first outlet duct C_{OUT1} and the diameter of the second outlet duct C_{OUT2} to be equal respectively to the first diameter of the first line L1 and to the second diameter of the second line L2.

[0092] In fact, the first outlet duct C_{OUT1} can have a different diameter from the first diameter of the first line L1 and the second outlet duct C_{OUT2} can have a different diameter from the second diameter of the second line L2, without departing from the scope of the invention.

[0093] Further, as shown in figure 3, a respective nozzle is positioned at one end of a respective outlet duct: a first nozzle N1 is positioned at one end of said first outlet duct C_{OUT1} and a second nozzle N2 is positioned at one end of said second outlet duct C_{OUT2}.

[0094] The first nozzle N1 is shaped so as to be arranged at the end of the first outlet duct C_{OUT1} and the second nozzle N2 is shaped so as to be arranged at the end of the second outlet duct C_{OUT2}.

[0095] Figure 4 shows a font 2 comprising a tapping unit 1 described above.

[0096] Said font further comprises a duct or inlet duct C_{IN} having an inlet 21A for receiving the beverage B to be tapped and an outlet 21B, connected both to the inlet L11 of the first line L1 and to the inlet L21 of the second line L2 of the tapping unit 1.

[0097] The inlet duct C_{IN} is arranged inside a casing of the font 2.

[0098] Figure 5 shows a tapping system for tapping a beverage with foam. said tapping system comprises:

- the font 2 (comprising the tapping unit 1),
- a container 3 containing a beverage B, connected to the font 2, and
- a pumping device 4, connected to said container 3, for pumping a quantity of beverage B present in said container 3 towards said font 2.

[0099] In particular, the container 3 has an inlet 31A, connected to the pumping device 4, and an outlet 31B, connected to the inlet 21A of the inlet duct C_{IN} of the font 2.

[0100] When the tapping system is in use, the pumping device 4 pumps a quantity of beverage present in the container 3 inside the font 2 by.

[0101] Said quantity of beverage B exits the outlet 31B of the container 3, reaches the inlet of the inlet duct C_{IN} of the font 2 and, via said inlet duct C_{IN}, reaches the tapping unit 1 and accordingly the inlet L11 of the first line L1 and the inlet L21 of the second line L2.

[0102] Via the valves V1, V2 controlled by the logic control unit U, a quantity of beverage B exits the outlet L12 of the first line L1 and a quantity of foam F exits the outlet L22 of the second line L2.

[0103] In this manner, the glass G placed below the tapping unit will receive a quantity of beverage B and a quantity of foam F.

[0104] The present invention also relates to a method for tapping a beverage with foam.

[0105] The method comprises the following steps:

A) providing a tapping unit 1 comprising:

a first line L1, having an inlet L11 for receiving a quantity of beverage B,
an outlet L12, a second line L2, different from said first line L1, having an inlet L21 for receiving a quantity of beverage B and an outlet L22,
a first valve V1, arranged on said first line L1,
a second valve V2, arranged on said second line L2;

B) opening said first valve V1 so that at least a quantity of beverage B is present on the outlet L12 of said first line L1; and

C) opening said second valve V2 so that at least a quantity of foam F is present on the outlet L22 of said second line L2.

Advantages

[0106] Advantageously, the tapping unit 1 that is the object of the invention enables a beverage B to be obtained with foam F, in which the foam F is obtained automatically.

[0107] Owing to the presence of two separate lines L1, L2 and of two valves V1, V2 distinct from one another, each of which is arranged on a respective line, and to the presence of a control logic U configured to control the opening/closing of each of said valves independently of one another, a quantity of beverage B exits a first line L1 and a quantity of foam F exits the second line L2.

[0108] Regardless of whether the tapping unit 1 has only one outlet duct C_{OUT1} (for the beverage and the foam) or two outlet ducts C_{OUT1}, C_{OUT2} (an outlet duct C_{OUT1} for the beverage B and an outlet duct C_{OUT2} for the foam F), a quantity of beverage B with foam F is obtained by said tapping unit 1.

[0109] The present invention has been described, in an illustrative but nonlimiting manner, according to a preferred embodiment thereof, but it is to be understood that variations and/or modifications may be made by those skilled in the art without thereby exiting from the relative scope of protection, as defined by the attached claims.

Claims

1. Tapping unit (1) for tapping a beverage (B) with foam (F), in particular beer (B) with foam (F), said tapping unit (1) comprising:

   - a first line (L1), having an inlet (L11) for receiving a quantity of beverage (B) and an outlet (L12),
   - a second line (L2), different from said first line (L1), having an inlet (L21) for receiving a quantity of beverage (B) and an outlet (L22),
   - a first valve (V1), arranged on said first line (L1),
   - a second valve (V2), arranged on said second line (L2),
   - a logic control unit (U), connected to said first valve (V1) and to said second valve (V2), and configured to:

     ◦ send a first control signal for opening said first valve (V1) so that at least a quantity of beverage (B) is present at the outlet (L12) of said first line (L1), and
     ◦ send at least a second control signal for opening said second valve (V2) so that at least a quantity of foam (F) is present at the outlet (L22) of said second line (L2).

2. Tapping unit (1) according to the previous claim, wherein said first line (L1) is a duct having a first diameter and said second line (L2) is a duct having a second diameter being less than said first diameter.

3. Tapping unit (1) according to any one of the previous claims, wherein said first line (L1) has a shape different from the shape of said second line (L2).

4. Tapping unit (1) according to any one of the previous claims, wherein at least said second valve (V2) is a proportional valve, and
   wherein
   said logic control unit (U) is configured to modulate said second control signal sent to the second valve (V2) to adjust the opening of said second valve (V2), so that a predetermined quantity of foam (F) is present at the outlet (L22) of the second line (L2).

5. Tapping unit (1) according to claim 4, wherein said

second control signal is configured to maintain said second valve (V2) open for a predetermined time period, so that a predetermined quantity of beverage (B) is present at the outlet (L22) of the second line (L2), before said second control signal is modulated by said logic control unit (U).

6. Tapping unit (1) according to claim 4, wherein said logic control unit (U) is configured to close said first valve (V1) when said second control signal is modulated.

7. Tapping unit (1) according to any one of claims 1-6, wherein said tapping unit (1) comprising an outlet duct (C_{OUT}) connected to the outlet (L12) of said first line (L1) and to the outlet (L22) of said second line (L2).

8. Tapping unit (1) according to any one of claims 1-6, wherein said tapping unit (1) comprises:

- a first outlet duct (C_{OUT1}) for the beverage (B), connected to the outlet (L12) of said first line (L1), and
- a second outlet duct (C_{OUT2}) for the foam (F), connected to the outlet (L22) of said second line (L2).

9. Tapping unit (1) according to any one of the previous claims, wherein said tapping unit (1) comprises activating means (10) for activating said logic control unit (U); said activating means (10) preferably comprising a lever (R) or a button or a further logic control unit connectable to said logic control unit (U) through a cloud, wherein said logic control unit (U) is configured to receive one or more signals/control signals sent by said further logic control unit.

10. Tapping unit (1) according to any one of the previous claims, wherein said tapping unit (1) comprises:

a level sensor (S1) for measuring a value associated with the fill level of a glass (G),
and/or
a measuring device (S2) for measuring a value associated with the stability of the foam (F) over time;
wherein
said logic control unit (U) is configured to:

- ◦ acquire said value associated to the fill level of a glass (G) and send said value and/or said value associated with the stability of the foam (F) over time, and
- ◦ send said value associated to the fill level of a glass (G) and/or said value associated to the stability of the foam (F) over time to a mobile terminal (D) or to central control unit.

11. Tapping unit (1) according to the previous claim, wherein

said level sensor (S1) is a capacitive sensor or an optoelectronic sensor, and/or
said measuring device (S2) is a Nibem measuring device.

12. Tapping unit (1) according to claim 10 or 11, wherein said tapping unit (1) comprises:

storage means (M) wherein one or more unique identification codes are stored, each of which is associated to a respective type of beverage (B), and
wherein
said logic control unit (U) is configured to store in said storage means (M) said value associated to the fill level of a glass (G) and/or said value associated with the stability of the foam (F) over time for each type of beverage (B).

13. Font (2) comprising a tapping unit (1) according to any one of the previous claims, wherein said font (2) comprises an inlet duct (C_{IN}) having an inlet (21A) for receiving the beverage (B) to be dispensed and an outlet (21B) connected to both the inlet (L11) of the first line (L1) and the inlet (L21) of the second line (L2) of said tapping unit (1).

14. Dispensing system comprising:

- a font (2) according to claim 13,
- a container (3) containing a beverage (B), wherein said container has an inlet (31A) and an outlet (31B), wherein said outlet (31B) is connected to the inlet (21A) of said inlet duct (C_{IN}),
- a pumping device (4), connected to the inlet (31A) of said container (3), for pumping a quantity of beverage (B) present in said container (3) toward said font (2) through the outlet (31B) of said container (3),

wherein
said font (2) is configured in such a way that, when a quantity of beverage (B) is pumped in said font (2) through said pumping device (4), said quantity of beverage (B) enters inlet duct (C_{IN}) of said font (2), through the inlet (21A) of said inlet duct (C_{IN}), and exits said font (2), through the outlet (21A) of said inlet duct (C_{IN}), for reaching the inlet (L11) of said first line (L1) and the inlet (L21) of said second line (L2) of said tapping unit (1).

15. Method for tapping a beverage (B) with foam (F), in particular beer (B) with foam (F), comprising the fol-

lowing steps:

A) providing a tapping unit (1) comprising:

a first line (L1), having an inlet (L11) for receiving a quantity of beverage (B), and an outlet (L12),
a second line (L2), different from said first line (L1), having an inlet (L21) for receiving a quantity of beverage (B) and an outlet (L22),
a first valve (V1), arranged on said first line (L1),
a second valve (V2), arranged on said second line (L2);

B) open said first valve (V1) so that at least a quantity of beverage (B) is present at the outlet (L12) of said first line (L1); and
C) open said second valve (V2) so that at least a quantity of foam (F) is present at the outlet (L22) of said second line (L2).

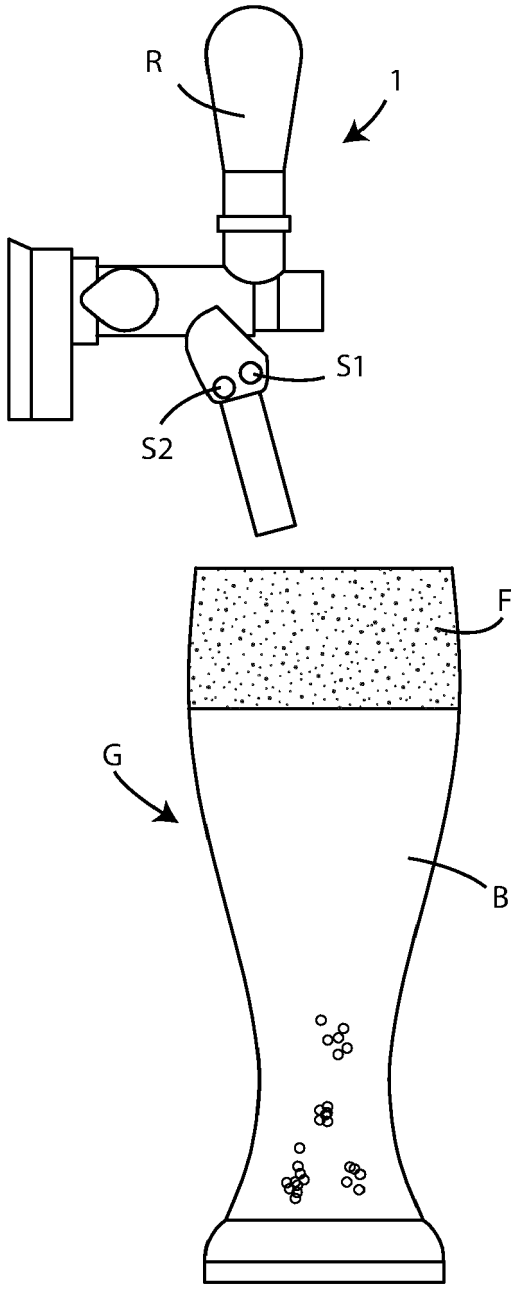

Fig. 1

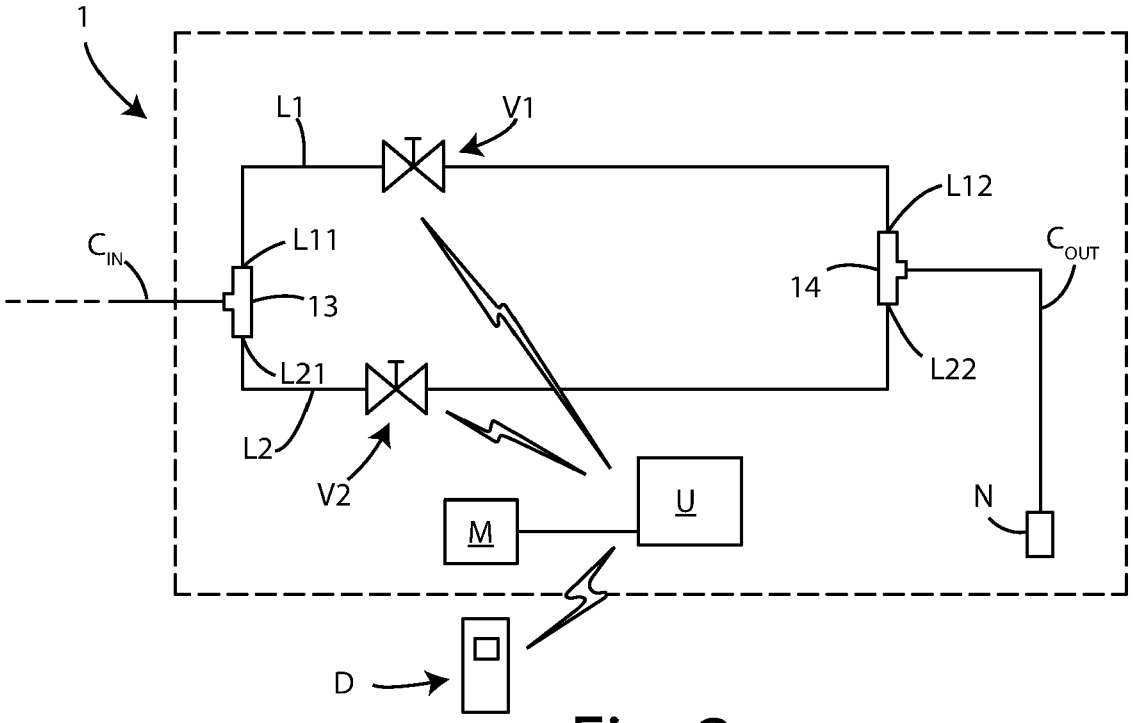
1
L1
V1
L12
C_{IN}
L11
C_{OUT}
14
13
L21
L22
L2
V2
U
M
N
D

Fig. 2

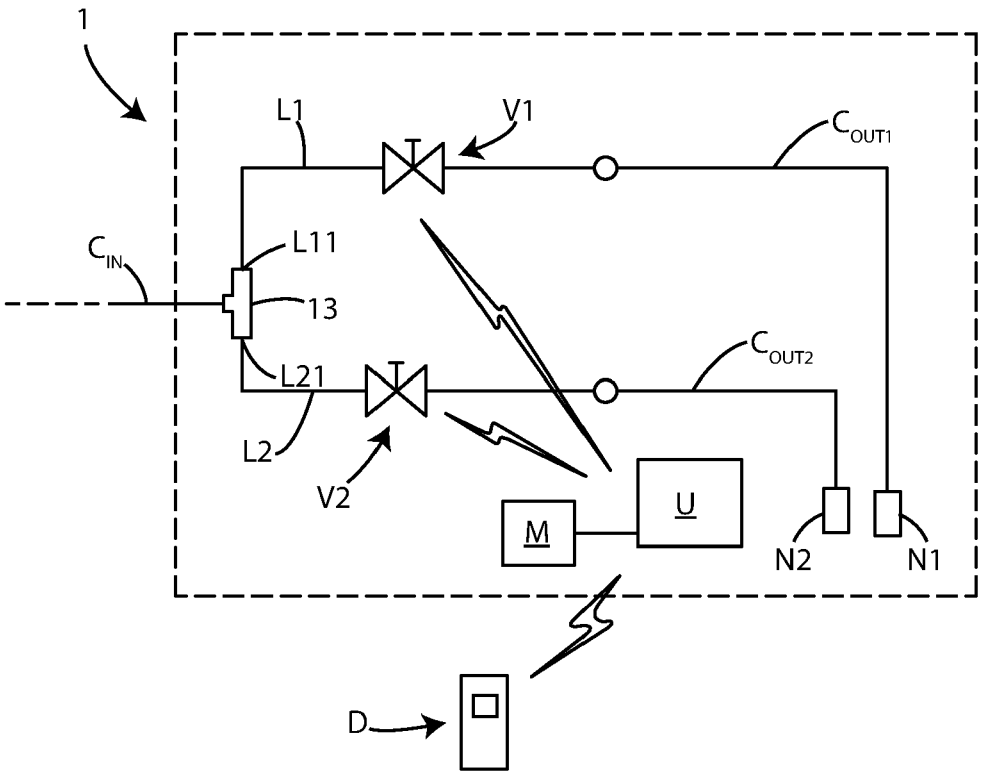
1
L1
V1
C_{OUT1}
C_{IN}
L11
13
C_{OUT2}
L21
L2
V2
U
M
N2
N1
D

Fig. 3

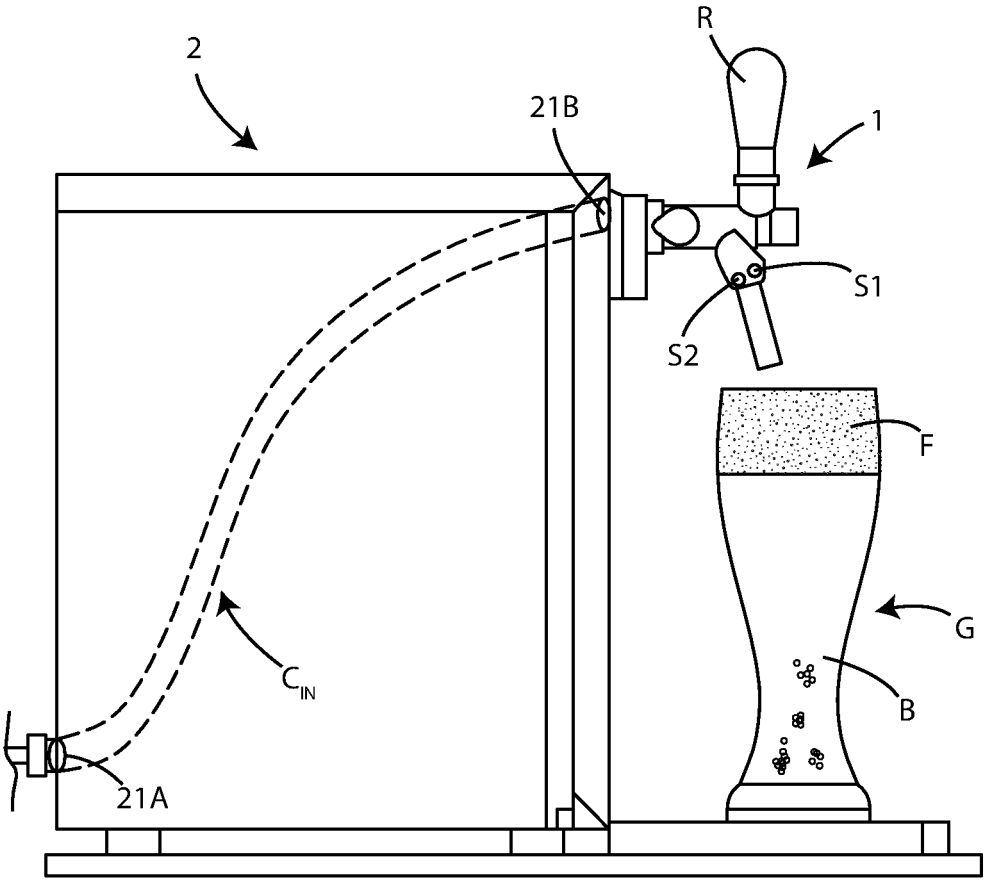

Fig. 4

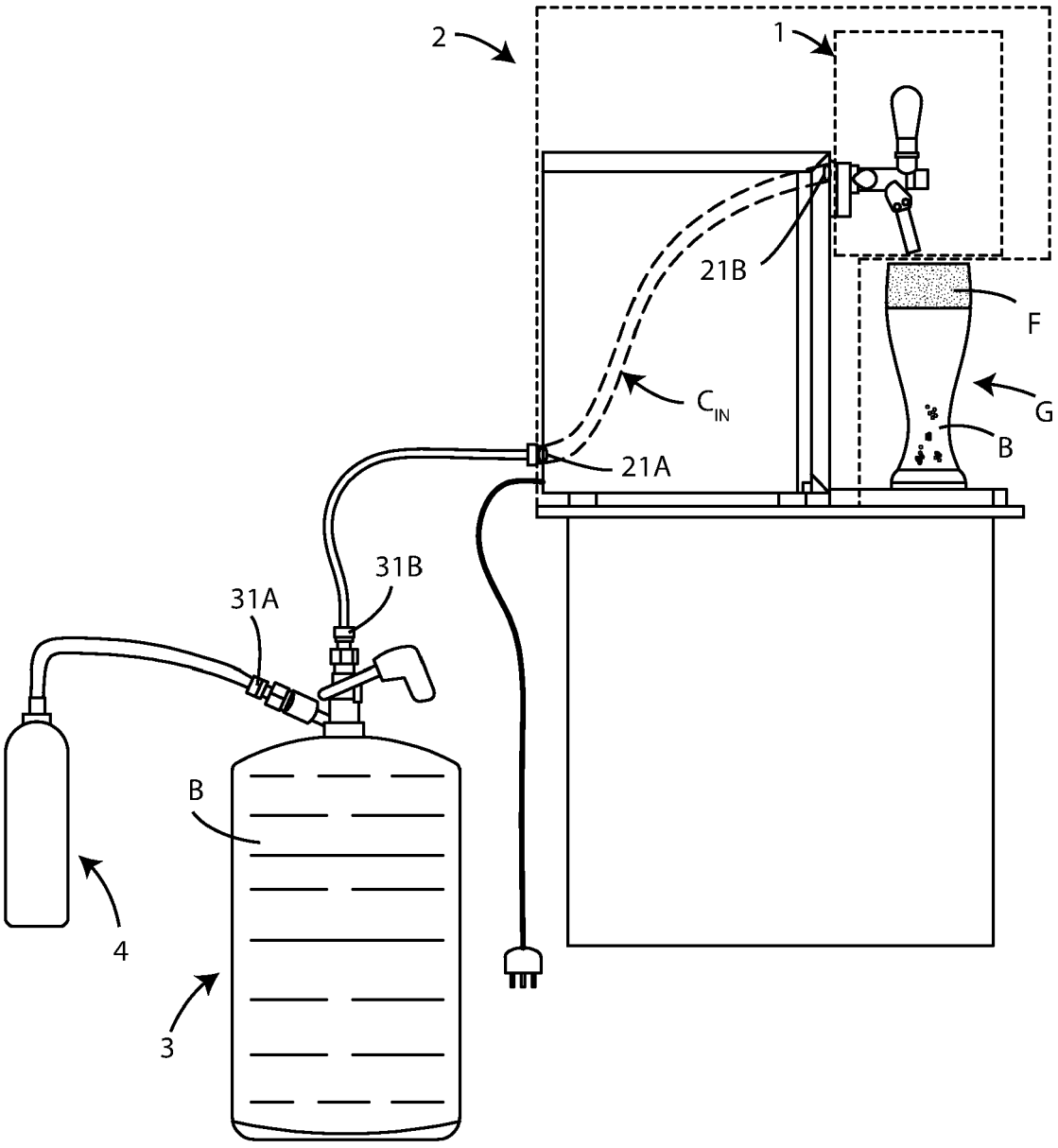

Fig. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 22 19 8599

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B67D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	10 February 2023	Desittere, Michiel

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