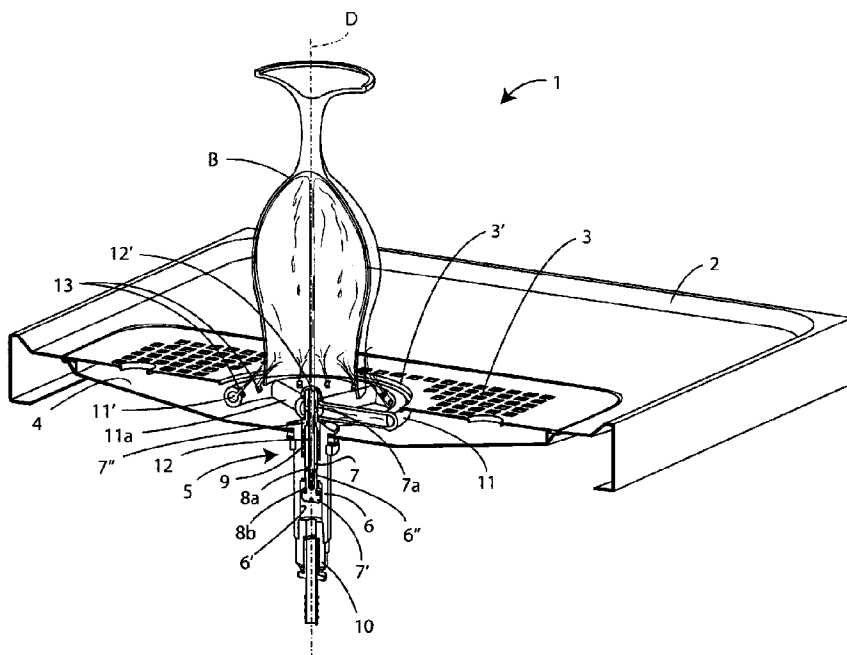




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 (72) Inventeur/Inventor:  
 CELLI, GOFFREDO, IT  
 (73) Propriétaire/Owner:  
 CELLI S.P.A., IT  
 (74) Agent: ROBIC

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(57) **Abrégé/Abstract:**

The present invention concerns a device (1) for washing a glass (B) comprising a supply duct (6) of a washing liquid, at least one dispensing member comprising at least one ring-shaped dispensing duct (11) having at least one hole (13) for the emission of a jet of said liquid, at least two radial connecting ducts (11 a), which connect said dispensing duct (11) to said supply duct (6), said at least two radial connecting ducts (11 a) laying on the same plane of said dispensing duct (11), so as to be capable of supporting the rim of said glass (B) when it is turned upside down, so that said at least one hole (13) of said dispensing duct (11) can emit a jet of liquid on the outer surface portion of said glass (B), and means for interrupting the flow (7, 7', 8b), for selectively interrupting the passage of said liquid through said supply duct (6) or through said dispensing duct (11).

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605, I-47842 San Giovanni Marignano (RN) (IT).(72) Inventor: **CELLI, Goffredo**; Celli S.P.A., Via Casino Al-  
bini, 605, I-47842 San Giovanni Marignano (RN) (IT).(74) Agents: **TIBURZI, Andrea** et al.; Barzano' & Zanardo  
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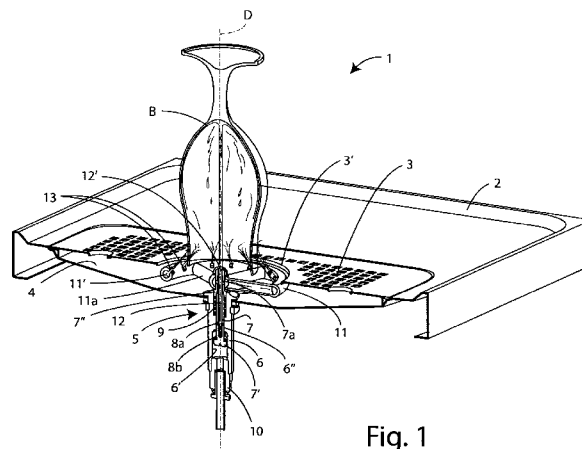


Fig. 1

(57) **Abstract:** The present invention concerns a device (1) for washing a glass (B) comprising a supply duct (6) of a washing liquid, at least one dispensing member comprising at least one ring-shaped dispensing duct (11) having at least one hole (13) for the emission of a jet of said liquid, at least two radial connecting ducts (11 a), which connect said dispensing duct (11) to said supply duct (6), said at least two radial connecting ducts (11 a) laying on the same plane of said dispensing duct (11), so as to be capable of supporting the rim of said glass (B) when it is turned upside down, so that said at least one hole (13) of said dispensing duct (11) can emit a jet of liquid on the outer surface portion of said glass (B), and means for interrupting the flow (7, 7', 8b), for selectively interrupting the passage of said liquid through said supply duct (6) or through said dispensing duct (11).

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## IMPROVED DEVICE FOR WASHING A GLASS

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### TECHNICAL FIELD

5 The present invention relates to an improved device for washing a glass.

More specifically, the present device is conveniently used for externally rinsing and disinfecting the glasses intended to be subsequently filled with a beverage such as beer and the like.

10 In the following, the description will be directed to the use of the device according to the present invention with glasses intended to be filled with beer, but it is clear that the same must not be considered limited to this specific use. This device, in fact, can be advantageously used also with glasses intended to be filled with other drinks, other than beer.

### BACKGROUND

15 Currently systems are known to wet the inner part of the glasses to rinse them and lower the temperature, contributing to improve the organoleptic properties of the drink, said systems provide a base, provided with a grid, below which it is placed a nozzle adapted to spray water upwards after an appropriate activation.

20 The glass to rinse must be, first, upside down and lean on said base.

Subsequently, by pressing the glass against said base, the nozzle which comes into operation, activating, delivers a jet of water against the internal surfaces of the glass.

25 Examples of known systems are the subject of patent applications U5378621, US683111, GB389787, DE575301, FR355227.

30 These documents describe systems for rinsing glasses both internally, through a nozzle which provides a water jet directed parallel to the symmetry axis of the glass, both externally, by means of openings formed on dispensing members.

Said dispensing members are shaped so as to direct the water jet on the entire outer surface of the glass, also on the portions distant from the rim, these openings being distant from the supporting surface of the rim of the glass. In this way the glass is completely wet and the area near  
35 the rim, where the lips are laid is not disinfected directly by the jet, but only due to the fall of the water. This can result in a non-optimal disinfection of the rim of the glass.

In other words, these known systems therefore do not allow to wet uniformly and effectively also the surfaces of glasses, and in particular the supporting area for the lips, where greater hygiene is necessary.

5 Also, systems according to the prior art have very bulky dispensing members especially when they are installed in structures in which they are located. This implies that they are not easily adaptable to sinks or drains, even of small size, of pubs, bars and the like.

#### **SUMMARY**

10 In light of the above, it is, therefore, object of the present invention to provide an improved device that allows to uniformly wet a glass, even on the outer surface and in particular on the rim.

A further object of the present invention is to provide a device comprising a dispensing element which is compact and easily adaptable to different sinks or drains.

15 Another object of the invention is to provide an improved device which allows to uniformly cool a glass.

A further object of the present invention is to provide an improved device for wetting a glass that is inexpensive and simple to manufacture.

20 It is therefore a specific object of the present invention a device for washing a glass comprising a supply duct of a washing liquid, at least one dispensing member comprising at least one ring-shaped dispensing duct having at least one hole for the emission of a jet of said liquid and means for interrupting the flow, for selectively interrupting the passage of the liquid. The device further comprises at least two radial connecting ducts, which connect  
25 said dispensing duct to said supply duct, said at least two radial connecting ducts laying on the same plane of said dispensing duct, so as to be capable of supporting the rim of said glass when it is turned upside down, so that said at least one hole of said dispensing duct can emit a jet of liquid on the outer surface portion of said glass. The means for interrupting the flow selectively  
30 interrupt the passage of said liquid through said supply duct or through said dispensing duct.

Further according to the invention, said supply duct comprises a support, having an internal cavity for the passage of said liquid, and also comprises connecting means to mutually connect said internal cavity and  
35 said at least one hole.

Always according to the invention, said at least one hole is configured so as to emit a liquid jet according to a predetermined trajectory which forms an angle with a predetermined radius comprised between 0 and 90 degrees.

Still according to the invention, said dispensing duct is a ring with a substantially circular shape.

Advantageously according to the invention, said connecting means comprise a circumferential inner cavity obtained in a dispensing duct, so as  
5 to form a toroid.

Further according to the invention, said dispensing duct could have a plurality of holes.

Always according to the invention, said device could comprise at least one nozzle manually adjustable on each of said holes, to direct the  
10 respective jet of liquid.

Always according to the invention, said dispensing duct is arranged substantially perpendicular with respect to said supply duct.

Still according to the invention, said device could comprise a further  
15 delivery hole to deliver a jet of said liquid according to a predetermined direction passing within said dispensing element, said delivery hole being in communication with said supply duct and being arranged substantially on the plane in which said radial connecting ducts and said dispensing duct lie.

Advantageously according to the invention, said predetermined direction is an axial direction with respect to said dispensing duct.

Further according to the invention, said means for interrupting the  
20 flow are configured to allow the passage of a liquid through said supply duct when a pressure equal to, or greater than a given threshold pressure value is exerted on said dispensing element.

Always according to the invention, said means for interrupting the  
25 flow comprise a shutter, arranged in said internal cavity of said support, and a spring arranged between said shutter and said support.

Still according to the invention, said connecting means comprise a  
30 supply duct incorporated in said shutter and communicating with said dispensing duct and with said internal cavity of said support when said flow interruption means are configured so as to allow the passage of a liquid through said internal cavity.

#### **DETAILED DESCRIPTION**

The present invention will be now described, for illustrative but not  
35 limitative purposes, according to its preferred embodiments, with particular reference to the figure 1 of the enclosed drawing, wherein it is shown a cutaway view of a device for wetting a glass according to the present invention.

Referring to figure 1, by reference number 1 it is indicated a device for wetting a glass according to the present invention.

Said device 1 comprises a support base 2 integrated with a grid 3 for draining liquids to an underlying tank outflow 4, from which said liquids flow out towards a collecting member, not shown in the figure.

Device 1 includes a dispensing device 5 formed by a support 6 having substantially the shape of a cylinder in which an axial through cavity 6' is formed.

This support 6 is arranged so as to pass through a corresponding opening formed in said tank outflow 4, to which it is firmly anchored by means of suitable removable connecting means.

On the lower part of the support 6 a connecting member 10 is mounted, adapted to allow the connection of a water supply duct (not shown in the figure).

Support 6 has, in correspondence of the axial through cavity 6', a narrowing 6", through which a substantially cylinder-shaped shutter 7 is enabled to slide.

This shutter 7 provides, internally, with an axial feed duct 12 which flows on the top with an axial dispensing hole 12' directed according to a predetermined axial direction D, and communicating, at the bottom, with said axial through cavity 6' of the support 6 using at least one portion of the radial duct.

On the outer surface of the shutter 7 a circumferential groove is obtained, in which a first ring seal 8a is housed, adapted to provide a seal between said shutter 7 and the narrowing 6" of the support 6.

In correspondence of its lower end, this shutter 7 has a head shutter 7' having a second ring seal 8b, arranged facing said narrowing 6" and configured to form a seal when said second seal 8b abuts with the lower part of said narrowing 6".

In correspondence of an intermediate axial position, the shutter 7 has a widened portion 7" in the radial direction.

Within the support 6 there is a spring 9 arranged between the narrowing 6" of said support 6 and the enlarged portion 7" of the shutter 7, in order to induce the ring seal 8 to abut on the bottom of said narrowing 6", so obstructing said axial through cavity 6'.

The dispensing device 5 also comprises a dispensing duct 11, which in this embodiment is a circular-shaped ring, having a circumferential internal cavity 11' and arranged in correspondence with an

opening 3' formed in the grid 3, substantially orthogonal with respect to the shutter 7.

5 In particular, said dispensing ring 11 is mounted on an upper portion 7a of the shutter 7, axially projecting from the underlying support 6, through a plurality of radial connecting ducts 11a, so as to make mutually communicating the circumferential inner cavity 11' of said dispensing ring 11 and the axial supply duct 12 of the shutter 7, through said plurality of radial connecting ducts 11a.

10 Said plurality of radial connecting ducts 11a is adapted to support the rim of the glass and lies on the same plane of said dispensing duct 11.

In particular, said plurality of radial connecting ducts 11a is substantially coplanar with said dispensing duct 11, so as to be arranged in correspondence with said opening 3' formed in said grid 3.

15 On the upper part of the dispensing ring 11 a plurality of dispensing through holes 13 communicating with said dispensing circumferential internal cavity 11' is obtained.

20 Said dispensing through holes 13 extend along an entire circumference of said dispensing ring 11 and are configured so as to deliver related fluid jets directed substantially towards said predetermined axial direction D.

On said through holes 13 manually adjustable dispensing nozzle can be arranged (not shown in the figures), in order to better direct the respective jet of liquid.

25 According to a variant of the device 1, it may include, further, a cooling system - not shown in the figure for simplicity of representation - arranged upstream of the support 6 and capable to cool the liquid before it passes through said support 6.

30 For the operation of the device 1 it is required, first, connecting the support 6 to means for feeding water or other liquid, such as a solenoid pump, for example through a tube connected to the above-mentioned connection member 10.

Once the above connection is carried out, the device 1, therefore, becomes operational.

35 To wet a glass B by device 1, it is necessary, first of all, overturn said glass B with the related containing cavity facing downwards and placing it on the radial connecting ducts 11a of the dispensing device 5.

Exerting a pressure on the cup B such as to overcome the opposition of the spring 9, the shutter 7 with its second seal 8b moves downwards, allowing the passage of water through the axial supply duct.

5 At this point, the water, being capable to freely flow in the axial supply duct 12, reaches the axial dispensing hole 12' and the through holes 13 formed in the ring dispensing duct 11, thus producing a jet of water substantially axially directed towards the inner surfaces of the glass B and a plurality of water jets directed toward the outer surfaces of said glass B, each according to a trajectory such as to form an angle with a  
10 radius of said supply ring 11 comprised between 0° and 90°.

In this way, thus, the glass B is wet both internally and externally. In particular, since the rim of the glass B is positioned on said plurality of radial connecting ducts 11a, the water coming out from said supply through holes 13, formed in the supply ring 11, coplanar with said plurality of  
15 radial connecting ducts 11a, is conveyed directly on the rim of the glass B ensuring a selective washing.

Glass B is possibly also cooled both on the inner surface for containing the liquid, and on the outside.

20 Furthermore, in case of the device 1 also provides for the above cooling system, the water that wets the glass B also determines a generalized and uniform cooling.

The beer poured into a so wet and cooled glass will show an optimal quantity and quality of foam, so as to make its tasting more pleasant.

25 A further advantage of this device is given by the cool sensation perceived by the consumer when leans his lips on the rim of the glass to drink the beer, or other beverage contained in this glass. In fact, the external cooling improves the effects of cooling inside the glass.

30 The present invention has been described for illustrative but not limitative purposes, according to its preferred embodiments, but it is to be understood that modifications and/or changes can be introduced by those skilled in the art without departing from the relevant scope as defined in the enclosed claims.

**CLAIMS**

1. A device for washing a glass comprising  
a supply duct of a washing liquid,  
at least one dispensing member comprising  
5 at least one ring-shaped dispensing duct having at least one hole for  
the emission of a jet of the liquid, and  
means for interrupting the flow, for selectively interrupting the passage  
of the liquid,

10 wherein the device further comprises at least two radial connecting  
ducts, which connect the dispensing duct to the supply duct, the at least  
two radial connecting ducts laying on the same plane of the dispensing  
duct, so as to be capable of supporting the rim of the glass when it is  
turned upside down, so that the at least one hole of the dispensing duct  
can emit a jet of liquid on the outer surface portion of the glass, and

15 wherein the means for interrupting the flow selectively interrupt the  
passage of the liquid through the supply duct or through the dispensing  
duct.

2. The device according to claim 1,  
20 wherein the supply duct comprises a support, having an internal cavity  
for the passage of the liquid, and  
wherein it comprises connecting means to mutually connect the  
internal cavity and the at least one hole.

3. The device according to claim 1 or 2, wherein the at least one hole  
25 is configured so as to emit a liquid jet according to a predetermined  
trajectory, which forms an angle with a predetermined radius comprised  
between 0 and 90 degrees.

4. The device according to anyone of claims 1 to 3, wherein the  
dispensing duct is a ring with a substantially circular shape.

5. The device according to claim 2 , wherein the connecting means comprise a circumferential inner cavity obtained in the dispensing duct, so as to form a toroid.

5 6. The device according to anyone of claims 1 to 5, wherein the dispensing duct has a plurality of holes.

7. The device according to anyone of claims 1 to 6, wherein it comprises at least one nozzle manually adjustable on each of the holes, to direct the respective jet of liquid.

10 8. The device according to anyone of claims 1 to 7, wherein the dispensing duct is arranged substantially perpendicular with respect to the supply duct.

15 9. The device according to anyone of claims 1 to 8, wherein it comprises a further delivery hole to deliver a jet of the liquid according to a predetermined direction passing within the dispensing element, the delivery hole being in communication with the supply duct and being arranged substantially on the plane where the radial connecting ducts and the dispensing duct lie.

20 10. The device according to claim 9, wherein the predetermined direction is an axial direction with respect to the dispensing duct.

20 11. The device according to anyone of claims 1 to 10, wherein the means for interrupting the flow are configured to allow the passage of a liquid through the supply duct when a pressure equal to, or greater than a given threshold pressure value is exerted on the dispensing element.

25 12. The device according to claim 2, wherein the means for interrupting the flow comprise a shutter, arranged in the internal cavity of the support, and a spring, arranged between the shutter and the support.

30 13. The device according to claim 12, wherein the connecting means comprise a supply duct incorporated in the shutter and communicating with the dispensing member and with the internal cavity of the support when the flow interruption means are configured so as to allow the passage of a liquid through the internal cavity.

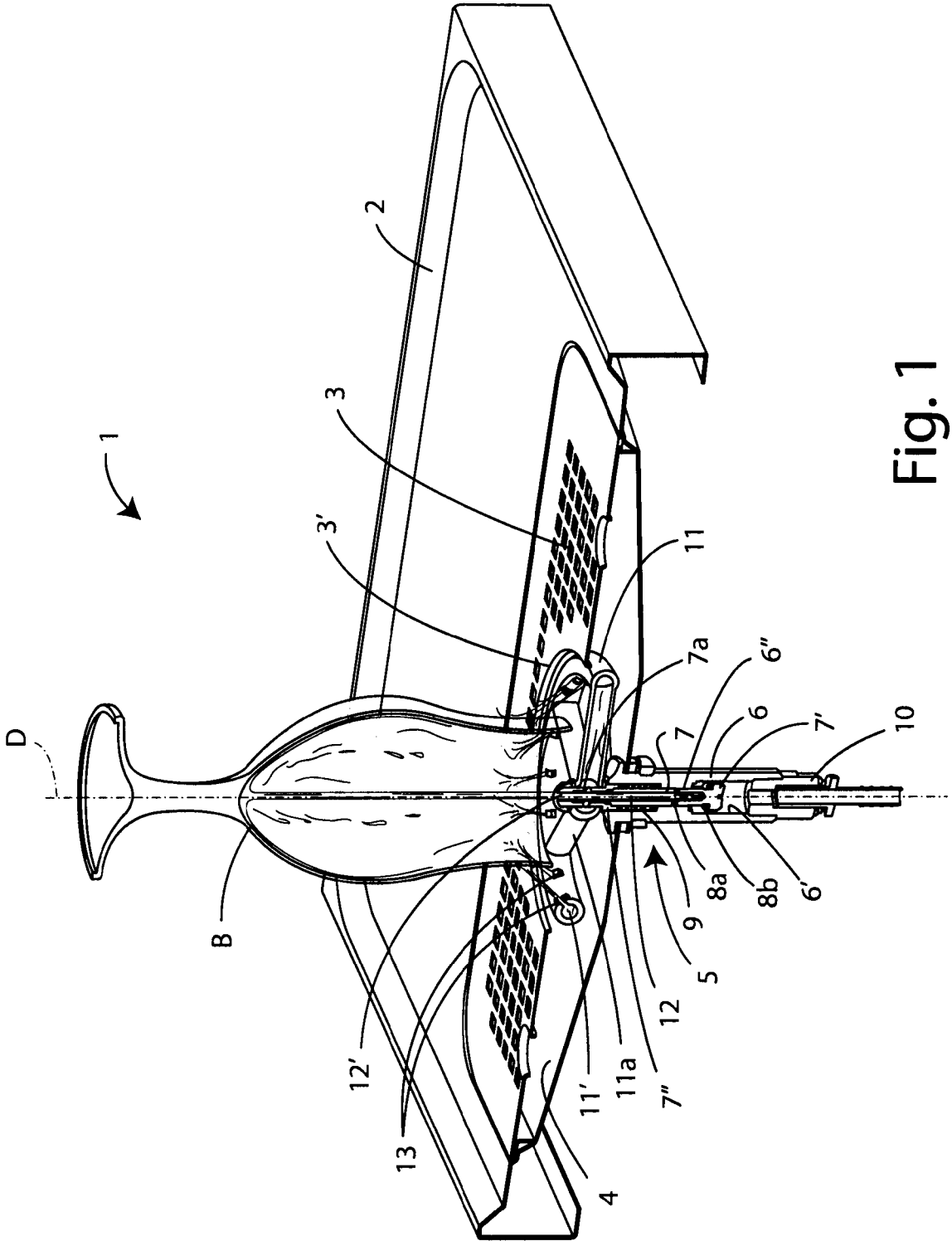


Fig. 1

