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(19) **HU****MAGYARORSZÁG**
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(72) Feltaláló(k): SCHMED, Arthur, CH-8832 Wollerau (CH) BALKAU, Werner, CH-8762 Schwändi bei Schwanden (CH)	(74) Képviselő: Erdély Péter, DANUBIA Szabadalmi és Jogi Iroda Kft., Budapest

(54) **Betét alkalmazása vizeldék lefolyó nyílásába történő behelyezésre, valamint vizelde ilyen betéttel**

Az európai szabadalom ellen, megadásának az Európai Szabadalmi Közlönyben való meghirdetésétől számított kilenc hónapon belül, felszólalást lehet benyújtani az Európai Szabadalmi Hivatalnál. (Európai Szabadalmi Egyezmény 99. cikk(1))

A fordítást a szabadalmas az 1995. évi XXXIII. törvény 84/H. §-a szerint nyújtotta be. A fordítás tartalmi helyességét a Szellemi Tulajdon Nemzeti Hivatala nem vizsgálta.

USE OF AN INSERT FOR THE DRAINAGE OPENING OF A URINAL AND URINAL WITH SUCH AN INSERT

Description

The invention relates to the use of an insert according to the generic term of claim 1 as well as to a urinal in combination with an insert which is inserted into the drainage opening.

Such an insertion component that is configured as an odor seal is known from DE 10 2009 008 574 A1, for example. The odor seal is provided with an inflow surface, which has at least one drain opening that is covered by a superimposed cover hood. It has a sealing device which, in a default position, closes the flow connection between a drain and a drain opening, and which opens when a certain amount of urine runs into the drain. The sealing device has at least two chamber parts which restrict the volume of a chamber, wherein the first chamber part is a membrane part that lifts away from the second chamber part when a prescribed amount of liquid collects in the chamber, clearing the flow connection to the drain opening.

Another odor seal for a dry urinal is known from CH 694 274 A5, for example. This odor seal comprises a basin, which has an opening in the upper area in the middle of a ring-shaped inflow surface, with the opening being closed by a closure flap. The closure flap is pressed through a shaft from the bottom against the edge of the ring-shaped inflow surface. This closed state is maintained by a magnet located at the bottom end of the shaft and another magnet that is inserted into the base of the basin, as the two magnets have the same polarity and repel each other. When a sufficient amount of urine and/or rinse water collects at the closure flap, it is pressed downward, so that the liquid can be drained.

Another kind of an insert for a urinal that is configured as an odor seal is known from EP 1 076 739 B1. In this odor seal, a floating body is inserted instead of closure flap, with the floating body floating up through the liquid level in the insert and coming to rest in the opening of the ring-shaped inflow surface.

Such inserts that are configured as odor seals are used in dry urinals and serve for closing off the drain into the wastewater pipe system in such a manner that any odor leaks from the wastewater pipes are avoided. Moreover, such odor seals are meant to ensure that the urine is drained completely into the drain, so that no residues remain in the area of the odor seal. There is no water flushing as in traditional urinals, whereby fresh water is saved. In addition, disinfectant cubes that dissolve when exposed to urine and thus unfold a cleaning and disinfecting effect can be placed on the inflow surface of the odor seal.

From EP 1 382 758 A2, a dry urinal with a mechanical odor seal and a bowl without a flushing rim is known. In this dry urinal, a diaphragm valve closes the drain in a liquid-tight or gas-tight manner in a first position. The diaphragm valve can be transferred into a second position, in which the urine can be drained through the diaphragm valve. In order to facilitate the cleaning of the urinal that is operated as a dry urinal, the urinal as well as the downstream pipe systems is flushed in preset time intervals by means of an externally controlled flushing system. For this purpose, the bowl is provided with a special rinse water distributor, which distributes the rinse water inside the bowl which has no flushing rim in a targeted manner. It is explicitly stressed here that this urinal is not to be provided with a flushing rim. This is particularly in order to achieve a variable distance between inflow and drain of the rinse water connection.

Other inserts or urinals are known from WO 2013/091862 A1 or GB 2355185 A. The odor seal that is known from the first aforementioned publication has a cover hood that covers a disinfectant cube. An application of liquid through the openings in the cover hood is not disclosed. The openings that are disclosed in the second aforementioned publication are airing holes which are provided to air the space under the cover hood. Also in this publication, no reference is made to the application of a liquid through the openings.

The present invention is based on the objective to indicate a possibility of cleaning, in particular of intermediate cleaning, as well as of disinfecting a urinal, in particular a dry urinal.

The objective is solved by means of the features of claim 1.

The use according to the invention has the advantage that a simple and reliable option for applying a cleaning or disinfecting liquid on the surface of a bowl of a urinal, in the drainage opening of which the insert according to the invention is inserted, is created. In particular, the insert according to the invention can be advantageously configured in such a manner that already existing urinals, in particular dry urinals, can be retrofitted so as to facilitate a – preferably electronically controlled – application of a cleaning and/or disinfectant liquid onto the surface of a bowl.

In addition, the use according to the invention has the advantage that, apart from the drainage opening, the urinal does not have to have other openings in the surface of a bowl through which the cleaning and/or disinfectant liquid can be introduced. In particular, it can be dispensed with flush or spray heads and a flushing rim that are arranged on the surface of a bowl. In particular, this has the advantage that the surface of a bowl can be closed and accordingly can be free of openings or edges in which dirt may collect. What is more, such a bowl surface can be cleaned by the cleaning personnel in a particularly easy fashion, as the surface of the bowl can be easily wiped, without having to wipe around additional flush or spray heads.

The use according to the invention has the particular advantage that the time intervals between the cleaning procedures that have to be performed by the cleaning personnel can be considerably increased, as intermediate cleaning can be performed in a time-controlled manner and/or after a respective number of uses by means of the insert according to the invention, preferably in an automatically controlled manner.

In an advantageous embodiment, the insert is configured as an inlet through which urine can be drained off. Alternatively, it can also be provided that the insert has one inlet through which urine can be drained off.

In a particularly advantageous embodiment, the insert has an odor seal or is part of an odor seal. It can be provided in a particularly advantageous manner that the insert has an odor seal or is configured as part of an odor seal, through which [urine] that is introduced into the bowl is completely drained off in such a manner that the urinal into which the insert is inserted can be operated as a dry urinal.

The above-mentioned embodiments, in which the insert has multiple functions, can be advantageously configured in such a way as to be particularly compact. In particular, no additional installation space is necessary in these embodiments in order to be able to realize the function of cleaning and/or disinfectant liquid application.

In a particularly advantageous embodiment, the outlet opening is configured as a nozzle. In particular, it can be advantageously provided that the outlet opening is configured as a ring nozzle.

In an especially advantageous embodiment, which is particularly well-suited for being adapted to the respective shape and/or dimensions of the surface of a bowl of a urinal, the size and/or the shape of the outlet opening can

be adjusted. Alternatively or additionally it can also be advantageously provided that the angular position of the outlet opening is adjustable with respect to a urinal into which the insert is inserted.

In regards to the adjustability to the respective shape and/or size of the surface of a bowl of a urinal it can also be advantageously provided that different spray shapes, in particular different spray cones or different spray discs, can be adjusted. In particular it can be provided – alternatively or additionally – that an asymmetrical spray shape can be adjusted. Especially the last-mentioned embodiment takes into account that the surface of a bowl of a urinal is usually configured so as to be asymmetrical.

It can also be provided in an advantageous manner that the outlet opening is and/or can be connected directly or indirectly to a reservoir for liquid or at least a component of the liquid.

In an advantageous embodiment, the insert comprises a hood. In particular it can be provided that the insert has a hood which at least partially surrounds a compartment for a disinfectant cube. The hood can advantageously be provided with passage openings through which urine may pass to the disinfectant cube.

In a particularly advantageous embodiment, the outlet opening is configured and arranged in such a manner that the cleaning and/or disinfectant liquid that is applied through the outlet opening is applied by being directed past the disinfectant cube. In this manner, it is advantageously achieved that the disinfectant cube is only worn off if the urinal is actually used, and not when the intermediate cleaning is performed.

In a particularly advantageous embodiment, one segment of the hood is arranged in a moveable and/or rotatable manner. In particular it can be advantageously provided that in one area a segment of the hood has first passage openings of a first size and/or a first number, and in a second area which is different from the first area has second passage openings of a second size that is different from the first size and/or of a second number that is different from the first number, and that the segment of the hood can be arranged so as to be moveable and/or rotatable in such a manner that one of the areas can be aligned towards the user, as needed. Such an embodiment has the advantage that the rate at which the disinfectant cube that is arranged under the hood is used up can be adjusted. This is due to the fact that, through the orientation and/or rotational position, the amount of urine that reaches the disinfectant cube through the hood can be adjusted.

Of course it can be provided that, apart from the first area and the second area, one or several other areas having different passage openings are present in the segment.

What is particularly advantageous is a urinal, in particular a dry urinal, which has a draining opening in which an insert according to the invention is inserted, wherein a reservoir for a liquid, in particular for cleaning and/or disinfectant liquid, is provided in the urinal, wherein the liquid can be applied through the outlet opening, and wherein the insert is directly or indirectly connected to the reservoir for a liquid, in particular cleaning and/or disinfectant liquid.

In a particularly advantageous embodiment it is provided that a connection of the outlet opening to a reservoir, which is arranged inside the urinal itself, is effected in an automatic manner. Here, it can be advantageously provided that the urinal and the insert both comprise respective connection elements which mesh automatically, and in particular in a forcibly actuated manner, during the insertion of the insert into the drainage opening of the urinal.

In an advantageous urinal, the outlet opening is configured and arranged in such a manner that the liquid that is released from the outlet opening wets virtually the entire surface of a bowl of the urinal. As has already been mentioned, this can be realized for example through the adjustment of the size and/or the shape of the outlet

opening and/or the angular orientation of the outlet opening and/or the spray shape to the geometry and size of the urinal.

In a particularly advantageous embodiment, a replaceable reservoir for the liquid or for a component of the liquid is provided. The reservoir can in particular be advantageously configured as a disposable container. Such an embodiment has the particular advantage that there is no need for the user to refill the reservoir in an inconvenient manner, but instead the user only has to insert a new reservoir when the previous reservoir is empty.

In a special embodiment, in which the reservoir is particularly easy to insert, the reservoir has a sealing membrane that is configured and arranged so as to be punctured by at least a suction tube as the reservoir is being inserted. This embodiment has the particular advantage that the user can insert the reservoir directly without having to open a seal before that. In addition, such an embodiment has the advantage that the sealing membrane is punctured just immediately before reaching the connection position, by which it is ensured that no cleaning and/or disinfectant liquid is spilled prematurely.

In a particularly advantageous embodiment, a bayonet catch or a clip fastener are provided to temporarily secure a reservoir in a connection position.

In an advantageous embodiment, the reservoir is configured as a disposable container and is equipped with a fastening element for the temporary securing in a connection position. The fastening element is configured in such a manner that it is automatically mechanically destroyed as the reservoir is removed. This embodiment has the particular advantage that a reattachment of a container which has already been removed is avoided in an effective manner. In particular it is avoided in this way that a reservoir that has already been inserted and emptied is filled with unsuitable and/or inadmissible liquids, and that these unsuitable and/or inadmissible liquids are applied to the urinal instead of the actually provided liquid.

This aspect is particularly important as it has to be always made sure that the urinal meets mandatory hygiene requirements and that no liquids are used that can damage the urinal or can be harmful to health.

In order to facilitate the insertion of a reservoir into the urinal, a guide – preferably a conical one – can be advantageously provided. Such an embodiment has the particular advantage that the user can insert the reservoir without being able to see the connection position. For example, it becomes possible in this way to insert the reservoir into the urinal from below, without having to lie down on the floor.

In a particularly advantageous embodiment a filling level display is provided, displaying information about the filling level of the cleaning and/or disinfectant liquid in the reservoir. In particular, a filling level display can be provided that emits light of different colors depending on the filling level of the cleaning and/or disinfectant liquid. One or multiple light sources can be provided for the emission of the light. In particular, it is expedient to use light-emitting diodes of one or multiple colors.

In a special embodiment, a light-emitting diode is used which can light up in three colors, namely for example red, yellow and green. As long as the reservoir is at least half-full, the light source lights up in green. When the reservoir reaches a filling level between a quarter and half of the maximal filling level, the light source lights up in yellow. As soon as the reservoir has a filling level that is less than a quarter of the maximal filling level, the light source lights up in red. Of course it is also possible to use only two colors or more than three colors, depending on how detailed the indication of the filling level is supposed to be.

In a particularly advantageous embodiment, the filling level display has at least one optical waveguide, in particular an optical fiber. This embodiment has the particular advantage that the light source, including its electrical connections, can be arranged outside of the area where it is exposed to the danger of coming into contact with cleaning and/or disinfectant liquid or urine. Instead, in this embodiment, the light [emitted] by the light source or the light sources is transported by means of an optical waveguide into an area in which the user can perceive the light. This area may even be an inlet opening for urine or for the cleaning and/or disinfectant liquid, as in contrast to an electrical arrangement an arrangement with an optical waveguide is liquid-resistant. In particular, the occurrence of short circuits is excluded.

In a special embodiment, an inlet connection, in particular a fresh water connection, for water is provided. This embodiment has the particular advantage that a concentrate can for example be used in the reservoir, from which concentrate the liquid that is to be applied can be mixed by the addition of water.

In an advantageous urinal a mixing device is provided which mixes at least two components for creating the liquid. In particular a mixing device can be provided, which mixes at least two components for the creation of the liquid, wherein the component is a disinfecting or cleaning component and wherein another component is water.

In an advantageous urinal, at least one pump, in particular a metering pump, is provided for conveying and/or metering the liquid or a component of the liquid. The pump can for example be configured in an advantageous manner as an electric oscillating piston pump. Such an oscillating piston pump has the particular advantage that it is low-cost, has a very long service life and allows for particularly exact metering.

In an advantageous embodiment of the urinal according to the invention, an electronic unit is provided which controls a mixing ratio of the liquid and/or that controls a mixing of the components of the liquid and/or which controls the amount of liquid to be applied to the surface of a bowl.

In an advantageous embodiment of the urinal according to the invention, a time or interval control -- preferably an automated one -- for the application of the liquid is provided. In particular, a detection device can be provided which detects the number of uses of the urinal, so that the application of the liquid to the surface of a bowl -- which is preferably automatically controlled -- can be respectively triggered after a prescribed and/or prescribable number of uses, for example through an electronic control.

This embodiment has the particular advantage that the application occurs only when it is necessary. In particular cleaning and/or disinfecting agent can be economized in this manner.

In an advantageous embodiment, the application of the liquid to the surface of a bowl is triggered automatically. For example, it can in particular be provided that the application is controlled based on the time of day or based on the date. Such an embodiment has the advantage that a more frequent application can take place in times when the urinal is used more often, while in times when the urinal is expected to be used less often, the application occurs less frequently.

If the liquid which is present in the reservoir contains partial components that show the tendency to separate or to clump, a device for stirring or for recirculation by means of pumping the liquid can be provided in an advantageous manner. Such a recirculation by means of pumping can for example be carried out in such a manner that the liquid is extracted from the reservoir and is supplied to a pump which pumps the extracted liquid back into the reservoir.

In an advantageous embodiment, the urinal has a base body which has a cavity for at least one functional component and/or for at least one reservoir and/or for an electronic control unit and/or for at least one pump, wherein the base body preferably also comprises the bowl. Such an embodiment has the particular advantage that the urinal can be configured so as to be very compact while at the same time also being very robust. A particular advantage here is the fact that the cavity especially protects the components that are contained inside it from any external influences. In particular, the components that are arranged inside the cavity are very effectively protected from any manipulation. What is more, such a urinal can be easily cleaned without any danger of damaging individual components in the course of the cleaning procedure. Preferably the electronic components are arranged in such a manner that they are protected from splashing water, as it may happen that the cleaning personnel uses high-pressure cleaners for cleaning.

Further goals, advantages, features and application possibilities of the present invention follow from the description of an exemplary embodiment given hereafter by referring to the drawing.

Herein:

Fig. 1 shows a urinal comprising an insert according to the invention.

Fig. 2 shows a detailed view of an insert according to the invention which is inserted into a urinal.

Fig. 1 shows a urinal 1 with a drainage opening 2, into which an insert 3 is inserted. The insert 3 has an outlet opening 4 that is configured as a nozzle and through which a liquid 5 can be applied, namely by being sprayed on, onto a surface 6 of a bowl of the urinal 1. The insert 3 is configured as an inlet through which urine can be drained off. Further, the insert 3 is also configured as an odor seal through which urine that is introduced into the bowl 22 is drained off completely in such a manner that the urinal 1 can be operated as a dry urinal.

The outlet opening 4 is configured and arranged in such a manner that the liquid 5 that is released from the outlet opening 4 wets virtually the entire surface 6 of a bowl of the urinal 1.

The urinal 1 has a reservoir 7 for a concentrate 13. In order to mix the concentrate 13, in particular before an application procedure, it is provided that it is stirred. Here, the concentrate 13 is extracted from the reservoir 7 by means of a pump 8 and is resupplied into the reservoir via a return duct 10, with this process being controlled by a two/three-way valve 9. Through this circular recirculation by means of pumping, the concentrate 13 is mixed. The urinal 1 has a fresh water connection 24. The inflow of fresh water is controlled through a two/two-way valve 11. By means of a mixing device 12 that receives fresh water and -- when the two/three-way valve 9 is adjusted accordingly -- also concentrate 13 from the reservoir 7, the liquid 5 that is to be applied is mixed and subsequently supplied to the outlet opening 4.

The urinal 1 comprises a filling level display 14 with a light source 15 and a flexible optical waveguide 16. The light source 15 generates light, the color of which depends on the filling level of the reservoir 7. The generated light is transported by means of the flexible optical waveguide 16 to the insert 3. There, the user can see whether the reservoir is still filled to a sufficient degree. A display arranged directly at the insert is particularly advantageous, since it is especially sure to be perceived.

Figure 2 shows an insert 3 according to the invention that is configured as an inlet and as an odor seal. The insert comprises an inner-tube valve 23 for the purpose of providing a gas-tight closure. In addition, a seal is provided between the insert 3 and the bowl of the urinal.

In addition, the insert comprises a screen 17 on which a disinfectant cube 18 can be positioned. Above the disinfectant cube 18, a hood 19 is positioned which partially covers the disinfectant cube. Inside the hood 19, a

segment that is rotatable about a symmetry axis of the insert and that has passage openings through which urine can pass to the disinfectant cube. The segment 19 has different areas that have passage openings of respectively different sizes. By rotating the segment, one area can respectively be oriented towards the user. This embodiment has the particular advantage that the rate at which the disinfectant cube wears off can be controlled by way of aligning the openings through which a large amount of urine can reach the disinfectant cube towards the user.

At the tip of the hood 19, an outlet opening 4 is arranged that is configured as a ring nozzle for the purpose of applying a liquid, in particular a cleaning and/or a disinfectant liquid, onto a surface of a bowl of a urinal, in the drainage opening of which the insert 3 is inserted. The outlet opening 20 receives the liquid to be released via a tube 21.

Parts list

- | | |
|----|---------------------------|
| 1 | urinal |
| 2 | drainage opening / insert |
| 3 | insert |
| 4 | outlet opening |
| 5 | liquid |
| 6 | surface of bowl |
| 7 | reservoir |
| 8 | pump |
| 9 | two/three-way valve |
| 10 | return duct |
| 11 | two/two-way valve |
| 12 | mixing device |
| 13 | concentrate |
| 14 | filling level display |
| 15 | light source |
| 16 | optical waveguide |
| 17 | screen |
| 18 | disinfectant cube |
| 19 | hood |
| 20 | outlet opening |
| 21 | tube |
| 22 | bowl |
| 23 | inner-tube valve |
| 24 | fresh water connection |

Betét alkalmazása vízeldek lefolyó nyílásába történő behelyezésre, valamint vízelde ilyen betéttel

SZABADALMI IGÉNYPONTOK

1. Betét (3) alkalmazása vízeldek (1) lefolyó nyílásába (2) történő behelyezésre, ahol a betét (3) legalább egy kivezető nyílással (4) van ellátva folyadék (5) kibocsátásához a vízelde (1) csészefelületére (6), ahol a betét (3) a lefolyó nyílásba (2) van behelyezve, **azzal jellemezve, hogy a folyadék (5) a kivezető nyílásból (4) a vízelde (1) csészefelületére (6) van kiszórva vagy kipermetezve.**
2. Az 1. igénypont szerinti betét (3) alkalmazása, **azzal jellemezve, hogy a betét (3) el van látva egy bűzelzáróval, vagy annak egy részét alkotja.**
3. Az 1. vagy 2. igénypont szerinti betét (3) alkalmazása, **azzal jellemezve, hogy a kivezető nyílás (4) fűvókaként vagy körfűvókaként van kialakítva.**
4. Az 1 – 3. igénypontok bármelyike szerinti betét (3) alkalmazása, **azzal jellemezve, hogy a kivezető nyílás (4) alakja, vagy nagysága, vagy szögállása állítható.**
5. Az 1 – 4. igénypontok bármelyike szerinti betét (3) alkalmazása, **azzal jellemezve, hogy a kivezető nyílás (4) csatlakoztatható a folyadék (5) tartály (7) vagy a folyadék (5) legalább egy komponensét befogadó tartály (7) csatlakozóeleméhez.**
6. Az 1 – 5. igénypontok bármelyike szerinti betét (3) alkalmazása, **azzal jellemezve, hogy rendelkezik egy burával (19), ami legalább részben körülvesz egy, egy tisztítótablettát (18) tartalmazó teret.**
7. A 6. igénypont szerinti betét (3) alkalmazása, **azzal jellemezve, hogy a kivezető nyílás (4) a búra (19) hegységében van elhelyezve.**
8. A 6. vagy 7. igénypont szerinti betét (3) alkalmazása, **azzal jellemezve, hogy a búra (19) egy szegmense eltolható vagy elforgatható.**
9. Az előző igénypontok bármelyike szerinti betét (3) alkalmazása, **azzal jellemezve, hogy a kivezető nyílás (4) úgy van kialakítva és elrendezve, hogy a kilépő folyadék (5) a vízelde (1) teljes csészefelületét (6) érintse.**
10. Vízelde (1), elsősorban szárazüzemű vízelde (1), lefolyó nyílással (2) és abba behelyezhető betéttel (3), **azzal jellemezve, hogy a betét (3) legalább egy kivezető nyílással (4) van ellátva folyadék (5) kibocsátásához a vízelde (1) csészefelületére (6), ahol a betét (3) közvetlenül vagy közvetve van bekötve egy folyadék tartályba (7), és a folyadék a kivezető nyílásból (4) kiszórható vagy kipermetezhető.**
11. A 10. igénypont szerinti vízelde (1), **azzal jellemezve, hogy a kivezető nyílás (4) úgy van kialakítva és elrendezve, hogy a kilépő folyadék (5) a vízelde (1) teljes csészefelületét (6) érintse.**
12. A 10. vagy 11. igénypont szerinti vízelde (1), **azzal jellemezve, hogy a folyadékot (5) vagy a folyadék (5) legalább egy komponensét befogadó legalább egy tartály (7) cserélhetően van a vízeldeben (1) elhelyezve.**
13. A 10 – 12. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy a tartály (7) együtű tartály.**

14. A 10. vagy 13. igénypontok egyike szerinti vízelde (1), **azzal jellemezve, hogy a tartály (7) tartalmaz egy zárómembránt, ami úgy van kialakítva, hogy a tartály (7) behelyezésekor legalább egy szívócső átszűrje.**
15. A 10 – 12. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy egy bajonettzárral vagy egy kapesos rögzítéssel van ellátva egy tartály (7) csatlakozási helyzetben történő átmeneti rögzítésére.**
16. A 10 – 15. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy a tartály (7) együtű tartály, és el van látva egy rögzítőelemmel egy csatlakozási helyzetben történő átmeneti rögzítésre, ahol a rögzítőelem úgy van kialakítva, hogy a tartály (7) eltávolításakor automatikusan mechanikusan összetörik.**
17. A 10 – 16. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy töltési állapot jelzőt (14), ami információt szolgáltat, célszerűen különböző színes fények formájában, a tartályban (7) lévő tisztító vagy fertőtlenítő folyadék mennyiségéről.**
18. A 10. vagy 11. igénypont szerinti vízelde (1), **azzal jellemezve, hogy a töltési állapot jelző (14) legalább egy fényvezetőt (16), előnyösen egy fényvezető szálal tartalmaz.**
19. A 10 – 18. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy csatlakozót, célszerűen tisztavíz csatlakozót.**
20. A 10 – 19. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy keverőszerkezetet (12), ami a folyadék (5) előkészítéséhez legalább két komponenset kever össze, ahol az egyik komponens tisztító vagy fertőtlenítő komponens, a másik komponens pedig víz.**
21. A 10 – 20. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy szivattyút (8), előnyösen egy adagoló szivattyút vagy egy elektromos lengődugattyús szivattyút, a folyadék (5) vagy a folyadék (5) egy komponensének szállítására vagy adagolására.**
22. A 10 – 21. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy elektronikát, ami vezérli a folyadék (5) komponenseinek összekeverését vagy a csészefelületre (6) kiszórandó folyadék (5) mennyiségét.**
23. A 10 – 22. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy, célszerűen automatikus idő- vagy intervallum szabályzót a folyadék (5) kiszórásához.**
24. A 10 – 23. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy szenzorral ellátott érzékelő egységet, például mozgásérzékelőt, ami a vízelde (1) használat számát érzékeli, és egy vezérlő egy megadott vagy megadható használati szám elérése után beindítja a folyadék (5) kiszórását a csészefelületre (6).**
25. A 10 – 24. igénypontok bármelyike szerinti vízelde (1), **azzal jellemezve, hogy tartalmaz egy alaptestet, ami egy olyan üreggel van ellátva, amiben egy szivattyú (8), vagy egy tartály (7), vagy egy vezérlő elektronika elfér, és tartalmazza a csészét (6) is.**
26. Az 1 – 9. igénypontok bármelyike szerinti betét (3) vagy a 10 – 25. igénypontok bármelyike szerinti vízelde (1) alkalmazása, **azzal jellemezve, hogy a folyadék tisztító vagy fertőtlenítő folyadék.**

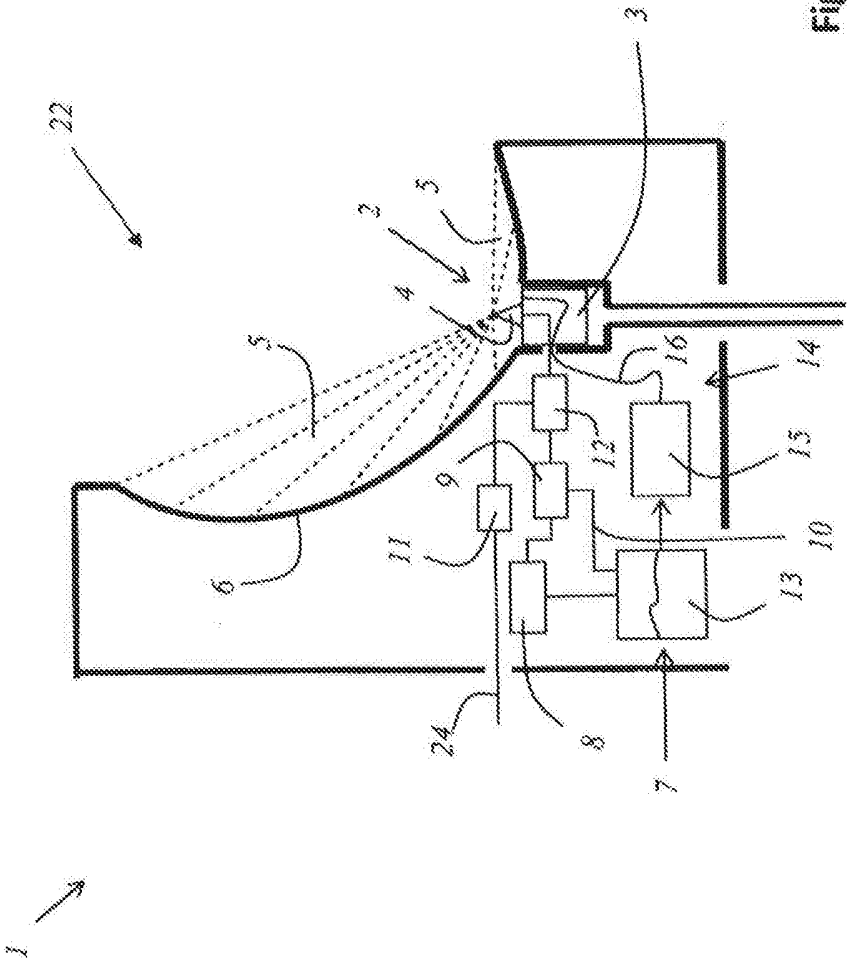


Fig. 1

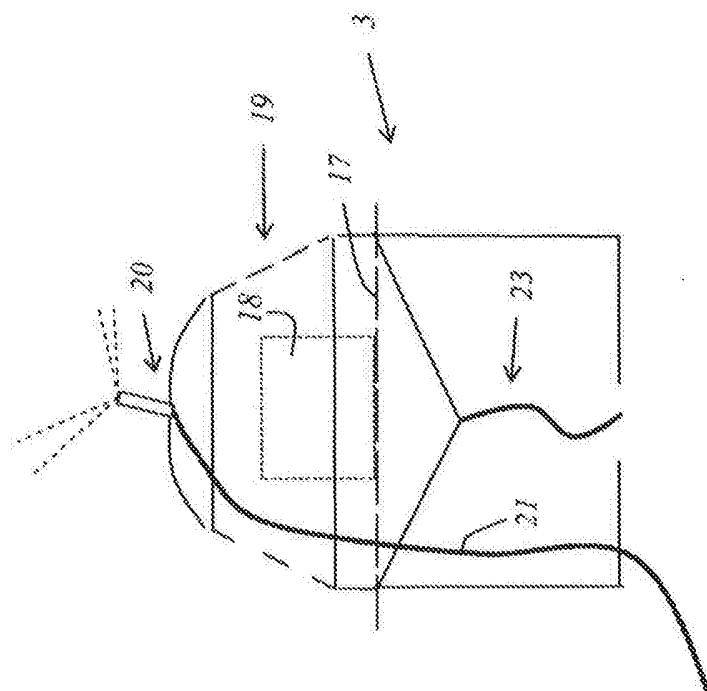


Fig. 2