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METHOD AND APPARATUS FOR CLEANING THE MOUTH CONTACT AREA OF DRINKING GLASSES

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Fig. 1

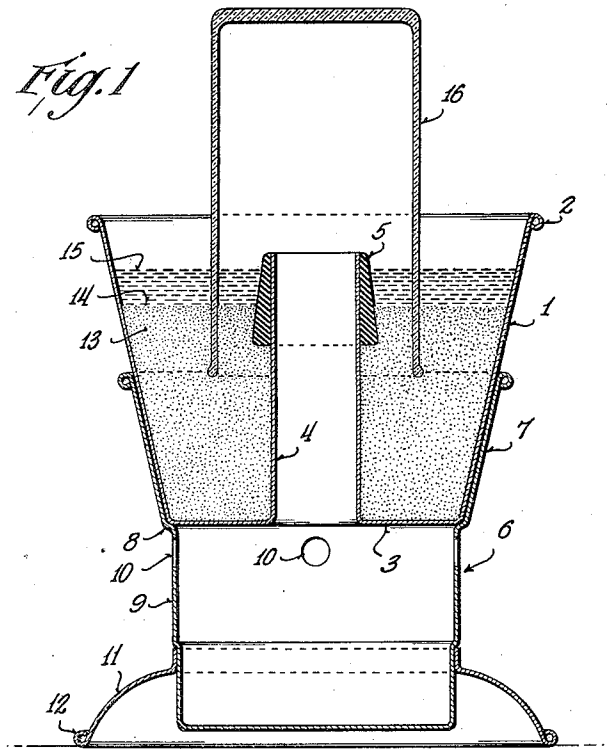


Fig. 3

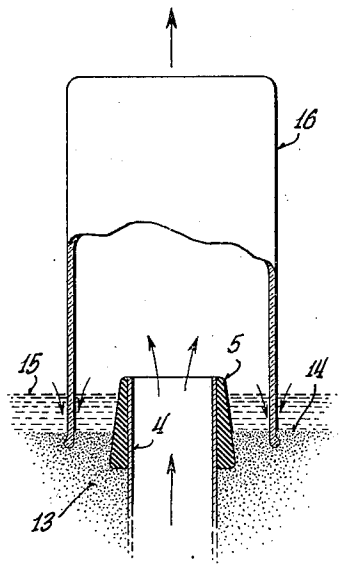
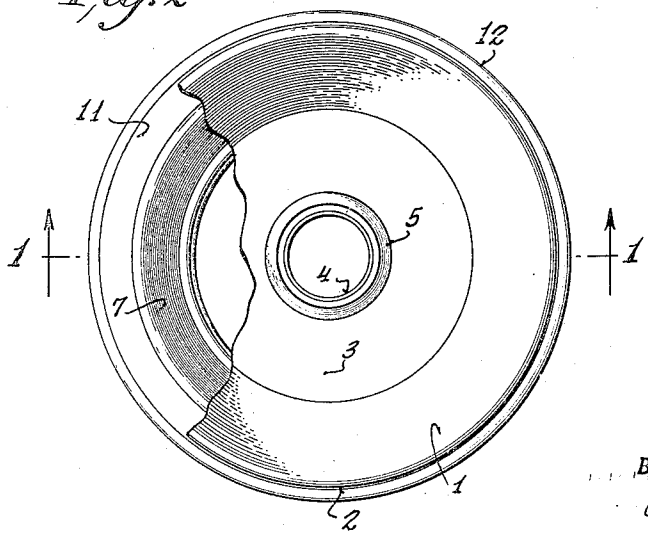


Fig. 2



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METHOD AND APPARATUS FOR CLEANING THE MOUTH CONTACT AREA OF DRINKING GLASSES

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7 Claims. (Cl. 51—182)

This invention relates to a method and apparatus for cleaning the mouth contact area of drinking glasses such as those used in dispensing liquid refreshments.

It has been found that the usual methods of cleaning drinking glasses which are used in dispensing beverages such as beer, carbonated and other liquids, are not effective in the removal of the contamination such as grease, or rouge that remains after use at the mouth contact area. The mouth contact area of the drinking glass is defined as that portion of the drinking glass both inside and outside adjacent to the rim of the glass which may be directly or indirectly contaminated by the lips of the user. When this contamination is not removed, a very unsanitary condition results. In addition to this, it has been found that the formation of a finely frothed, creamy "collar" or "top" on the beverage is prevented when there is any lip grease, natural oil, or rouge or soap fats at the mouth contact area. When this contamination is present, at the mouth contact area, both an unpalatable, unattractive drink and an unsanitary, disease spreading condition results.

Various attempts have been made to overcome this difficulty. Frequently three separate rinses are employed in sequences including what is called a "refuse rinse," a "clear water rinse," and a "chemical rinse," but even with these three successive rinses the greasy contaminated zone at the mouth contact area remains. The above method can be followed fairly quickly but is not satisfactory. A slower method has been used in which the glasses are washed with soap and hot water, but this time consuming method is seldom followed in places where a large number of patrons have to be quickly served and the glasses used over and over. In addition to this even this last method is not wholly satisfactory for there frequently remains a layer of soap fat which precludes the formation of a creamy "collar" or "top" on a carbonated beverage.

This invention is designed to overcome the above noted defects and object of this invention are to provide a method and an apparatus for the rapid cleaning of the mouth contact area of glasses in such a manner that contamination such as grease, rouge or natural oil at the mouth contact area of drinking glasses is completely removed thus insuring a thoroughly clean and sanitary glass.

Further objects are to provide a method and an apparatus which may be used in the method for quick cleaning of the mouth contact area of drinking glasses, the apparatus being so arranged that it is compact and does not require much room and may be placed, if desired, on any suitable support and may be instantly available so that a large number of glasses used in serving patrons in public places may be quickly and thoroughly cleaned.

In greater detail objects of this invention are to provide a container within which is placed a solid, granular scouring and cleaning agent and a liquid such as water, for instance, which extends to a level above that of the solid, granular scouring and cleaning agent and to provide a vent pipe extending through the bottom of the container for freely venting the air trapped in an inserted glass, and in the preferred form of the invention to provide a lower supporting member for the container such member being equipped with a chamber for collecting any overflow liquid that may pass downwardly through the vent pipe from the upper container and being so arranged as to provide means for freely venting the lower end of the vent pipe.

Further objects are to provide a device which is of simple construction which may be cheaply made and which may be readily used.

An embodiment of the invention is shown in the accompanying drawing in which:

Figure 1 is a vertical sectional view of the device showing the glass in position to be cleaned, such view corresponding to a section on the line 1—1 of Figure 2.

Figure 2 is a plan view of the structure shown in Figure 1 with the glass and the water and cleaning material omitted and with part of the top section broken away.

Figure 3 is a fragmentary view showing the glass being removed from the device.

Referring to the drawing it will be seen that the device consists of a container 1 which may be made of metal and may be of any suitable shape. In the preferred form the shape of the upper member is that of a frustum of a cone arranged in an inverted position. The upper portion is open and is preferably provided with a beaded edge to give a suitable finish. The bottom wall 3 is integral with an upwardly extending tubular member or vent pipe 4 which is open at both ends. The upper portion of the tubular member carries a rubber buffer or a cushioning ring 5. The lower member indicated generally by the reference character 6 is provided with an upper conical portion 7 preferably provided with a lower shoulder portion 8 and adapted to receive the container 1.

The lower portion of the member 6 may be cylindrical as indicated by the reference character 9 and is provided with a plurality of air vent openings 10 which are located adjacent the upper part of the cylindrical portion 9. The cylindrical portion 9 is rigidly secured to a base 11 which may be provided with a beaded lower edge 12. The upper container has a sufficiently snug fit with the lower supporting means or lower portion to prevent the upper container from turning with reference to the lower supporting means when the glass is rotated during the scouring and cleaning operation. The device may be placed on a bar or counter or may be placed on any other suitable supporting surface.

In using the device, the container 1 has a mixture of cleaning and scouring material indicated by the reference character 13 positioned therein to about the line 14. This compound consists of a scouring agent such as sand mixed with an alkaline agent and also with a chlorine carrying agent. A few of the compounds that have been found satisfactory are listed herewith:

	Per cent
Sand	50
Tri sodium phosphate	35
Tetra sodium pyro phosphate	14
Sodium paratoluene-sulfonchloramide	1
Sand	60
Tri sodium phosphate	30
Tetra sodium pyro phosphate	10

The sand is preferably white silicon sand which will pass through approximately 50 to 60 mesh screen and which has the natural irregularity in its surface to provide the necessary function for the scouring action hereinafter to be described but which is not sharp enough to scratch the glass.

After the compound 13 has been positioned within the container 1, such container is filled with water to approximately the level indicated by the reference character 15. The chemicals are only partly dissolved and the water is maintained in a saturated condition. There remains a large part of undissolved chemicals mixed with the sand as shown in Figure 1.

In using the device the glass 16 is inserted into the container 1 over the air vent tube 4. The glass is forced down into the mixture of sand and chemical which will hereinafter be referred to as the solid cleaning and scouring agent and the air trapped within the glass is freely vented through the tube 4 and through the vent holes 10. The downward motion of the glass causes a scrubbing action and this is supplemented by a few quick semi-circular motions imparted to the glass by the operator. The operator thereafter draws the glass upwardly as indicated in Figure 3. It will be seen that the air rushes upwardly through the tube 4 and the water sweeps downwardly both inside and outside the glass and thus sweeps away or washes away any adhering solid particles of the cleaning and scouring agent.

In the cleaning of the glass at a bar, the glass is first rinsed in running water which rinse is usually referred to as a "refuse rinse." Thereafter the glass is cleaned in the manner hereinbefore described by quickly thrusting the glass downwardly through the saturated chemical solution and into the solid cleaning and scouring agent and giving it a few quick half turns and thereafter quickly removing it by an upward motion. After this the glass is dipped and rinsed in what is commonly called a "chemical rinse." Obviously a clear water rinse could precede the "chemical rinse" if desired.

In the processes heretofore used in cleaning beverage glasses there has been no means whereby the oily surface at the mouth contact area could be removed. This oily material is caused by the natural body grease of the lips of the user and frequently caused by means of rouge and other preparations applied to the lips. This mouth contact area is a fertile field for the transmission of diseases due to the inadequacy of the ordinary methods of cleaning beverage glasses. In addition, the grease on the glass prevents the formation of a creamy "collar." However by following the method hereinbefore described it is apparent that the grease and contamination is most readily and most easily scrubbed off and removed by the chemical solution and by the solid scouring agent. The white silicon sand acts powerfully as a scouring agent and its action is supplemented materially by means of the undissolved chemicals mingled with the sand.

It is to be understood that the device may take other forms than the portable form shown. For instance, the lower portion of the device may be formed as a part of the bar fixture if desired and the upper part of the device may be removably carried thereby. The form shown has been found eminently satisfactory, however, as it provides a fixture which may be placed wherever desired and which occupies a small amount of space and is of attractive appearance.

It is to be noted that in using the device if any water should pass down the vent tube 4 it is caught in the lower portion and may be poured back from the lower portion into the upper container.

It will be seen that a very simple type of device and a very simple method have been provided by this invention whereby beverage glasses, water glasses, or any kind of drinking glasses may be thoroughly cleaned, particularly at the mouth contact area and may thus have the grease film or the rouge or other material collecting at the mouth contact area quickly removed so that the glass presents a fresh, clean and sparkling appearance and is in a much more sanitary condition than has heretofore been possible. In addition to this, there is no additional time required in the cleaning of the glasses as the process may be followed with the utmost rapidity.

It is to be noted that the expression "mouth contact area" of glasses is to be interpreted as that area on the inside or outside of the glass which may be contaminated, whether there has been contact solely by the lips of the user or through any other cause; for example, in certain types of sterilizers for water glasses it frequently happens that there is a narrow band of collected scum particularly on the inside of the glass adjacent to the rim of the glass. This area comes within the definition of the mouth contact area hereinbefore discussed.

Although this invention has been described in considerable detail, it is to be understood that such description is intended as illustrative rather than limiting, as the invention may be variously embodied and is to be interpreted as claimed.

I claim:

1. The method of cleaning the mouth contact area of glasses comprising inserting an inverted glass in a liquid and a scouring mixture of solid, granular material, relieving the trapped air in the glass, partially rotating the glass a plurality of times to secure a scouring action with the

scouring mixture below the liquid level, and finally raising the glass directly upwardly and allowing air to rush into the glass so that the downward motion of the liquid relative to the inside and outside surfaces of the glass will wash any remaining adhering granular material from the inner and outer surfaces of the glass.

2. A device for cleaning the mouth contact area of drinking glasses comprising a container having a bottom and an open top and having a vent pipe carried by the bottom and opening through the bottom and open at its top, said container being arranged to hold a solid, granular scouring agent and a liquid, and supporting means removably supporting said container.

3. A device for cleaning the mouth contact area of drinking glasses comprising a container having a bottom and an open top and having a vent pipe carried by the bottom and opening through the bottom and open at its top, said container being arranged to hold a solid, granular scouring agent and a liquid, and supporting means removably supporting said container, said supporting means being arranged to provide free communication of the lower end of the vent pipe with the outside air.

4. A device for cleaning the mouth contact area of drinking glasses comprising an upper container having an open top and a closed bottom and adapted to contain a liquid and a solid, granular scouring agent, a vent pipe opening through the bottom and projecting upwardly in said container and having an open upper end, and a lower member removably holding said upper container and having a collecting chamber for any liquid that may overflow the vent pipe.

5. A device for cleaning the mouth contact area of drinking glasses comprising an upper container having an open top and a closed bottom and adapted to contain a liquid and a solid, granular scouring agent, a vent pipe opening through the bottom and projecting upwardly in said container and having an open upper end, and a lower member removably holding said upper container and having a collecting chamber for any liquid that may overflow the vent pipe, said lower member having means for venting said collecting chamber.

6. A device for cleaning the mouth contact area of drinking glasses comprising a container, a solid, granular scouring agent and a liquid within said container, said liquid extending upwardly to a level above said scouring agent, a vent pipe opening through the bottom of said container and open at its upper end, and supporting means for said container, said supporting means being arranged to provide free venting of the lower end of said vent pipe.

7. A device for cleaning the mouth contact area of drinking glasses comprising a container, a solid, granular scouring agent and a liquid within said container, said liquid extending upwardly to a level above said scouring agent, a vent pipe opening through the bottom of said container and open at its upper end, a cushioning ring surrounding the upper end of said vent pipe, and supporting means for said container, said supporting means being arranged to provide free venting of the lower end of said vent pipe.

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