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APPARATUS FOR HOLDING AND WASHING DRINKING VESSELS.

APPLICATION FILED NOV. 15, 1910.

981,433. **Patented Jan. 10, 1911.**

2 SHEETS—SHEET 1.

FIG. 1

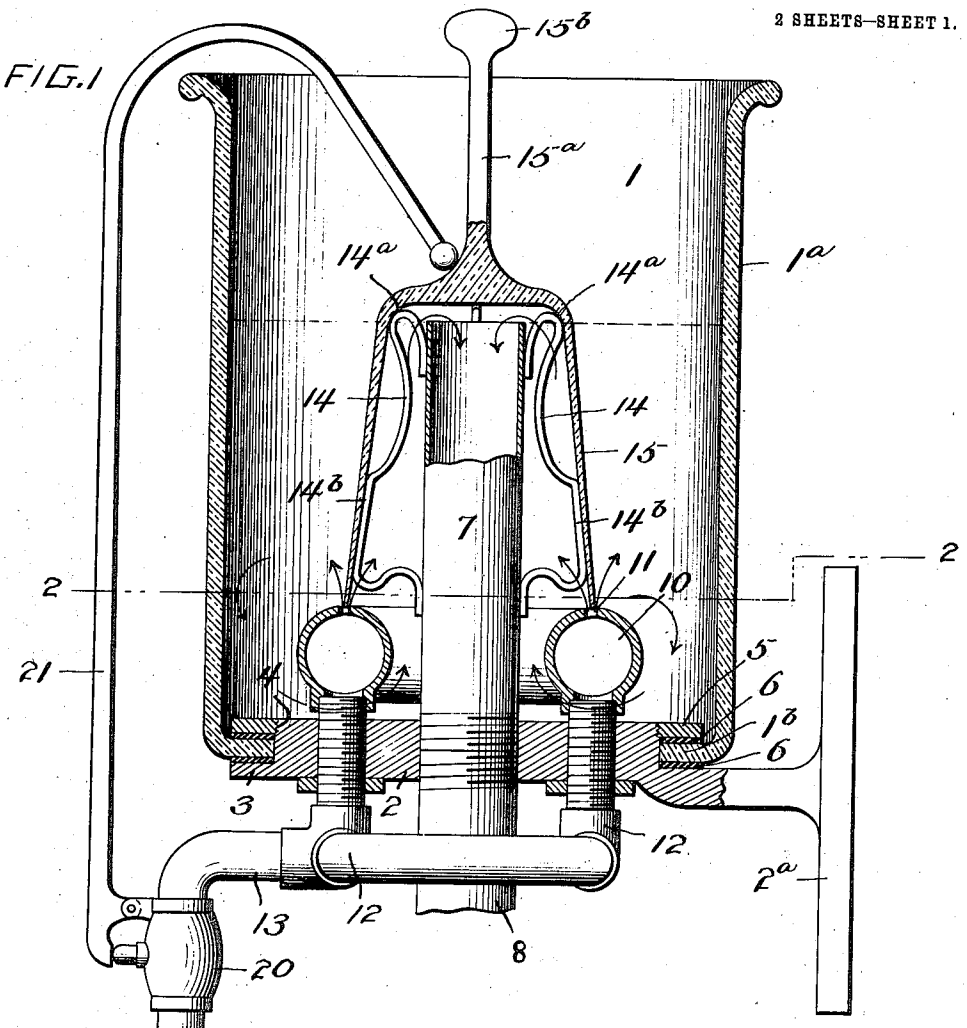


FIG. 3

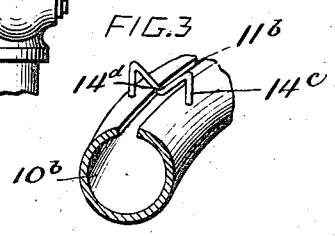
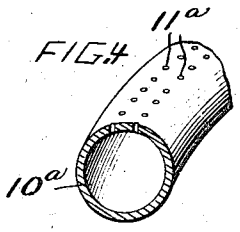


FIG. 4



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2 SHEETS—SHEET 2.

FIG. 2

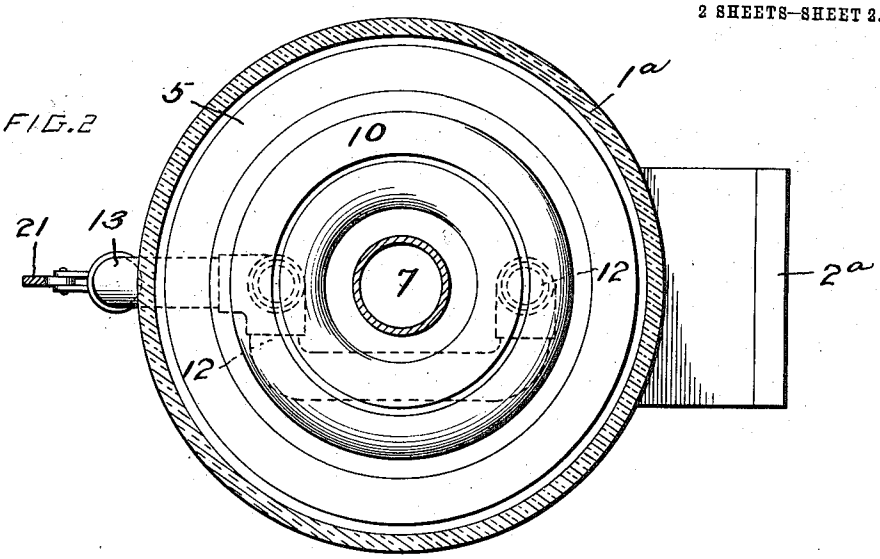


FIG. 5

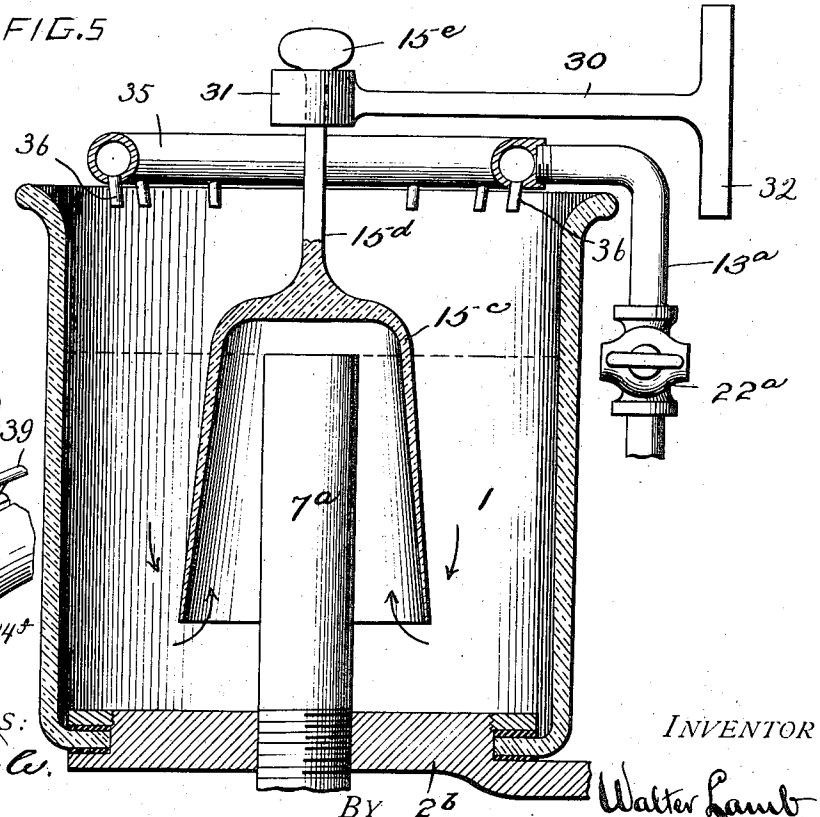
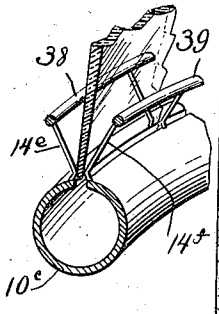


FIG. 6.



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APPARATUS FOR HOLDING AND WASHING DRINKING VESSELS.

981,433. Specification of Letters Patent. Patented Jan. 10, 1911.

Application filed November 15, 1910. Serial No. 592,596.

To all whom it may concern:

Be it known that I, WALTER LAMB, citizen of the United States, residing at Hanover, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Holding and Washing Drinking Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists of the novel features hereinafter described reference being had to the accompanying drawings which show an embodiment of the invention which I have selected for purposes of illustration, and the invention is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 represents a vertical sectional view of the embodiment of my invention which I have selected for purposes of illustration. Fig. 2 is a horizontal sectional view on line 2—2 of Fig. 1. Figs. 3 and 4 are detail views of slightly modified forms of the flushing device shown in Figs. 1 and 2. Fig. 5 is a view similar to Fig. 1 showing a slightly modified embodiment of the invention. Fig. 6 is a detail view of a modified form of device for holding the drinking vessel in proper relation with the flushing device.

The object of my invention is to provide a holder and washing device for a drinking vessel, so constructed and arranged as to provide for the thorough cleansing of a tumbler or other form of drinking vessel, and also for holding it when not in use substantially submerged in the cleansing liquid.

The device is adapted for use in the offices of dentists and physicians, but is particularly desirable for use wherever a number of persons use a common drinking vessel, as in stores, offices, manufacturing establishments, schools, and at public drinking fountains.

In the embodiment of the invention which I have selected for the purposes of illustration, 1 represents a receptacle, in which the drinking vessel is designed to be held submerged in the flushing liquid, which will under ordinary circumstances be water. In the device here shown the receptacle comprises a metal bottom 2, provided with an annular flange portion 3, above which is a threaded shoulder 4 of less diameter than the flange portion, to receive a clamping ring 5, and the body portion of the receptacle consists of a cylindrical wall 1^a preferably of glass having an inwardly extending flange 1^b at the bottom, which is held between the flange 3, and ring 5, suitable packing 6, 6 of rubber, cement or other suitable material being employed to make a tight joint. The use of a transparent wall as 1^a for the receptacle allows an inspection of the device at all times so that it can be kept in a perfectly clean condition, and the presence of any accumulation of sediment from the water or other foreign matter, can be easily seen and remedied. The bottom 2 is preferably provided with a bracket 2^a of any desired shape or form by which the device may be secured to a wall, or other supporting surface.

The receptacle is provided with a discharge pipe 7, which extends upward to near the top of the receptacle, so that the receptacle shall always remain full of liquid, the level of which will be at the top of said discharge pipe. I prefer to make the pipe 7 removable to facilitate cleaning the bottom of the receptacle and to this end it is threaded at its lower end and screwed into a threaded discharge opening in the bottom 2, and a waste pipe 8 is screwed or otherwise connected to said bottom 2, as shown, to form a continuation of the discharge pipe 7, and carry the waste liquid to a suitable place where it can be discharged, as into a stationary wash or other basin, etc. I also provide means for flushing the receptacle 1 for the purpose of cleansing the drinking vessel immersed in the liquid contained therein, and said flushing device is arranged so as to wash particularly that portion of the drinking vessel which comes in contact with the lips. I also provide means for holding the tumbler, goblet or other drinking vessel, in the receptacle in a predetermined position with respect to the flushing device.

In the embodiment of the invention shown in Figs. 1 and 2, I have shown the flushing device, as consisting of an annular pipe or hollow ring 10, provided on its upper surface with a narrow annular discharge slit 11, said hollow ring being supplied with water by means of pipe connections 12, 12, from a supply pipe 13 which is connected with the city water main, or any other source of liquid supply. In these figures I have also shown the central discharge pipe 7 provided with means for supporting the

drinking vessel in such fixed relation with the flushing device that the rim of the drinking vessel will be held exactly above or within the annular discharge slit 11, so that the liquid will be expelled with force against both the outer and inner surfaces of the lip engaging portions of the drinking vessel. In this instance I have shown the drinking vessel in the form of a goblet 15, having a stem 15^a terminating in a ball or enlargement 15^b having a rounded bottom surface so that the device cannot conveniently be used except in connection with this device, and thus deterring persons from abstracting the drinking vessel, and the stem and enlargement form a convenient handle by means of which the vessel may be used and replaced without wetting the hands. The central discharge tube 7 is provided with three, four or more guiding and supporting brackets 14, as shown in Fig. 1 secured to the tube in any desired manner and provided with curved portions 14^a extending slightly above the top or mouth of the discharge tube, and with straight portions 14^b adapted to engage the inner surface of the vessel 15 adjacent to the rim or lip engaging portion, and hold it in proper relation to the discharge slit of the flushing device. The portions 14^a engage the bottom of the drinking vessel and support it just sufficiently above the open end of the tube 7 to permit the liquid to discharge freely therethrough during the flushing of the receptacle.

The flushing may take place automatically or by hand as preferred. In Figs. 1 and 2 I have shown devices for flushing the receptacle automatically when the drinking vessel is removed and replaced. This consists of a valve 20, in the pipe 13, provided with a valve operating arm 21 which extends to a position adjacent to the stem of the glass or vessel 15, so that as the glass is removed the valve will be operated and the water changed and when the glass is replaced after using, it will be immersed in fresh water, and as it is lowered into its place over the discharge pipe 7, the lever 21 will be operated to open the valve and the rim of the glass descend into the rush of water coming from the slit 11, thus thoroughly cleansing the glass. I may also provide a hand operated cock 22 in the pipe 13, as shown in Fig. 1 in addition to the automatic cock or valve 20, and I may dispense with the automatic valve altogether and operate the device by hand by opening cock 22 after the glass 15 has been replaced, flushing the receptacle thoroughly and then turning off the cock 22.

In some instances the annular flushing device 10 may be provided with two concentric rows of minute apertures as indicated at 11^a, 11^a Fig. 4, in which figure 10^a represents in section the annular flushing device, the said apertures being arranged to direct streams of water on the inner and outer faces of the drinking vessel. In some instances I may dispense with the particular form of support for the drinking vessel shown in Figs. 1 and 2 and instead of supporting the glass from the central tube, I may support it on brackets secured to the flushing ring. In Fig. 3 I have shown the flushing ring, here indicated by 10^b, provided with brackets 14^c (one of which is shown) extending across the discharge slit 11^b, and provided with notches 14^d to engage the rim of the glass and secure it in position relatively with the slit 11^b.

In Fig. 5 I have shown a slightly modified embodiment of my invention, in which the drinking vessel is supported by means outside of the liquid receptacle, and the flushing device is located above the drinking vessel, and discharges downwardly outside of the drinking vessel. In this form of the apparatus the receptacle is provided with a solid bottom 2^b from which the discharge pipe 7^a extends upwardly to the desired height within the receptacle, the receptacle having the cylindrical glass wall portion clamped at the lower end to the bottom 2^b as previously described with reference to Figs. 1 and 2. The glass or drinking vessel here indicated by 15^c is supported by a bracket 30, which has a bifurcated portion 31 engaging the stem 15^d just below the enlargement 15^e, and is provided with means, as a plate 32, for securing it to a wall or other supporting surface, in proper relation with the receptacle. 35 represents the annular flushing device connected to and supported by the supply pipe 13^a, which is provided with a suitable controlling valve indicated at 22^a. The annular flushing device is preferably provided with a plurality of nozzles 36, on its lower side, directed downward and toward the position occupied by the glass 15^c. When the valve 22^a is opened the water will be directed downward through the water in the receptacle, and as the discharged water must flow over the top of pipe 7^a, currents of the water are created which flow down over the outside of the rim of the glass and up on the inside thereof thereby cleansing the glass thoroughly, and particularly the rim portion thereof.

It is obvious that variations of the mechanical devices herein shown can be made within the spirit of my invention, which however, is fully disclosed by the embodiments of the invention herein described.

The apparatus herein before described can be conveniently installed at any desired point where a supply of water can be obtained, for example adjacent to a water cooler or public drinking fountain or at any other point where a drinking vessel is to be used by a number of persons. If desired

the water for drinking purposes can be obtained from the same pipe which furnishes the water for flushing the receptacle, for example by use of the well known goose neck delivery pipe arranged at a convenient point adjacent to said receptacle and connected with the water supply pipe and provided with a suitable form of controlling cock or valve. It is to be noted that the drinking vessel is maintained at all times immersed in the liquid in the receptacle, thus protecting it from dust and any foreign matter or impurities in the atmosphere and the drinking vessel can be additionally washed in fresh water either before or after use, or both, and either automatically or manually according to the desire of the person using the vessel. It is also to be noted that at every flushing of the receptacle, the drinking vessel is washed both externally and internally, the flush water flowing around the rim or lip engaging portions of the vessel and thoroughly cleansing the same.

The drinking vessel may be supported from the central discharge tube as shown in Fig. 1, or from the flushing device as in Fig. 3, or from an exterior support as in Fig. 5, or in any other desired manner, and it is obvious that the means for holding the drinking vessel in predetermined relation with the flushing device may be secured to any desired part of the apparatus. Thus in Fig. 6 I have shown another means for holding the vessel in the desired position which is secured to the flushing device and may or may not support the weight of the vessel, as preferred. This device consists of diverging arms 14^e, 14^f secured at intervals to the flushing ring here lettered 10^c and preferably connected at their upper ends by concentric rings 38 and 39. By placing the said arms close enough together they may be used to support the vessel as well as guide the rim of the vessel to and hold it in the desired position. The said arms may also be used to guide and hold the rim of the vessel where the weight of the glass is otherwise supported, as by projecting devices similar to the upper part of the arms 14 in Fig. 1, secured to the central discharge tube, or where an external support such as is illustrated in Fig. 5 at 30, 31 is employed to support the weight of the glass.

What I claim and desire to secure by Letters Patent is:—

1. Apparatus for holding and washing a drinking vessel, comprising among its members a liquid receptacle, provided with a discharge pipe extending upwardly within the vessel and having a discharge opening adjacent to the upper end of the receptacle, a flushing device for changing the entire contents of said receptacle, and means for supporting a drinking vessel, within said receptacle, in position to surround said discharge pipe, without closing said discharge aperture whereby said vessel is maintained substantially immersed in the liquid in said receptacle, when in engagement with said supporting means.

2. Apparatus for holding and washing a drinking vessel, comprising among its members, a liquid receptacle, provided with a discharge pipe extending upwardly therein and provided with a discharge aperture at its upper end, means for supporting a drinking vessel, within said receptacle in position to surround said discharge pipe without closing said discharge aperture, and a flushing device for changing the entire contents of said receptacle, provided with inlet apertures constructed to direct the incoming liquid on the exterior of the drinking vessel, whereby the liquid will pass up on the inside of the said vessel to the discharge aperture, and cleanse both the inner and outer surfaces of said vessel.

3. In an apparatus for holding and washing a drinking vessel, the combination with a receptacle, of a discharge pipe extending upwardly from the bottom thereof and having a discharge aperture adjacent to its upper end, an annular flushing device discharging within the receptacle, and constructed to direct liquid on the exterior of the drinking vessel, and means for supporting a drinking vessel in predetermined relation to said flushing device, and in a position to surround said discharge pipe without closing the said discharge aperture thereof.

4. In an apparatus for holding and washing a drinking vessel, the combination with a liquid receptacle, of a discharge pipe disposed vertically therein and having a discharge aperture adjacent to its upper end, a flushing device surrounding the said discharge pipe and located below the discharge aperture and means for supporting the drinking vessel in fixed relation with the flushing device, and in a position surrounding said discharge pipe.

5. In an apparatus for holding and washing a drinking vessel, the combination with a liquid receptacle, of a discharge pipe disposed vertically therein and having a discharge aperture adjacent to its upper end, an annular flushing device located adjacent to the bottom of the receptacle and provided with an annularly disposed discharge for directing liquid against the inner and outer faces of the drinking vessel, and means for supporting the drinking vessel with its rim in predetermined relation with said annularly disposed discharge.

6. In an apparatus for holding and washing a drinking vessel, the combination with a liquid receptacle, of a discharge pipe disposed vertically therein and having a dis-

charge aperture adjacent to its upper end, a flushing device located adjacent to the bottom of the receptacle and provided with an annular discharge slit, and supporting means for engaging the drinking vessel and holding its rim in a median position with respect to the edges of said slit, whereby the inflowing liquid will be directed against the inner and outer surface of the rim of said drinking vessel.

7. In an apparatus for holding and washing a drinking vessel, the combination with a liquid receptacle, of a discharge pipe disposed vertically therein and having a discharge aperture adjacent to its upper end, an annular flushing device surrounding said discharge pipe, located below the level of said discharge aperture and provided with an annular liquid discharge, and supporting devices secured to said discharge pipe for engaging the drinking vessel, said supporting devices having portions for engaging the drinking vessel adjacent to its outer rim and holding said rim in predetermined relation with the annular discharge of the flushing device.

8. In an apparatus for holding and washing a drinking vessel, the combination with a liquid receptacle, of a discharge pipe disposed vertically therein and having a discharge aperture adjacent to its upper end, a flushing device for changing the liquid in said receptacle located at a distance from said discharge pipe, means for supporting a drinking vessel in a position surrounding said discharge pipe, without closing the discharge aperture, and an automatic controlling device for the flushing device having an actuating part so located as to be operatively engaged by the drinking vessel, when the vessel is applied to or removed from its supporting means.

9. In an apparatus for supporting and washing a drinking vessel, the combination with a receptacle, comprising a metallic bottom, a transparent wall portion detachably secured to said bottom, a discharge pipe within said receptacle, detachably secured to said bottom and having a discharge aperture at its upper end, supports for a drinking vessel secured to said discharge pipe, an annular flushing ring surrounding said discharge pipe located adjacent to the bottom of said receptacle, and provided with an annular discharge concentric with the rim of the said receptacle, a supply pipe connected to said flushing device, and a controlling valve for said supply pipe.

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Witnesses:
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