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RECEPTACLE ACTUATED FAUCET

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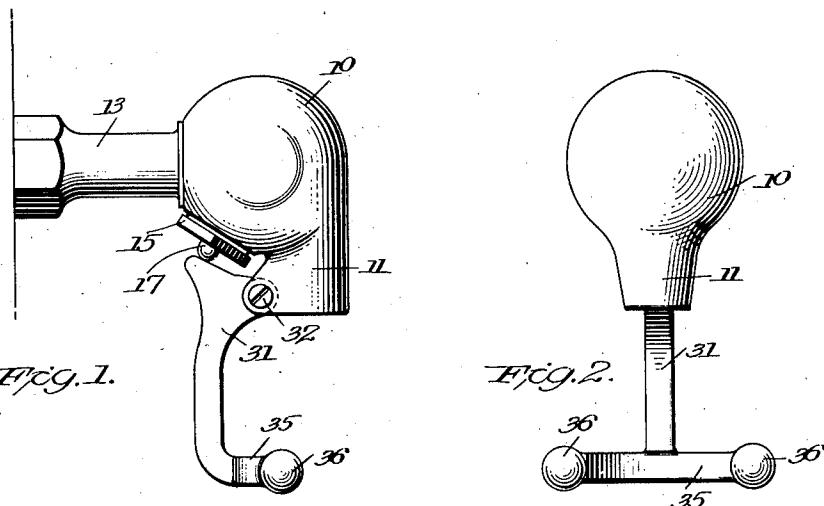


FIG. 1.

FIG. 2.

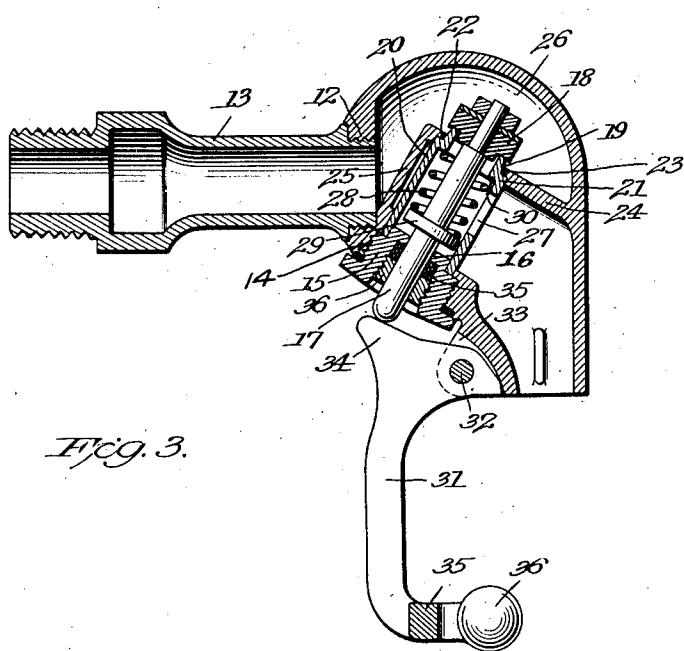


FIG. 3.

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# UNITED STATES PATENT OFFICE.

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## RECEPTACLE-ACTUATED FAUCET.

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The present invention relates to faucets, and more particularly to faucets of the self closing type provided with valve operating means adapted to be actuated by a vessel when presented to the faucet.

An object of the invention is to provide a faucet having a body portion of simple construction and design, which is of pleasing appearance, and may be manufactured at a minimum cost, the primary object of the invention being to reduce the labor and expense involved in the production of faucets of this type.

Another object of the invention is to simplify the arrangement and construction of the working parts, particularly the valve and valve seat, and to position the same within the faucet, so that they may be inserted and removed through the same opening in which the valve stem works during normal operation of the faucet.

Other objects of the invention will become clear as the description proceeds in connection with the preferred embodiment illustrated in the accompanying drawings, wherein:

Figure 1 is a side elevational view,  
Figure 2 is a front elevational view, and  
Figure 3 is a longitudinal section.

10 In the drawings, 10 indicates the body portion of regular or symmetrical contour, having extending therefrom a relatively short nozzle or spout 11, which is, preferably, cast integral with the body portion. Referring to Figures 1 and 2, it will be noted that the body is substantially spherical, the only projection therefrom being the spout. This formation of the body enables it to be produced at a materially less expense than faucets of irregular or non-spherical contour, which, after being cast, must be presented manually to the grinding wheel or other machining tool. The spout 11 serves as means for chucking the body in the work holder of an ordinary lathe, and then, due to the symmetrical shape of the body, its entire surface may be automatically machined. The only part which is not machined is the nozzle or spout; and hence this operation eliminates a great deal of the labor and expense involved in the usual operation of polishing and buffing faucet castings.

15 The top of the body, as will be noted, is imperforate, the body being provided with merely two openings, in addition to the discharge spout, namely, the inlet opening 12 at

its rear adapted to receive the end of the shank 13, and an opening 14 positioned preferably beneath the body between the nozzle and inlet opening 12.

20 The opening 14 has positioned therein a threaded plug 15 having a central aperture 16, through which passes a valve stem 17 carrying a valve 18 on its end within the body of the faucet. The valve 18 co-operates with a seat 19 formed upon the end of a tubular element 20, which is shouldered at 21 to fit in a seat 22, around an opening 23 in a wall or diaphragm 24, which extends partially across the interior of the faucet body, and has a depending portion 25 positioned over the inlet opening 12 to serve as a baffle directing the inflowing liquid upwardly to a reception chamber 26 above the wall 24. It will be observed that the tubular element effectively closes the opening 23 in the wall, so that when the valve 25 is open, the fluid must pass downwardly into the tubular element, from which it passes outwardly through an opening 27 in the side wall of the latter to the nozzle. A spring 28, which abuts a collar 29 on the stem and an internal shoulder 30 on the valve, serves normally to maintain the valve closed. The valve is opened by means of a lever 31 pivoted on a pin 32 supported by means of spaced lugs 33 extending rearwardly from the nozzle beneath the body portion. It will be noted that the lever has a valve engaging projection 34 positioned beneath the valve stem, and, at its lower end beneath the nozzle, carries a fork 35, provided with ball ends 36, to be engaged by a vessel when the stem is presented to the faucet. It will be understood that in order to position a vessel beneath the nozzle, the lever 31 must be moved rearwardly, thereby raising the valve and tensioning the spring 28; when the vessel is removed, the valve spring automatically closes the valve and returns the lever to the position indicated in Figures 1 and 2.

25 An important feature of the invention is the arrangement of the valve and its seat. It will be observed that the opening 23 in the wall 24 is of sufficient size to enable the valve to be drawn therethrough when the seat carrying tube 20 is removed. The tube 20 extends downwardly and is supported by means of the plug 15, which also serves to close the opening 14 in the faucet body. As will be understood, when the plug 15 is removed, the tubular element 20 may then be withdrawn.

with the valve and its stem, including the spring 28. To prevent leakage through the opening 16 in the plug 15, the latter is centrally dished to provide a box for a stuffing 5 35, which may be compressed by the nut 36 having a threaded fit within the plug 15.

Obviously, numerous changes may be made 10 in the construction illustrated and described in detail, without departing from the invention, the essence of which is set forth in the following claims.

I claim:—

1. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side surfaces, a nozzle leading therefrom, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a valve stem projecting through an opening 20 in the wall of said body portion, and means permitting withdrawal of said valve and stem through said opening, said means comprising a valve seat removably mounted in said casing, and removable means in said 25 opening serving to retain the seat and valve in the body portion.

2. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side 30 surfaces, a nozzle leading downwardly therefrom, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a valve stem projecting through an opening in the wall of said body portion, 35 and means permitting withdrawal of said valve and stem through said opening, said means comprising a valve seat removably mounted in said casing, and removable means closing said opening and serving also to retain the seat and valve in the body portion.

3. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side surfaces, a nozzle leading downwardly therefrom, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a valve stem projecting through an opening in the wall of said body portion on its under surface behind said nozzle, and 50 means permitting withdrawal of said valve and stem through said opening, said means comprising a valve seat removably mounted in said casing, and a plug closing said opening and serving also to retain the seat and valve in the body portion and to hold the seat in proper position therein.

4. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side 60 surfaces, a nozzle leading downwardly therefrom, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a reciprocably mounted valve stem projecting through an opening in the 65 wall of said body portion, and means per-

mitting withdrawal of said valve and stem through said opening, said means comprising a valve seat removably mounted in said casing, and a plug closing said opening and serving also to retain the seat and valve in the body portion, said plug and valve stem being disposed behind said nozzle.

5. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side surfaces, a nozzle leading downwardly therefrom and having its walls merging with the walls of the body portion, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a valve stem 60 projecting through an opening in the wall of said body portion on its under surface behind said nozzle, and means permitting withdrawal of said valve stem through said opening, said means comprising a valve stem 65 removably mounted in said casing, and a plug closing said opening and serving also to retain the seat and valve in the body portion; and means for operating said valve adapted to be engaged and actuated by a vessel as it is positioned adjacent said spout.

6. In a faucet, a body portion, a nozzle, valve operating means adapted to be actuated by a vessel, as it is positioned beneath the nozzle, a valve in said body portion having a stem projecting through an opening in the wall of the body portion, a tubular element having an end forming a valve seat in said casing and removable therefrom through said opening, and a transversely extending wall in said body portion having an aperture therein to receive the end of said tubular element which forms said valve seat, said element closing said opening around the seat.

7. In a faucet, a body portion, a nozzle, valve operating means adapted to be actuated by a vessel as it is positioned beneath the nozzle, a valve in said body portion having a stem projecting through an opening in the wall of the body portion, a tubular element having an end forming a valve seat in said casing and removable therefrom through said opening, a transversely extending wall in said body portion having an aperture therein to receive the end of said tubular element which forms said valve seat, said element closing said opening around the seat and having an opening in its wall to permit liquid to flow to the nozzle when the valve is open, and means in said opening serving to engage the opposite end of said tubular element and retain the element against movement.

8. In a faucet, a body portion, a nozzle, valve operating means adapted to be actuated by a vessel as it is positioned beneath the nozzle, a valve in said body portion having a stem projecting through an opening in the wall of the body portion, a tubular ele-

ment having an end forming a valve seat in said casing and removable therefrom through said opening, a transversely extending wall in said body portion having an aperture therein to receive the end of said tubular element which forms said valve seat, said element closing said opening around the seat and having an opening in its wall to permit liquid to flow to the nozzle when the 10 valve is open, and a plug in said opening serving to hold said tubular element in position.

9. In a faucet, a body portion, a nozzle, valve operating means adapted to be actuated by a vessel as it is positioned beneath the nozzle, a valve in said body portion having a stem projecting through an opening in the wall of the body portion, a tubular element having an end forming a valve seat in said 20 casing and removable therefrom through said opening, a transversely extending wall in said body portion having an aperture therein to receive the end of said tubular element which forms said valve seat, said element closing 25 said opening around the seat and having an opening in its wall to permit liquid to flow to the nozzle when the valve is open, and a plug in said opening serving to hold said tubular element in position, said valve stem 30 passing through said element and a central opening in said plug to the exterior of the body portion.

10. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side surfaces, an integral nozzle leading directly downwardly from said chamber and being disposed substantially therebeneath, said body portion having a valve therein for controlling the egress of fluid through said 35 nozzle, a valve stem projecting through an opening in the bottom wall of said body portion, and means permitting the withdrawal of said valve and stem through said opening.

11. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side surfaces, an integral nozzle leading directly downwardly from said chamber and being disposed substantially therebeneath, a nozzle 50 being integrally formed with the body portion and having its walls merging therewith, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a valve stem projecting through an opening in the bottom wall of said body portion, and means permitting the withdrawal of said valve and stem through said opening.

12. A faucet comprising a substantially spherical body portion forming a valve cham-

ber having unbroken top, front and side surfaces, an integral nozzle leading directly downwardly from said chamber and being disposed substantially therebeneath, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a valve stem projecting through an opening in the bottom wall of said body portion, and means permitting the withdrawal of said valve and stem through said opening, 65 and a receptacle actuatable member pivotally mounted on the rear wall of said nozzle and adapted to operate said valve stem, said nozzle having substantially unbroken front and side walls.

13. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side surfaces, an integral nozzle leading directly downwardly from said chamber and being disposed substantially therebeneath, a nozzle being integrally formed with the body portion and having its walls merging therewith, said body portion having a valve therein for controlling the egress of fluid through said 70 nozzle, a valve stem projecting through an opening in the bottom wall of said body portion, and means permitting the withdrawal of said valve and stem through said opening, and a receptacle actuatable member pivotally mounted on the rear wall of said nozzle and adapted to operate said valve stem, said nozzle having substantially unbroken front and side walls.

14. A faucet comprising a substantially spherical body portion forming a valve chamber having unbroken top, front and side surfaces, an integral nozzle leading directly downwardly from said chamber and being disposed substantially therebeneath, a nozzle 80 being integrally formed with the body portion and having its walls merging therewith, said body portion having a valve therein for controlling the egress of fluid through said nozzle, a valve stem projecting through an opening in the bottom wall of said body portion, and means permitting the withdrawal of said valve and stem through said opening, and a receptacle actuatable member pivotally mounted on the rear wall of said nozzle having substantially unbroken front and side walls, said nozzle having on its rear wall a rearwardly extending lug and a receptacle 85 actuatable valve operating member mounted on said lug at the rear of said nozzle, the nozzle having unbroken front and side walls merging with the walls of said chamber.

In testimony whereof I have hereunto set my hand.

WILLIAM J. MIX.