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J. F. CUSHMAN
FAUCET VALVE OPERATOR

2,270,239

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Fig. 1.

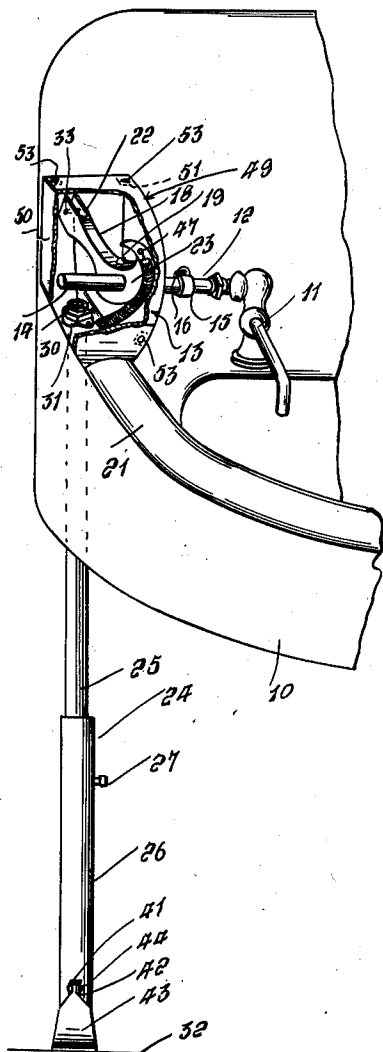


Fig. 2.

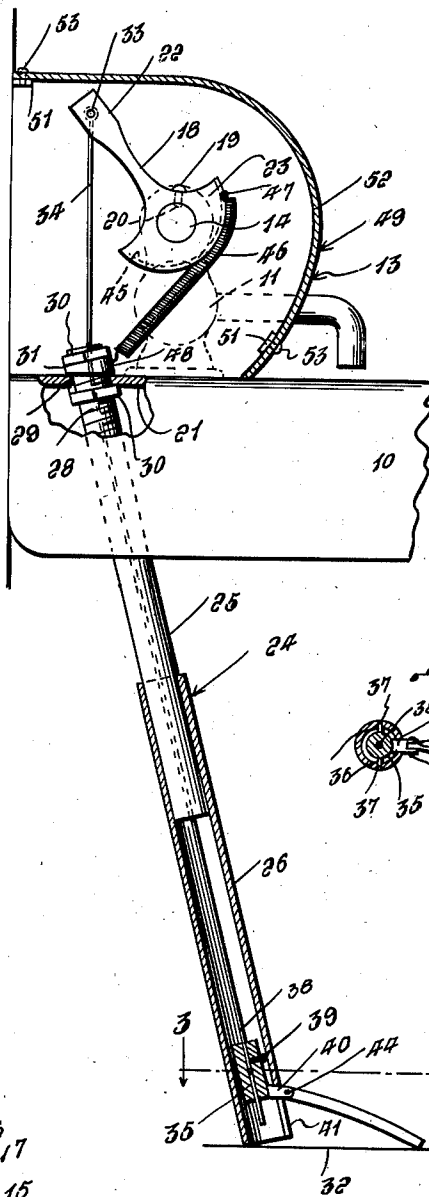


Fig. 3.

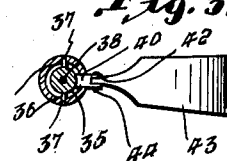


Fig. 4.

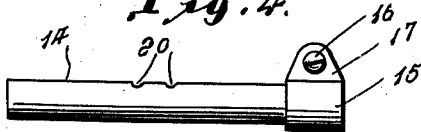
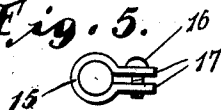


Fig. 5.



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FAUCET VALVE OPERATOR

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4 Claims. (Cl. 4-166)

This invention relates to an improved, sanitary operator for faucet valves and more particularly to an operator adapted to be actuated by means of a foot pedal to replace the conventional handle or knob conventionally used for opening and closing the valve of a faucet.

This invention is especially designed and adapted for use on faucets of wash bowls of barber shops and beauty parlors to provide a sanitary device by means of which such faucets may be turned on and off without being touched by the hand of the operator or attendant to eliminate the danger of germs being transmitted from one customer to another by the operator touching the handle or knob of the faucet.

More particularly, it is an aim of the invention to provide a device of simple construction which may be readily applied to a wash bowl and attached to the faucet spindle after the conventional handle or knob has been removed which is provided with a foot pedal for turning on the faucet and spring means for turning off the faucet when the pressure on the foot pedal is removed.

Other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, which illustrates a preferred embodiment thereof, and wherein:

Figure 1 is a perspective view showing the invention attached to a conventional wash basin and to a faucet thereof, the closure or casing of the invention being shown broken away to show the parts disposed therewithin.

Figure 2 is a vertical sectional view, partly in elevation of the same,

Figure 3 is a cross sectional view taken substantially along the plane of the line 3-3 of Figure 2,

Figure 4 is a plan view showing one of the elements of the device in detail, and

Figure 5 is an end view in elevation of the part shown in Figure 4.

Referring more particularly to the drawing, wherein like reference characters designate like or corresponding parts throughout the different views, 10 designates generally a portion of a conventional wash basin provided with a faucet 11 having a faucet valve spindle 12 which extends outwardly from a side of the faucet 11 and which is adapted to be turned in one direction for opening the faucet valve, not shown, and in the opposite direction for closing the faucet valve. These parts are of conventional construction and are shown merely to illustrate the application

of the faucet valve operator, designated generally 13, and comprising the invention.

The invention, designated generally 13, includes a hollow stem 14, best seen in Figure 4, which is provided at one end thereof with a clamping ring in the form of a split ring 15 having a threaded screw 16 for engaging the apertures of the ears 17 thereof. The aperture of the ear which is remotely disposed relatively to the head of the screw 16 is provided with threads, not shown, for threaded engagement with the shank of the screw 16 for contracting the ring 15.

The stem 14 is secured to the outer end of the spindle 12 by the split clamping ring 15. A lever 18 is secured to the stem 14, intermediate of its ends, by means of a set screw 19 which extends into one of the indentations or openings 20 which are formed in the stem 14, intermediate of its ends. The lever 18, which is disposed over the rim 21 of the wash bowl 10, includes an arm 22 which extends upwardly and rearwardly from the stem 14 and an arcuately shaped, substantially semi-circular head 23 which is disposed on the opposite side of the stem 14 and in substantially diametrically opposed relationship to the arm 22.

A tube 24, formed of the telescoping sections 25 and 26, which are held in adjusted positions relatively to each other by means of a set screw 27, is provided with an externally threaded upper end 28, which forms the outer end of the section 25, and which extends through an opening 29 in the rim 21 to position the upper end of the tube 24 substantially beneath the free end of the arm 22. The threaded end 28 carries a pair of nuts 30 which are disposed on opposite sides of the rim 21 and a gasket 31 which is disposed between the upper side of the rim 21 and the upper nut 30. The underside of the gasket 31 is preferably shaped to fit on the rim 21, as seen in Figure 1. The nuts 30, as best illustrated in Figure 2, are positioned a sufficient distance apart so that the tube 24 may be swung outwardly toward the outer edge of the wash bowl 10 after which the sections 25 and 26 are extended relatively to each other until the lower end of the section 26 engages the floor or supporting surface, indicated by the line 32. Set screw 27 is then tightened to hold the tube 24 in the position, as illustrated in Figure 2, relatively to the wash bowl 10 and to the floor 32.

The arm 22 is provided with a bifurcated free end in the furcations of which are mounted the ends of a pin 33 to which is secured one end of

a flexible cable 34. An elongated head 35, which is circular in cross section and which is of a diameter substantially less than the diameter of the bore of the section 26, is mounted in the lower end of said section and is provided with diametrically opposed outwardly projecting ribs 36 which are slidably mounted in diametrically opposed grooves 37 in the tubular section 26. Cable 34 extends downwardly through the tube 24 and has its opposite end disposed in the longitudinal bore 38 of the head 35 and is secured thereto by a set screw 39 by means of which the head 35 may be adjustably connected to the cable 34. Head 35 is provided with a shank 40 which is disposed substantially at right angles to the ribs 36 and which extends outwardly through an elongated slot 41 in the lower end of the section 26. Shank 40 is provided with a bifurcated free end to receive the restricted end 42 of a foot pedal 43. The restricted end 42 is connected to the bifurcated end of the shank 40 by means of a pivot pin 44. The pedal 43 extends outwardly and downwardly from the shank 40 and has its free end resting on the floor 32.

The outer edge of the arcuately shaped head 23 is provided with a groove 45 in which is disposed a portion of a contractile coil spring 46, one end of which is secured by a fastening 47 in the groove 45, adjacent its upper end. The opposite end of the spring 46 is anchored in an opening 48 in the gasket 31.

The lever 18 and the spring 46 are enclosed in a casing 49 which includes the spaced side walls 50 having inturned ears 51 to which is attached a cover 52, by means of fastenings 53. The stem 14 is journaled in the casing 49.

From the foregoing it will be seen that when the foot pedal 43 is depressed by a downward pressure thereon its secured end will pivot on pin 44 and its free end will pivot and slide on the surface 32 to move the head 35 downwardly to impart a downward pull on the cable 34 to swing the arm 22 downwardly in a counterclockwise direction to thereby turn the stem 14 and the spindle 12 in a counterclockwise direction, as seen in Figures 1 and 2, to open the valve, not shown, of the faucet 11 to thereby turn on the faucet. As long as pressure is maintained on the pedal 43 the faucet will remain open. When this pressure on pedal 43 is released the contractile spring 46 will react to turn the lever 18, spindle 12 and stem 14 in a clockwise direction to thereby close the faucet valve to shut off the faucet 11. This counterclockwise movement of the parts will also return the head 35 and the pedal 43 to the positions, as best seen in Figure 2.

It is to be understood, that each of the faucets of a wash bowl may be provided with an operator 13.

Various modifications and changes in the construction and arrangement of the parts forming the invention are contemplated and may obviously be resorted to as only a preferred embodiment thereof has been disclosed.

I claim as my invention:

1. A faucet valve actuator comprising a stem

connected to a faucet spindle, an arm fixed to and projecting from said stem, a cable connected at one end to said arm, a treadle having one end resting on a supporting surface and its opposite end projecting upwardly therefrom at an oblique angle thereto, the opposite end of said cable being connected to the elevated end of the treadle, said treadle being depressible to rock said arm to turn the stem of the faucet spindle in one direction for opening the faucet valve, a contractile spring for turning the arm in the opposite direction for closing the faucet valve, a pipe secured at one end in an opening of a wash basin and extending downwardly therefrom, said treadle being provided with a head, on its elevated end, slidably mounted in said pipe adjacent its lower end, and said head being provided with means for detachably and adjustably connecting it to said cable.

2. In a faucet operator, a stem having clamping means in one end thereof for attachment to a faucet valve spindle, a lever keyed to said stem and provided with an extension arm and an arcuately shaped head having a grooved outer edge, said arm and head being disposed on opposite sides of the stem, a tube adapted to be secured at one end in an opening in a wash basin and beneath said lever, said tube extending downwardly at an oblique angle to the wash basin and having its opposite end resting on a supporting surface disposed therebeneath, a foot pedal having a head portion slidably mounted in the lower end of said tube, said tube being provided with a slot to slidably receive a restricted portion of the pedal, said pedal being pivotally connected to its head portion and projecting outwardly and downwardly therefrom with the free end thereof resting on the supporting surface, a flexible member having one end connected to the free end of the extension arm of said lever, said flexible member extending through said tube, and means on said head portion for adjustably connecting the opposite end of said flexible member thereto, said pedal being depressible for moving its head portion downwardly for turning the lever in one direction to actuate the valve spindle for opening the faucet, and spring means connected to said arcuately shaped head and partially disposed in its groove for turning the lever in the opposite direction for closing the faucet.

3. A device as in claim 2, said tube being formed of telescoping, adjustably connected sections, the upper end of the upper section being externally threaded, fastening means carried by said threaded end for detachably securing the tube to the wash basin, a gasket disposed between one of the elements of the fastening means and the upper side of the basin carried by the tube, and one end of said spring means being anchored to said gasket.

4. A device as in claim 2, said tube being formed of telescoping, adjustably connected sections, the upper end of the upper section having means for detachably connecting it to the wash basin.

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