Oct. 6, 1931. F. SCHULDER 1,825,826

LAVATORY FAUCET

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FIG. 1

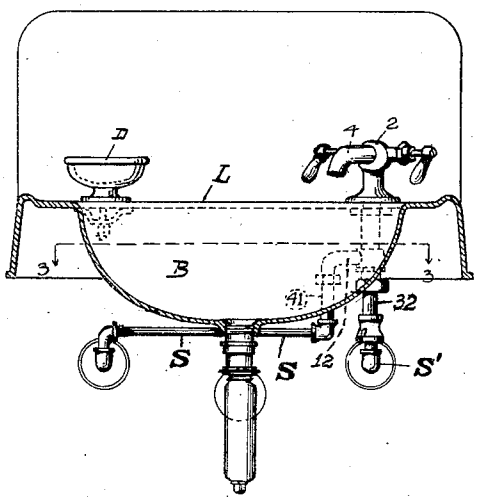

FIG. 2

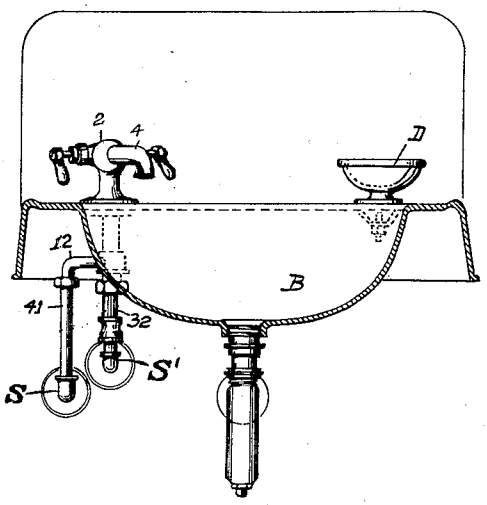

FIG. 3

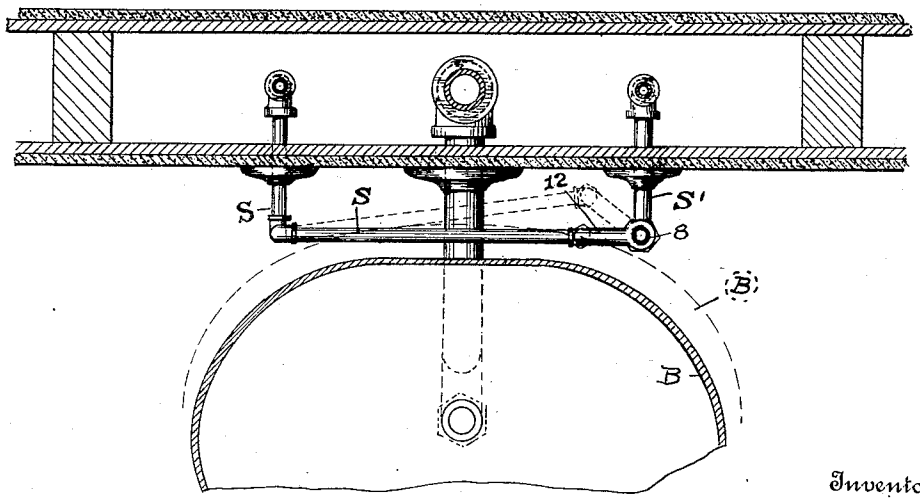

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FIG. 4

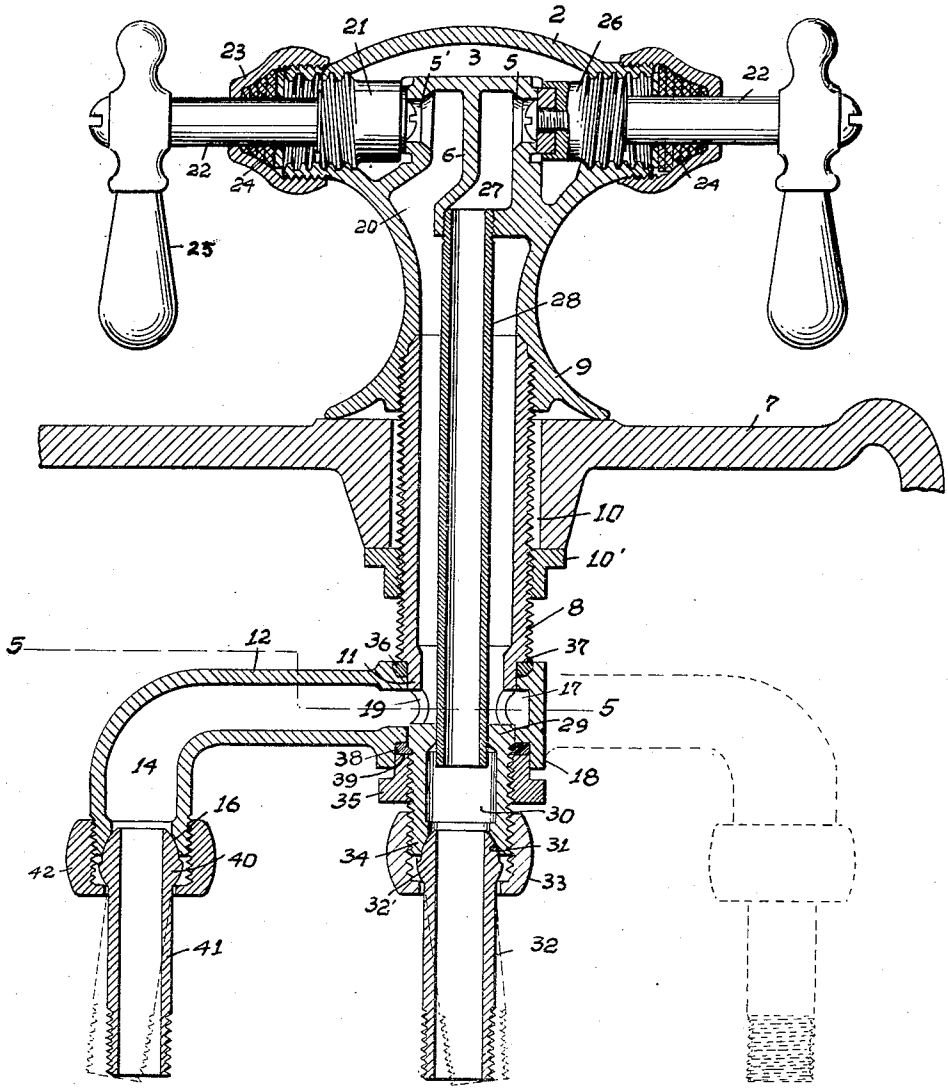

FIG. 5

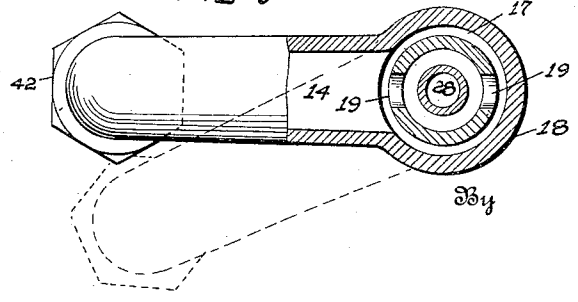

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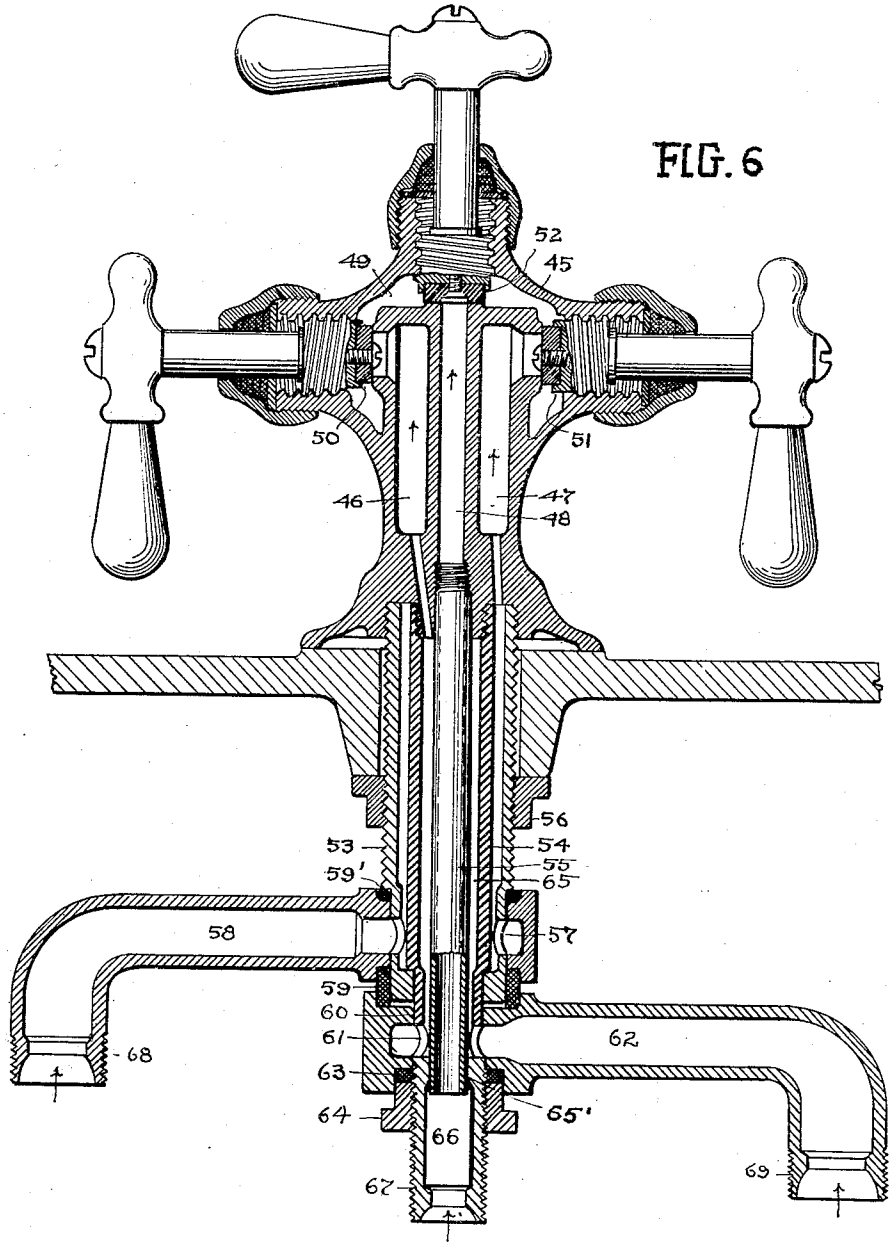
FIG. 6



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UNITED STATES PATENT OFFICE

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LAVATORY FAUCET

Application filed August 31, 1927. Serial No. 216,522.

My invention relates to an improvement in faucets or similar fixtures, the object in general being to provide a combination faucet or similar fixture adapted to be readily connected to two or more sources of supply and to dispense or deliver two or more liquids separately or mixed together. Thus, the present device is particularly constructed to facilitate attachment thereof to a lavatory, sink or other appliance where two or more supply pipes are installed. Such appliances, especially lavatories, are commonly equipped with two independent valves or faucets which are used to deliver hot and cold water into the lavatory bowl, and in some instances a third faucet is provided to deliver filtered or iced drinking water. The present conception is to employ a single combination faucet in one of the two faucet holes usually provided in the top of the lavatory to deliver two or more kinds of liquids from separate sources of supply, the other hole in the top and the space surrounding it being in that event utilized for other purposes than formerly. For example, the second opening may be utilized to attach a soap dish, a drinking fountain, a cup holder, or any other useful device to the lavatory top in an accessible position rearwardly of the bowl, thereby providing a more convenient and complete working arrangement than the customary two faucet installation occupying the same space. To facilitate attachment of such a combination faucet to a lavatory, sink or other appliance and afford the advantageous complete installation as described, the faucet is particularly constructed to permit two or more supply pipe connections to be easily made with two or more service pipes extending through the wall or floor beneath the lavatory. Thus, the present faucet is provided with a shank adapted to be easily inserted through one opening in the top of an ordinary lavatory or other support, and this lower end of the shank is adapted to be connected directly to one supply pipe, say the cold water supply pipe. The shank carries a lateral arm or branch adapted to swing or be turned in different directions for convenient adjustment and connection with a second supply pipe, say the hot water supply pipe. The swinging arm or branch permits the double faucet to be attached to either the right hand or left hand faucet opening in an ordinary lavatory, and to be conveniently connected to separate cold and hot water pipes regardless of their relative placement or position beneath the lavatory. In some cases the lavatory bowl offers obstruction to the making of straight line supply pipe connections, but the swinging arm or branch permits an easy connection to be made therewith notwithstanding. The swinging branch may also be shifted away from a wall behind the lavatory or from obstructing parts of the lavatory to permit more freedom for manipulating a wrench or tool in making the pipe connections. The construction of the faucet and the convenience of connection also permits a plumber, to make replacements and changes in old lavatory installations with less labor than formerly. That is, the device is suitable not only for new installations, but also of utility in replacing an old pair of single lavatory faucets quickly and economically in an old installation.

As an exemplification of the general utility and adaptation of the invention, see Figs. 1 and 2, in the accompanying drawings, which views are corresponding elevations and sections of an ordinary wall lavatory equipped with my improved combination faucet. These views show two different hook-ups or modes of mounting and connecting the faucet to two supply pipes. Fig. 3 is a horizontal section of a wall showing the pipes on a larger scale, on line 3—3 of Fig. 1. Fig. 4 is an enlarged sectional view of the faucet itself. Fig. 5 is a horizontal section on line 5—5 of Fig. 4. Fig. 6 is a sectional view of a modified form of the invention embodying three valves and three separate supply pipe connections.

Structurally considered, the faucet comprises a body 2 having a mixing chamber 3 which is open to a delivery spout 4. Chamber 3 contains two or more separate valve seats or outlets open to chamber 3, and in the double faucet shown in Fig. 4 there are two outlets 5—5′ arranged in parallel vertical

planes on opposite sides of a central division wall 6 within the upper part of body 2. The lower part of body 2 is flanged to seat on the top 7 of a lavatory or other support, and a screw-threaded shank 8 extends downwardly from the flanged bottom 9 and passes through an opening or hole 10 in top 7. A nut 10′ on shank 8 clamps the faucet rigidly to the top, and a portion 11 of shank 8 is reduced in diameter and finished smoothly to provide a round swivel bearing for a lateral arm or branch 12 which is hollow to provide a water passage 14 therein. Branch 12 has a downwardly bent end 15 which is screw-threaded externally and formed with a flaring end opening and seat 16 at the outer end of passage 14, and the opposite end of this passage opens into a circular chamber 17 within the round head 18 which is sleeved rotatably upon the cylindrical portion 11 of shank 8. Openings 19 in the wall of portion 11 communicate with circular chamber 17 in head 18 to permit the water to pass from the right-angled arm or branch 12 into and upwardly through the shank to a passage 20 in the neck of the faucet and thence through this passage to the valve seat or outlet 5′. A valve member 21 having a screw-threaded stem 22 controls the outflow of water through seat 5′, the valve stem being confined and held by a screw cap 23 containing packing 24 and being provided with a handle 25 as usual. A similar valve member 26 at the opposite side of body 2 controls the outflow of water at valve seat 5 which opens into a small chamber 27 from which a short pipe 28 extends downwardly through the center of hollow shank 8. The lower end of pipe 28 passes through an opening in a closure wall or diaphragm 29 in the reduced portion 11 of the shank and communicates with an intake passage 30 having a flaring entrance 31 with which a separate tail piece 32 is connected by means of a ball joint 32′ and a flanged nut 33. The extremity 34 of shank 8 is screw-threaded its full length to receive nut 33 and to permit a second nut 35 to be used in clamping arm or branch 12 to the shank. A fluid-tight union is required for this arm or branch, and therefore, the upper face of its round head 18 is recessed to hold a packing ring 36 opposite an annular shoulder 37 where said shank is reduced in diameter. The bottom face of round head 18 is also recessed to receive a second packing ring 38 and the gland portion 39 of nut 35, thus sealing the hollow branch or arm 12 where jointed to the shank. The inner pipe 28 may be sweated or soldered at its lower end to wall 29, and its upper end may be screw-connected to division wall 6 within body 2. The downwardly bent end of arm or branch 12 has a flaring seat 16 formed therein to receive the end 40 of a tail piece 41, and a flanged nut 42 is screw-connected to the arm to fasten this tail piece 41 adjustably thereto. Separate tail pieces facilitate the making of faucet connections with the separate supply pipes S—S′, but in some instances a slip-joint connection may be made with or for the pipes. The branch or elbow 12 being rotatable about the vertical axis of shank 8, various settings and a wide range of adjustment of the parts may be readily made, and it may be turned either to the right side or to the left side of shank 8 should conditions require such a setting. In Fig. 1 the faucet is mounted at the right side of lavatory L, and a soap dish D is secured to the left side, and hot water supply pipe S which connects with tail piece 41 on branch or elbow 12 extends to the left side of the lavatory, while the tail piece on shank 8 is aligned vertically and connected with cold water supply pipe S′. In Fig. 2 the faucet is mounted at the left side of the lavatory bowl, and the soap dish D is affixed at the right hand in an opening in the lavatory top, while the two supply pipes S—S′ are placed relatively close together, one higher than the other, beneath the double faucet. When the supply pipes are connected as shown in Fig. 1, the hot water pipe S may extend on a straight line to the arm or branch elbow 8, providing the lavatory bowl B does not obstruct, but if the bowl has a perpendicular rear wall in the way the branch elbow may be turned rearwardly at an angle to offset supply pipe S as shown in dotted lines in Fig. 3. The faucet shown in Fig. 4 may be termed a mixing device or double faucet, as the structure embodies two independent inlets and a common outlet. But the invention is not necessarily restricted to a double faucet, inasmuch as more than two inlet chambers and pipe connections may be provided. For example, in Fig. 6 I show a modified form of the invention, comprising a faucet body 45 having three intake passages or chambers 46, 47 and 48, respectively, communicating with a common discharge chamber 49, the outflow from these passages or chambers being controlled by separate valves 50, 51, and 52, respectively. Three concentric tubes or tubular extensions 53, 54 and 55, respectively, project downwardly from the base of the body 45, and the outer and larger tubular part 53 may be termed the shank of the faucet, being screw-threaded to receive a clamping nut 56. The lower end of shank 53 is reduced in diameter, smoothly finished, and provided with intake openings 57 in its side. A hollow arm or elbow 58 is sleeved in rotatable connection with the reduced end of the shank, and two compressible gaskets or packing rings 59—59′ seal the joint. Tube 54 has a reduced end 60 which extends through and closes the lower end of the outer tube or shank 53, and end 60 is in turn provided with intake openings 61 in its side. A second hollow arm or elbow 62 is sleeved in rotatable connection with reduced end 60, and a compressible gasket or

packing ring 63 seals the bottom joint for this arm or elbow, a single nut 64 being used to compress all the gaskets and fix both arms or elbows in position. The inner tube 55 extends downwardly through the second tube 54 and its lower end 65′ fits tightly within and closes the annular passage 65 between the two tubes 54 and 55 below the side openings 61. However, the lower end of central tube 55 is open to an intake chamber 66 within the screw-threaded projecting portion 67 of tube 54. A tail piece or supply pipe connection is made with end 67, and the downwardly bent ends 68 and 69 of the two arms or elbows 58 and 62 are also constructed to permit separate tail piece or supply pipe connections to be made therewith. In this way three liquid supply connections may be made with the faucet, and the liquids mixed within the faucet or delivered separately therefrom. In a lavatory installation the central pipe 55 may be used to deliver ice water, the second pipe 54 cold water, and the third pipe or shank 53 hot water. From the foregoing it will be understood that a faucet may be provided having two or more inlet passages and supply pipe connections as occasion may require; that all the liquid dispensed from the faucet may be delivered into a lavatory bowl or into any other receptacle or place where the device may be mounted; that the several tubular members comprising the shank portion of the device provide annular passages of ample capacity to freely discharge the liquid separately into the faucet body; that the rotatable branch member or members referred to as arms or elbows greatly facilitate the making of pipe connections in installing the device; and that the distributing tubes provide for the intake of the water laterally through the side wall thereof from the swiveling sleeve portion of the branch member or members to permit them to be turned to any desired radial position relatively to the faucet body and to any angle relatively to each other.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the forms hereinbefore described being merely a preferred embodiment thereof.

What I claim, is:

1. A valved combination fixture for distributing fluids, comprising a hollow screw-threaded shank containing a plurality of fluid passages and having a reduced and smoothly finished portion containing openings in its side and terminating in a screw-threaded extension, a nut sleeved upon said screw-threaded shank adapted to clamp said fixture to a support, a hollow branch having rotatable connection with said open-sided reduced portion, a nut sleeved upon the screw-threaded extension of said shank adapted to affix said branch removably thereto, and means adapted to connect separate supply pipes to the outer ends of said branch and shank, respectively.

2. A fixture for distributing fluids, having a shank containing separate fluid passages, valves for said passages, a hollow branch member rotatably connected to said shank in open communication with one of said fluid passages, said branch member having a downwardly-extending intake end, means at the end of said shank adapted to connect a supply pipe thereto in open communication with another fluid passage within said shank, and means adapted to connect a second supply pipe to the downwardly-extending intake end of said branch member.

3. A lavatory fixture, comprising a body provided with two inlet chambers, flow controlling means for each chamber, a tube communicating with one of said chambers, a second tube positioned within said first tube and communicating with the other chamber in said body, means for connecting said second mentioned tube to a supply pipe disposed substantially in axial alignment therewith, and tubular connecting means positioned over said first mentioned tubular part and communicating therewith and adapted for attachment to a second supply pipe, said tubular means being adjustable about the axis of said tubes.

In testimony whereof I affix my signature.

FRED SCHULDER.