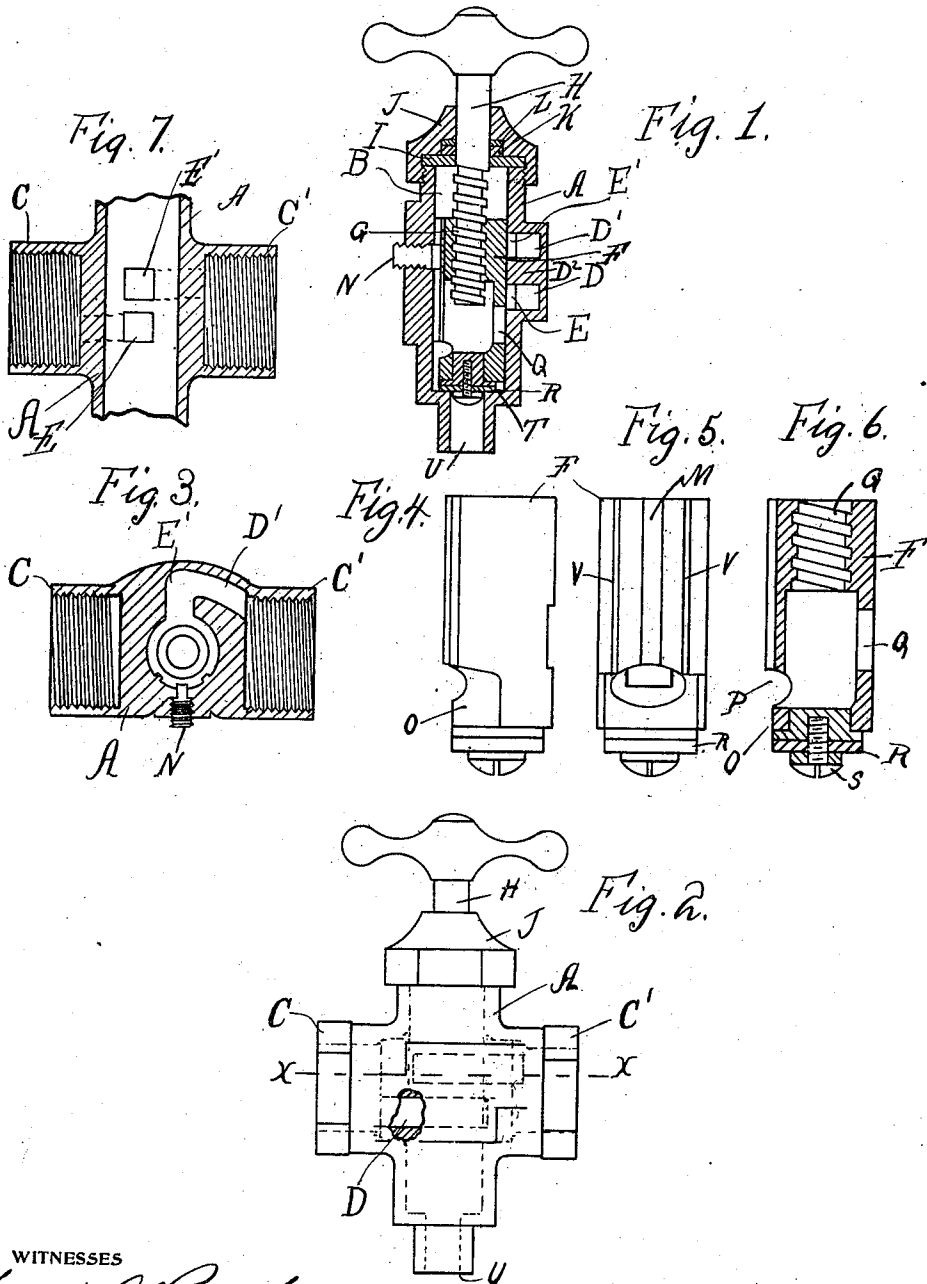


F. STEINER.
TWO-WAY FAUCET.
APPLICATION FILED APR. 28, 1908.

981,711.

Patented Jan. 17, 1911.



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TWO-WAY FAUCET.

981,711.

Specification of Letters Patent.

Patented Jan. 17, 1911.

Application filed April 28, 1908. Serial No. 429,701.

To all whom it may concern:

Be it known that I, FRANKLIN STEINER, a citizen of the United States, residing at Conshohocken, in the county of Montgomery and State of Pennsylvania, have invented a certain new and useful Improvement in Two-Way Faucets, of which the following is a specification.

My invention relates to a new and useful improvement in two-way faucets, and has for its object to provide an exceedingly simple and effective device of this description by which hot or cold water or any other two fluids may be drawn from the same faucet, or a combination of the two in any proportion desired by the operation of a single valve, thus doing away with the necessity of using two or more faucets for bath tubs and the like.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a central vertical section of my improved faucet. Fig. 2, an elevation of the same. Fig. 3, a section taken at the line $x-x$ of Fig. 2. Fig. 4, is a side elevation of the plunger. Fig. 5, a similar view taken at right angles to Fig. 4. Fig. 6, a vertical section of the plunger, and Fig. 7, a section of the valve casing taken at right angles to Fig. 1.

In carrying out my invention as here embodied, A represents the casing of the faucet, which is preferably made from a single casting, having a central barrel or bore B, this barrel being circular in cross section.

Formed with the casing are the two threaded extensions C and C', to which the hot and cold water pipes are connected, and from the extension C leads the passage-way D to the opening E, while from the extension C' leads the passage-way D' to the opening E', and as clearly shown in Fig. 7 these openings are in vertical alinement with each other for the purpose hereinafter set forth.

F represents the plunger, which has internal threads formed therein, as indicated at G, with which engage the threads of the

stem H, which latter passes through the disk I and cap J, the latter being threaded upon the top of the casing to hold the parts in place.

Formed with or secured upon the stem is a collar K, which fits within a recess formed within the cap for that purpose, and in this recess is also fitted a washer L to prevent leakage around the stem. This collar serves the further purpose of preventing the stem from moving upward when being revolved, and the disk I upon which the collar rests prevents the stem from moving downward.

In order that the plunger may be held from moving upward when being revolved, provide a groove M lengthwise of the plunger, in which fits the pin or key N, thus causing the plunger to be raised or lowered when the stem is revolved in one or the other direction.

The lower end of the plunger is cut away, as indicated at O, and has a hole P formed through the wall thereof which communicates with its interior, and thus communicates with the port Q formed in the opposite wall of the plunger. The lower end of the plunger has a washer R secured thereto by means of the screw S, and this washer is adapted to be forced upon the valve seat T when the plunger is driven to the limit of its downward movement, thus closing the outlet U from the casing.

In practice the turning of the stem in the proper direction will raise the plunger, the first movement thereof opening the outlet U and bringing the port Q opposite the opening E, which will permit cold water to flow from the passage D through the port and by way of the cut away portion O to the outlet U. By further raising the plunger the port Q will be caused to overlap the wall D² which separates the passages D and D' and thus permit the flow of both hot or cold. But a still further raising of the plunger will cause the port Q to register with the opening E', permitting the hot water to flow from the passage D' through the port and by way of the cut away portion to the outlet. Thus by the use of my improvement either hot or cold water may be drawn from the faucet by either raising or lowering the plunger by the proper manipulation of the valve stem, or both hot and cold water may be drawn at the same time in any desired mixture by bringing the port Q in communication with both the

hot and cold water openings E and E', and my improvement will serve the purpose of the two faucets which are generally used in bath tubs and the like, and has the further advantage of permitting the mixture of the hot and cold water before it leaves the faucet so as to draw the water at any temperature desired.

To prevent undue pressure upon the under side of the plunger I form the grooves V therein which permits the water to flow to the upper side of the plunger, thus balancing the pressure.

Having thus fully described my invention, what I claim as new and useful, is—

A valve of the kind described comprising a casing having a central bore and provided with an outlet at its lower end, and oppositely disposed threaded extensions to which hot and cold water pipes are adapted to be connected, said extensions being connected to the bore by passages extending into the bore one above the other in vertical alignment, a hollow plug slidably mounted in

said bore provided with a vertical groove, and a threaded bore, a pin mounted in the casing extending into said groove, said plug being cut-away upon one side and provided with a port upon the opposite side, a washer carried by the lower end of said plug for closing said outlet, and a valve stem mounted in the cap of the casing having a threaded lower end working in the threaded bore of the plug for operating the same so as to cause the ports of said plug to register with one of the passages of the casing or both of the passages, the surface of said plug having vertical grooves therein to permit a portion of the fluid to pass to a point above the plug for equalizing pressure thereon.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

FRANKLIN STEINER.

Witnesses:

S. S. WILLIAMSON,
EDW. W. ANSTICE.