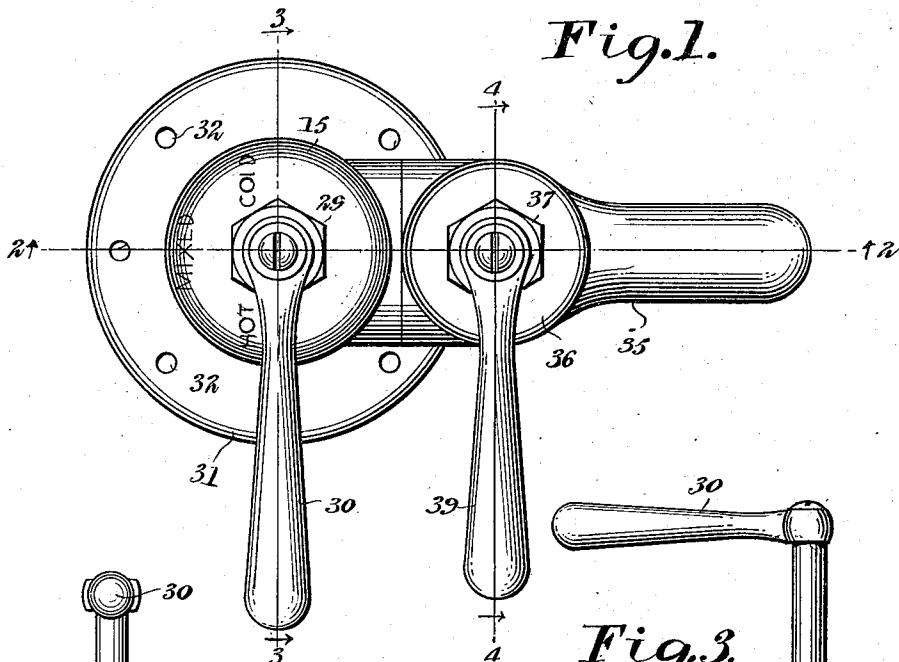
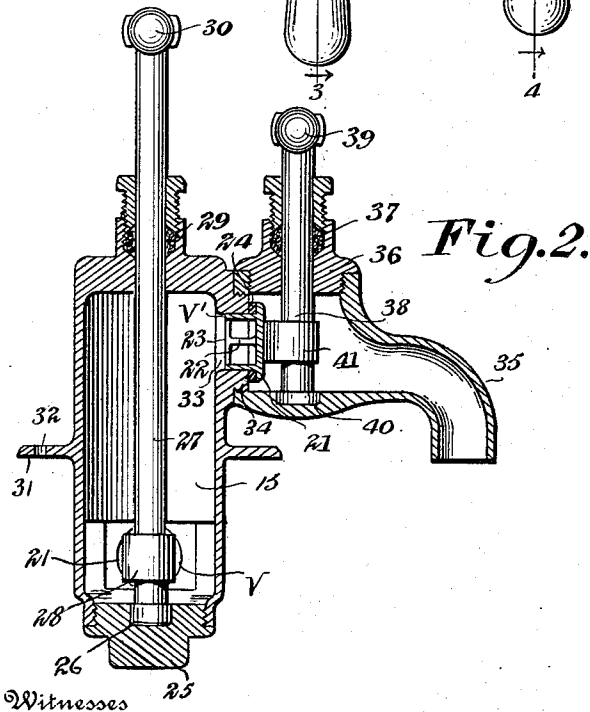
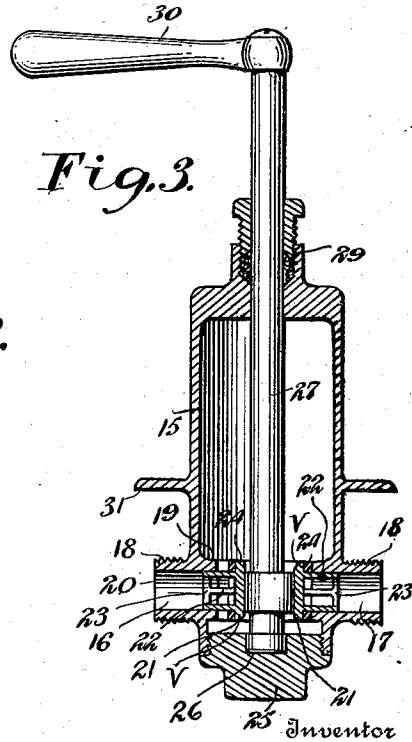


A. W. BURNEY.
WATER COCK.
APPLICATION FILED MAY 8, 1915.

1,216,940.

Patented Feb. 20, 1917.

2 SHEETS—SHEET 1.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 4.

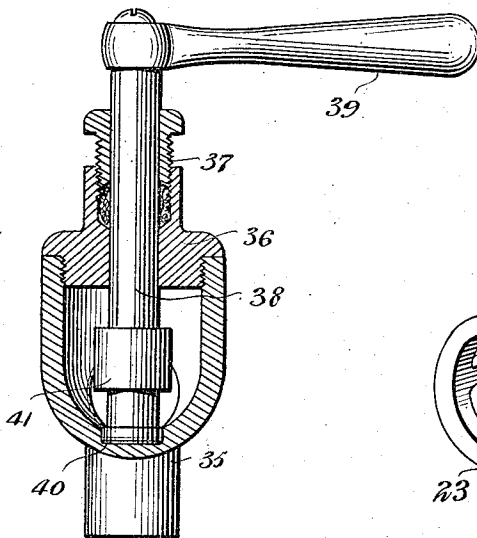


Fig. 5.

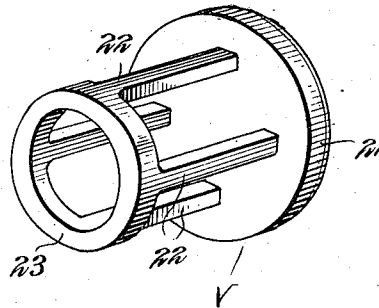
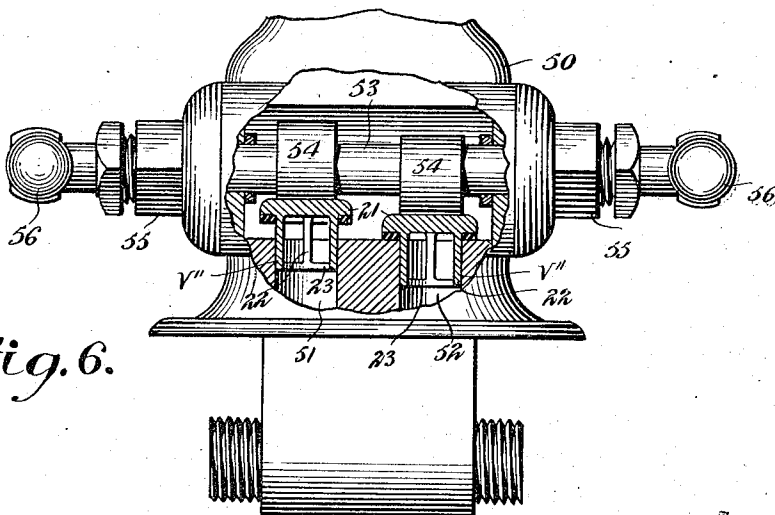


Fig. 6.



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UNITED STATES PATENT OFFICE.

ARTHUR W. BURNEY, OF LEWISTON, IDAHO.

WATER-COCK.

1,216,940.

Specification of Letters Patent.

Patented Feb. 20, 1917.

Application filed May 8, 1915. Serial No. 26,827.

To all whom it may concern:

Be it known that I, ARTHUR W. BURNEY, a citizen of the United States, residing at Lewiston, in the county of Nez Perce and State of Idaho, have invented new and useful Improvements in Water-Cocks, of which the following is a specification.

This invention relates to water cocks or faucets, and it has for its object to produce a faucet of simple and improved construction from which by the manipulation of a single handle, hot, cold, or tempered water may be drawn at will, assuming that connections have been made with sources of supply of hot and cold water.

A further object of the invention is to produce a faucet of the character described wherein the quantity of the supply of hot, cold or tempered water may be governed by the manipulation of a single valve handle.

A further object of the invention is to produce a faucet of the character described, of simple and improved construction, provided with a mixing chamber wherein hot and cold water in predetermined proportions will be mixed before being delivered through the spigot.

A further object of the invention is to produce a faucet of the character described and of simple and improved construction in which the proportionate supply of hot and cold water may be instantly determined and regulated by the manipulation of a single valve handle.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings—

Figure 1 is a top plan view of a faucet constructed in accordance with the invention.

Fig. 2 is a vertical sectional view taken on the line 2—2 in Fig. 1.

Fig. 3 is a vertical sectional view taken on the line 3—3 in Fig. 1.

Fig. 4 is a sectional view taken on the line 4—4 in Fig. 1.

Fig. 5 is a perspective detail view of one of the valve members detached.

Fig. 6 is a side elevation partly in section illustrating a modified form of the invention.

Corresponding parts in the several figures are denoted by like characters of reference.

The device, as illustrated in the drawings, comprises a cylindrical mixing chamber 15 provided with inlet ports 16, 17 for hot and cold water, respectively, said ports being surrounded by outwardly extending screw threaded flanges 18, whereby connection may be conveniently made with sources of supply of hot and cold water. The ports 16, 17 are also surrounded by inwardly extending flanges 19, the inner ends of which present smooth flat faces constituting valve seats 20. The valves V seating on the flanges 19 may be termed cage valves, each comprising a disk 21 having legs 22 guided through the ports, said legs being connected together by rings or reinforcing members 23, and said legs serving also to support a washer 24 which will constitute a packing, whereby a tight joint may be formed between each valve V and its seat. The lower end of the cylindrical mixing chamber is closed by a cap 25 having threaded connection therewith and provided with a central recess 26 disposed axially with respect to the cylindrical chamber, and wherein the lower end of the valve rod 27 is stepped, said valve rod carrying an eccentric cam 28 engaging between the valve disks 21 and so proportioned that either one of the valves V may be forced to a seated or obstructing position with respect to its port by rotation of the valve stem about its axis. It will be seen that while only one of the valves V may be tightly seated at any one time, the stem 27 may be so adjusted that both valves may be simultaneously unseated, thereby establishing communication between the mixing chamber and the sources of supply of hot and cold water. It will also be seen that by

manipulation of the stem 27, the relative positions of the valves may be varied so as to regulate the proportionate supply of hot and cold water.

5 The upper end of the mixing chamber is equipped with a gland or stuffing box 29 through which the stem 27 extends, and said stem is provided at its upper end with a handle 30, whereby it may be conveniently
10 rotated about its axis. The mixing chamber is provided intermediate its upper and lower ends with a flange 31 having apertures 32 for the passage of fastening members, such as screws or bolts, not shown, whereby it
15 may be mounted in position for operation.

The mixing chamber is provided near its upper end with an outlet port 33 surrounded by a flange 34 with which a bib or spigot 35 has threaded connection. The spigot 35
20 is provided with a cap 36 having a stuffing box 37 through which extends a stem 38 having at its upper end a handle 39, the lower end of said stem being stepped in a recess 40 in the bottom wall of the spigot. The stem
25 has an eccentric cam 41 serving to actuate a valve V' which is of the same type as the valves V, heretofore described, said valve seating on the outer face of the flange 34.

It will be seen that by proper manipulation of the stem 38 the valve V' may be
30 normally maintained in a seated condition, preventing the out-rush of water through the port 33. The stem 27 having the eccentric cam 28, whereby the valves V, V'
35 are actuated, may normally be left in any desired position since out-rush of water from the mixing chamber is prevented. As soon as the stem 38 is manipulated to relieve pressure of the eccentric cam 41 against the
40 valve v', the latter will be unseated by the out-rush of water, and the temperature of the out-rushing water may now be determined by proper adjustment of the stem 27 carrying the eccentric cam 28 whereby one or the
45 other of the valves V may be completely seated or whereby both of said valves may be permitted to open to such an extent as to determine the temperature of the water passing through the outlet.

50 In Fig. 6 of the drawings there has been shown a modified form of the invention in which 50 designates a casing or housing constituting a mixing chamber, said casing having
55 inlets 51, 52 for hot and cold water, respectively. The inlet ports are located beside each other, and are adapted to be controlled by valves V², said valves being constructed precisely like the valves V hereinbefore referred to. A stem 53 supported for
60 rotation in the walls of the housing is provided with cams or eccentrics 54 engaging the respective valves, said cams or eccentrics being oppositely disposed with respect to the axis of the stem so that when the latter
65 is rotated one of the valves may be seated,

while the other will be unseated by the pressure of the incoming fluid. It is also obvious that in an intermediate position of the stem, both valves may be partially unseated, thus permitting water to enter
70 through both ports or inlets 52. Packing boxes 55 have been provided for the two ends of the stem, which latter extends through the casing or housing and has been
75 shown as being provided with a handle 56 at each end for convenience in operation, but it is obvious that only one handle is needed. The mixing chamber 50 is to be provided with a valve controlled outlet substantially as shown in Figs. 1 to 5, inclu-
80 sive, but it is not deemed necessary to specifically illustrate the same, because the construction and operation thereof will be well understood from the foregoing description.

I desire it to be particularly understood
85 that the design of the mixing chamber and its outlet may be indefinitely varied, it being in some instances found that a vertically disposed cylindrical mixing chamber is desirable, while in other instances a horizon-
90 tally disposed cylindrical chamber may be preferred, while the design of the outlet duct and its location with respect to the mixing chamber is also capable of being indefinitely
95 varied. I particularly reserve the right to such variations in design and general structure as fall within the scope of the appended claims.

From the foregoing description taken in connection with the drawings, it will be seen
100 that I have produced a faucet of extremely simple and effective construction adapted for connection with sources of supply of hot and cold water and wherein by manipulation of a single handle, the temperature of
105 the out-rushing water may be determined, the quantity being regulated by manipulation of another handle. In the drawings the top portion of the cylindrical mixing chamber has been shown as provided with indices
110 to indicate the proper position of the handle 30. The said handle is also shown to be elevated sufficiently above the handle 39 to obviate interference of the two handles.

Having thus described the invention, what
115 is claimed as new, is:—

1. In a faucet of the character described, a cylindrical mixing chamber provided with diametrically opposed inlet ports disposed in axial alinement, said ports surrounded by
120 outwardly extending screw threaded flanges and by inwardly extending flanges, the latter forming valve seats, said cylindrical chamber being open at its lower end, valves seated on the inwardly extending flanges
125 and having guide portions guided within said flanges, an axial stem extending through the top of the casing and having a handle, said stem provided with an eccentric disk constantly engaging the two valves, said
130

valves being maintained by fluid pressure in engagement with the disk, and a closure for the lower end of the casing affording a step for the axial stem and permitting access to the valves.

2. In a faucet of the character described, a cylindrical mixing chamber provided with diametrically opposed inlet ports disposed in axial alinement, said ports surrounded by outwardly extending screw threaded flanges and by inwardly extending flanges, the latter forming valve seats, said cylindrical chamber being open at its lower end, valves seated on the inwardly extending flanges and having guide portions guided within said flanges, an axial stem extending through the top of the casing and having a handle, said stem provided with an eccentric disk constantly engaging the two valves, said valves being maintained by fluid pressure in engagement with the disk, and a closure for the lower end of the casing affording a step for the axial stem and permitting access to the valves, said mixing chamber being provided with a valved outlet arranged in a plane above that of the outwardly extending screw threaded flanges which constitute water inlets.

3. In a faucet of the character described, a cylindrical mixing chamber provided with diametrically opposed inlet ports disposed in

axial alinement, said ports surrounded by outwardly extending screw threaded flanges and by inwardly extending flanges, the latter forming valve seats, said cylindrical chamber being open at its lower end, valves seated on the inwardly extending flanges and having guide portions guided within said flanges, an axial stem extending through the top of the casing and having a handle, said stem provided with an eccentric disk constantly engaging the two valves, said valves being maintained by fluid pressure in engagement with the disk, and a closure for the lower end of the casing affording a step for the axial stem and permitting access to the valves, said mixing chamber being provided with a valved outlet arranged in a plane above that of the outwardly extending screw threaded flanges which constitute water inlets, the stem of the outlet valve being provided with a handle, and said handle and the handle of the axial stem in the mixing chamber being located in different horizontal planes.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR W. BURNEY.

Witnesses:

S. A. ROBERTS,
J. N. PATTERSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."