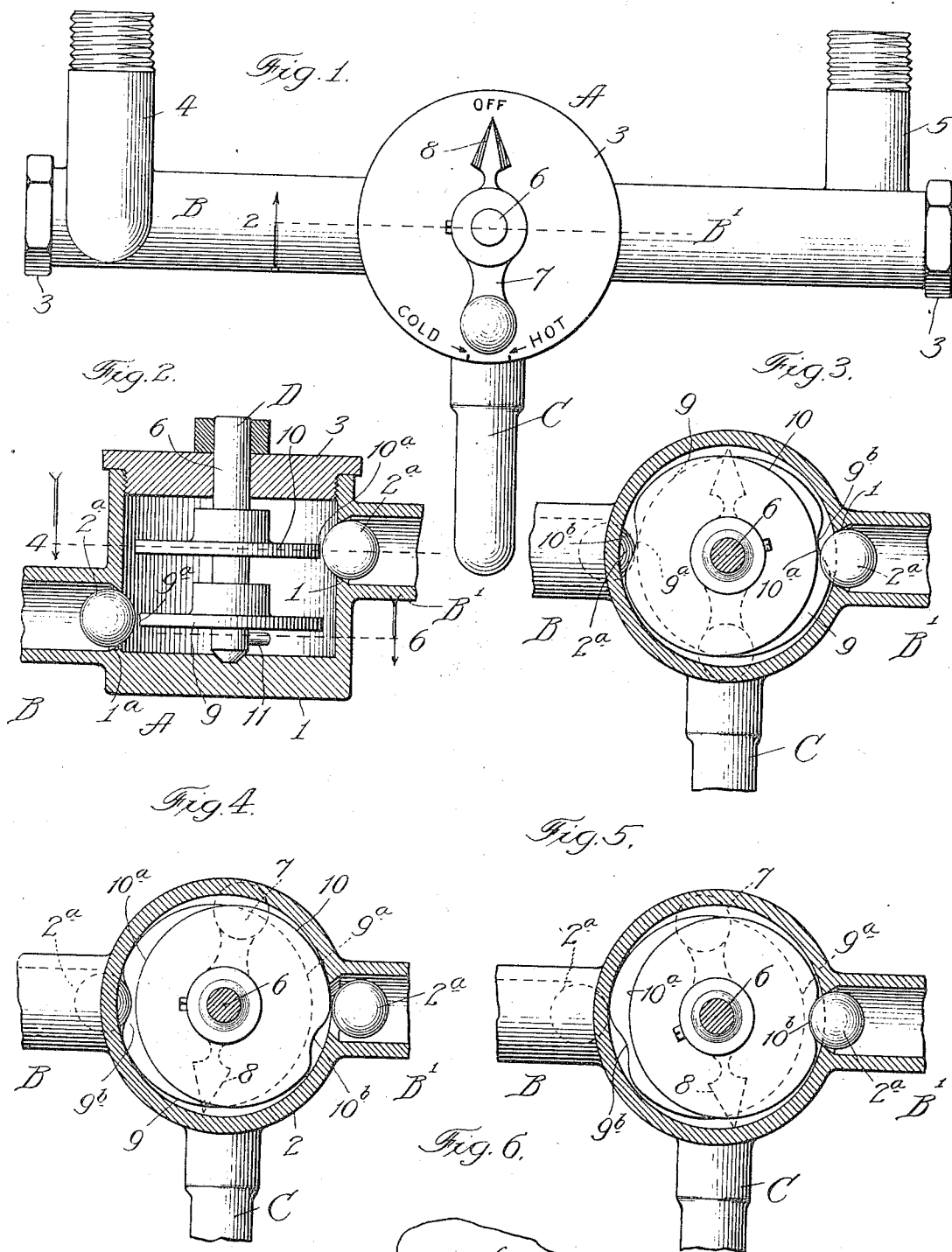
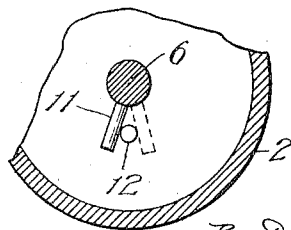


1,024,175.

Patented Apr. 23, 1912.



Witnesses:
 Chas. H. Bull
 H. J. Chase



Inventor:
 James H. Boye.
 By Dyrenforth, Lee, Christian & Wiles
 Attys.

UNITED STATES PATENT OFFICE.

JAMES H. BOYE, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOHN L. FLANNERY, OF CHICAGO, ILLINOIS.

FAUCET.

1,024,175.

Specification of Letters Patent.

Patented Apr. 23, 1912.

Application filed September 7, 1911. Serial No. 648,232.

To all whom it may concern:

Be it known that I, JAMES H. BOYE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Faucets, of which the following is a specification.

My invention relates to faucets adapted to supply either hot or cold water, or any desired mixture thereof.

My primary object is to provide a faucet of improved construction and operation, which will enable either hot or cold water to be secured in adequate volume, and any desired mixture of hot and cold water to be secured by the operation of a single actuating device.

The invention is adapted for use, among other purposes, in connection with bath-tubs, wash-bowls, sinks, etc.

My invention is illustrated in its preferred embodiment in the accompanying drawing, in which—

Figure 1 represents a plan view of a faucet constructed in accordance with my invention; Fig. 2, a broken vertical section taken as indicated at line 2 of Fig. 1, this view showing the valves controlling the hot and cold water conduits closed; Fig. 3, a broken plan section taken approximately as indicated at line 4 of Fig. 2, with the valve-unseating cams in the position shown in Figs. 1 and 2; Fig. 4, a section taken as indicated at line 4 of Fig. 2, but showing the cams in such position as to wholly unseat the valve controlling the cold water admission, while the valve for controlling the hot water admission remains seated; Fig. 5, a similar section showing the cold-water-controlling valve seated and the hot-water controlling valve unseated; and Fig. 6, a broken section taken as indicated at line 6 of Fig. 2, and showing a stop-device for limiting the oscillating movements of the rotary shaft which carries the valve-unseating cams.

In the construction illustrated, A represents a casing or mixing chamber; B, a hot water conduit connected with the cylindrical wall of the casing; B¹, a cold water conduit connected with the cylindrical wall of the casing at a point diametrically opposite; C, a discharge-spout connected with the cylindrical wall of the casing at a point midway between the points of communication of the supply-conduits; and D, valve-unseating

mechanism. The casing preferably comprises a rear or lower wall, or disk, 1, having an upwardly-projecting flange constituting a cylindrical wall 2; and a removable front or top plate 3, which may have threaded connection with the wall 2, as shown in Fig. 2.

The inlet-conduits B and B¹ are preferably located in different planes. At their points of communication with the mixing-chamber, they are provided with valve-seats 1^a contacted by inwardly-seating ball-valves 2^a which project somewhat within the mixing-chamber. The conduits B and B¹ are in the form of pipes equipped with removable end-plugs 3. The branch pipe, or nipple, 4 communicates with the conduit B; and a branch-pipe, or nipple, 5 communicates with the conduit B¹. Connection may be made with the water-supply pipes of a building through said nipples.

The valve-unseating mechanism D comprises a shaft 6 which extends through the top or front wall 3 of the chamber A and has its outer end equipped with an actuating-handle 7 provided with a pointer 8; and cams 9 and 10 fixedly mounted on the shaft within the chamber A. The cam 9 is located in the same plane as the valve controlling the conduit B; and the cam 10 is located in the same plane as the valve controlling the conduit B¹. The cams are shown as eccentrically mounted disks having the low portions 9^a and 10^a, respectively. The high portions of the cams are recessed, or cut away, as indicated at 9^b and 10^b, respectively. In the form shown, the cams are similar in contour, and are fixed on the shaft in angular relation to each other. That is to say, the lowest point of the low portion 9^a of the cam 9 is approximately 180° from the lowest point of the low portion 10^a of the cam 10; and consequently the recess 9^b of the cam 9 is approximately (although not quite) 180° from the recess 10^b of the cam 10.

The disk, or plate, 3 serves as an index or dial over which the pointer 8 plays. Thus, the upper or outer surface of the plate 3 is marked at its rear portion with the word "Off", which indicates, when the pointer is turned to that point, that both the hot and cold water are shut off; and the front portion of the outer surface of the plate 3 is marked with the words "Hot" and "Cold", spaced a short distance apart,

and indicating, when the pointer is turned to one or the other, all hot or all cold water, as the case may be.

In Fig. 6, the lower portion of the shaft 6 is shown equipped with a stud 11, which is adapted to engage a stud, or stop, 12, which projects upwardly from the lower wall 1 of the mixing chamber. The full-line position of the stud 11 corresponds with the position of the cams when the pointer 8 points to the word "Cold" in Fig. 1; and the dotted line position of the stud 11 corresponds with the position of the cams when the pointer points to the word "Hot" in Fig. 1. The stop for limiting the rotation of the shaft 6 may or may not be employed, according to desire. When the pointer is in the position shown in Fig. 1, the low points 9^a and 10^a of the cams are adjacent the hot-water-controlling valve and the cold-water-controlling valve, respectively, but not in contact therewith. Rotation of the shaft in one direction will give a mixture of hot and cold water, that is tepid water, and will then give, when the pointer reaches the cold-index position, an entirely cold supply. When the shaft is rotated from the closed position in the opposite direction, a mixture will first be given, and then, when the pointer points to the hot-index point, an entirely hot supply will be obtained.

From the foregoing description, it will be understood that it is possible, with my improved construction, to secure an abundant supply of either hot water or cold water, or to secure any desired mixture, by actuating a single valve actuating device.

While the use of similar cams and the described arrangement are preferred, the invention is not limited thereto; nor is it essential that the cams should be separately formed.

The foregoing detailed description has been given for clearness of understanding only, and no undue limitation should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is—

1. A device of the character set forth, comprising a mixing-chamber equipped with an outlet-passage and equipped with inlet-conduits, inwardly-seating valves in said conduits projecting into said mixing-chamber, a shaft extending into said mixing-chamber and equipped with valve actuating means comprising a pair of similar cams mounted on said shaft and adapted to contact with the respective valves, said cams having low portions disposed in angular relation to each other and having high portions provided with recesses, whereby either valve may be held in unseated position while the other valve remains in the seated position.

2. A device of the character set forth, comprising a cylindrical casing equipped with an outlet-spout and equipped with inlet-conduits communicating through the cylindrical wall of the casing, ball-valves in said conduits projecting into the casing, a shaft extending into the casing and equipped with a pair of cams corresponding with said valves and having peripheral portions adapted to contact directly with said ball valves, and means for actuating said shaft.

3. A device of the character set forth, comprising a mixing-chamber equipped with an outlet-spout and equipped with a pair of inlet-conduits located in different planes, ball-valves in said conduits seating toward the mixing-chamber and projecting therein, a handle-equipped shaft extending into the mixing-chamber and equipped with a pair of cams located in the planes of the respective valves, said cams having low portions substantially 180° apart and high portions provided with recesses approximately 180° apart, for the purpose set forth.

JAMES H. BOYE.

In presence of—

J. G. ANDERSON,
R. A. SCHAEFER.