

No. 693,315.

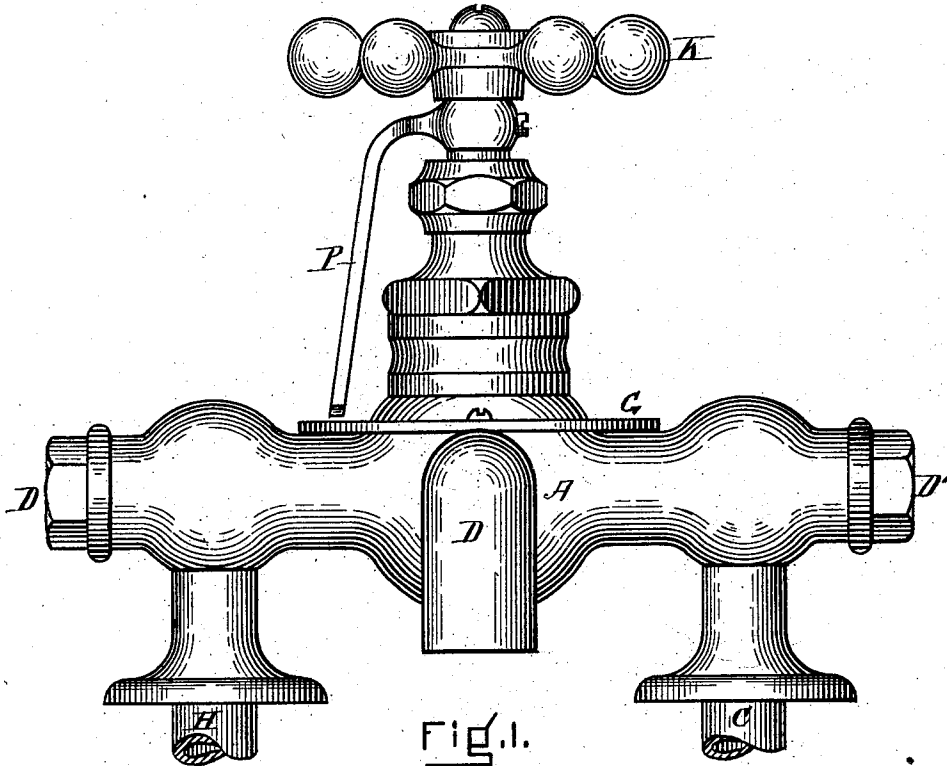
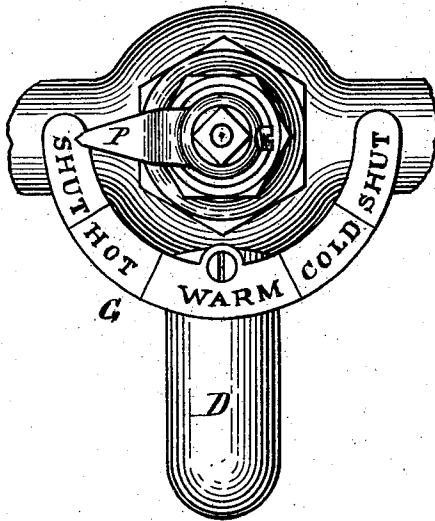
Patented Feb. 11, 1902.

G. A. SODERLUND.
COMBINATION FAUCET.

(Application filed Apr. 23, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

Frank G. Parker
Clarence Bodenstein

INVENTOR

Eustice A. Soderlund.

No. 693,315.

Patented Feb. 11, 1902.

G. A. SODERLUND.
COMBINATION FAUCET.

(Application filed Apr. 23, 1900.)

(No Model.)

2 Sheets—Sheet 2.

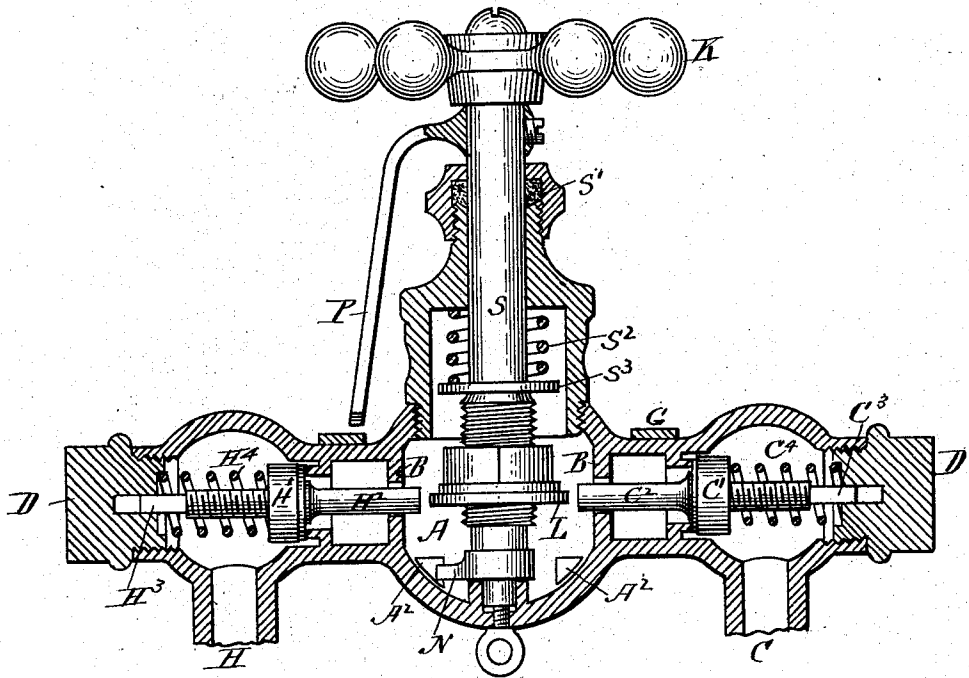


Fig. 3.

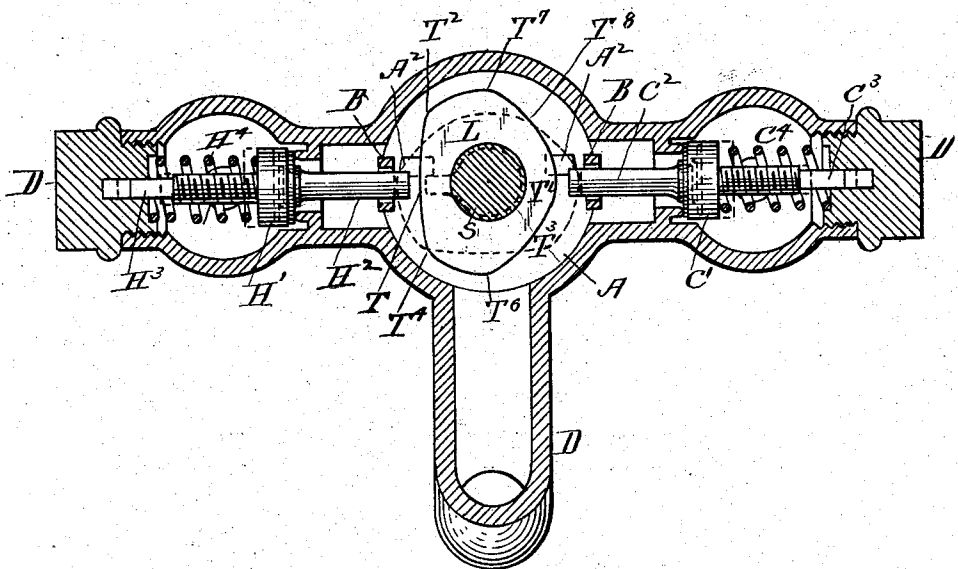


Fig. 4.

WITNESSES
Frank G. Parker
Clarence Bodenstein

INVENTOR

Gustave A. Sobelwood.

UNITED STATES PATENT OFFICE.

GUSTIVE A. SODERLUND, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS TO NILS J. SODERLUND AND OSCAR L. SODERLUND, OF MEDFORD, MASSACHUSETTS.

COMBINATION-FAUCET.

SPECIFICATION forming part of Letters Patent No. 693,315, dated February 11, 1902.

Application filed April 23, 1900. Serial No. 14,042. (No model.)

To all whom it may concern:

Be it known that I, GUSTIVE A. SODERLUND, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in a Combination-Faucet, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of faucets in which the arrangement is such that by the turning of a single hand wheel or lever either hot or cold water or water of an intermediate temperature may be made to flow from the mouth of the faucet; and it consists in combining with the hot and cold water pipe at their junctions with the faucet cam-operated valves and in connected mechanism for perfecting the operation of the parts.

The object is to so improve the construction of this class of faucets that there shall be no danger of disarrangement of the parts or failure to operate.

The object I attain by the mechanism shown in the accompanying drawings, in which—

Figure 1 shows one of my faucets in front elevation. Fig. 2 is a view showing in plan parts that relate to an indicating device. Fig. 3 is a vertical section of the entire device. Fig. 4 is a horizontal section of the same.

In the drawings I have indicated the cold-water pipe by C and the hot-water pipe by H and the discharge by D. The discharge-nozzle D leads from the receiving-chamber A, which is centrally located, as shown in Figs. 3 and 4. The valves C' and H' have stems C² C³ and H² H³ and are each provided with closing springs. (See C⁴ and H⁴.) The stems C² C³ and H² H³ extend both sides of their respective valves. Thus the parts C² and H² extend from the faces of the valves through the guides BB into the central or receiving chamber A, and the parts H³ C³ extend through the springs H⁴ C⁴ and have square ends which fit loosely into recesses formed in the end plugs D and D', so that the valves cannot turn on their axes. The hot and cold water valves H' and C' are operated by the following-described device: A bisymmetrical cam L, Figs. 3 and 4, is rigidly attached to the shaft S. This shaft S passes up through the stuffing-

box S' and is provided with a hand-wheel K and has attached to it a pointer P, the end of which traverses over the graduated plate G, which is divided into sectors marked "Shut," "Hot," "Warm," "Cold," "Shut." (See Fig. 2.) The lower end of the valve-shaft S has a stop-arm N, which is adapted to engage with the fixed stops A² A², and thus prevent the cam L from being turned too far either to the right or left.

S² is a spring which is placed between the disk S³ on the valve-shaft S and the upper wall of the chamber A, so as to bring a certain amount of friction upon the shaft S, and thus hold it in any position in which it is left by the user.

My combination-faucet works as follows: When the cam L occupies the position shown in Fig. 4, the pointer P stands at "Shut" on the left, as shown in Fig. 2, and the points T' T' are opposite the ends of the valve-stems H² C². To open the hot-water valve H', the handle K is turned from the left toward the right, bringing the pointer P onto the division "Hot." This will turn the cam L, so that the part T² will act on the valve H' and open it, thus letting on the hot water, the point T³ being opposite the valve-stem C². Now by turning the cam L more to the right the pointer P will occupy the division "Warm," and the points T⁷ T⁶ of the cam will be in contact with the valve-stems H² C² and force both valves open, letting on hot and cold water, which, mixing, gives "Warm." Now a further turning of the cam will bring the point T⁴ against the valve-stem C², and thus allows it to remain open; but the point T⁸ will be opposite the stem H² of the hot-water valve H', and thus allow it to close, so that only cold water can flow. A continued rotation of the cam will complete its full half-turn, and the pointer P will stand at "Shut" on the right hand. The point T' of the cam will be opposite the stem H² and the point T will be opposite the stem C'—that is, both valves will be closed.

I claim—

1. In a combination-faucet; a central receiving-chamber having a discharge-nozzle, and valvular connections with the hot and

cold water supply pipes; hot and cold water valve-chambers provided with valve-seats, adapted to receive valves, which in opening move away from the said central receiving-chamber, each of said chambers having two openings beside the valve-opening, that is, an inlet water-supply, and a screw-plugged opening large enough to admit of the placing and adjusting the water-valve; and a bisymmetrical cam adapted to operate said valves, substantially as and for the purpose set forth.

2. In a combination-faucet; a central receiving-chamber having a discharge-nozzle, and valvular connections with the hot and cold water supply pipes; hot and cold water valve-chambers provided with valve-seats, adapted to receive valves, which in opening move away from the said central receiving-chamber, said valve-chambers having screw-plugged openings large enough to receive, from the exterior, the hot and cold water valves; said hot and cold water valves; having stems extending in both directions from the valve and adapted to act as guides, their

outer ends being squared and adapted to fit loosely in recesses made in the end plugs; said end plugs; and a bisymmetrical cam adapted to operate said valves, substantially as and for the purpose set forth.

3. In a combination-faucet a central receiving-chamber having a discharge-nozzle and valvular connection with hot and cold water pipes; valves adapted to open and close said hot and cold water pipes; a cam adapted to operate said valves, mechanism for operating said cam, and a spring adapted to frictionally hold said cam in any position in which it is set, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 29th day of March, A. D. 1900.

GUSTIVE A. SODERLUND.

Witnesses:

FRANK G. PARKER,
CLARENCE BODENSTEIN.