(Model.)

F. SCHRUMPF.

STOP COCK.

No. 243,731. Patented July 5, 1881.

Fig 1.

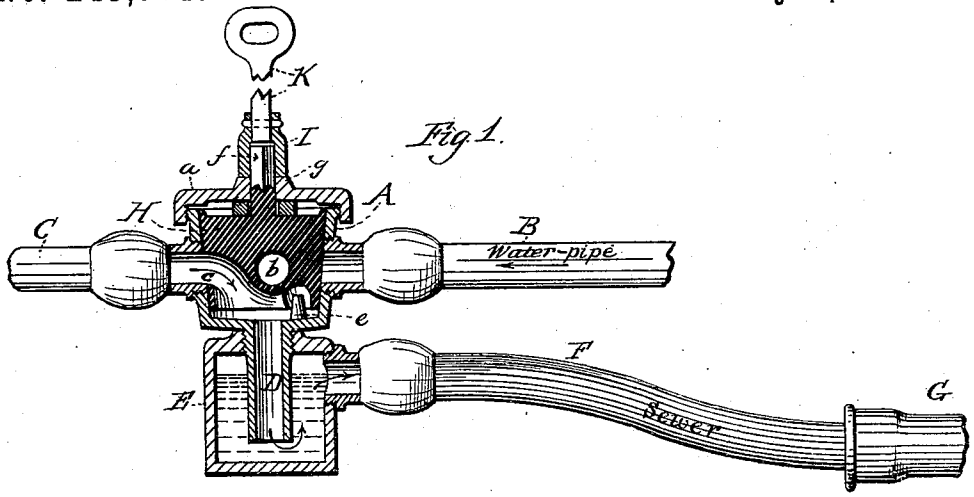


Fig. 2.

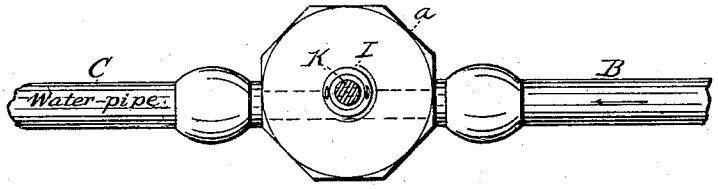
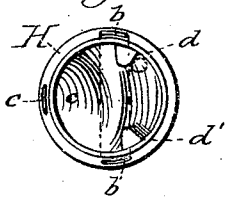


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK SCHRUMPF, OF CHICAGO, ILLINOIS.

STOP-COCK.

SPECIFICATION forming part of Letters Patent No. 243,731, dated July 5, 1881.

Application filed February 23, 1881. (Model.)

To all whom it may concern:

Be it known that I, FREDERICK SCHRUMPF, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Stop-Cocks, of which the following is a specification.

My invention relates to stop-cocks for shutting off the water in houses and for hydrants; and it consists in the peculiar novel devices and combinations of devices embodied in my stop-cock, as fully hereinafter explained, and pointed out by the claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a vertical section of the stop-cock, the connections with the same being shown in elevation, and the cock being turned to shut off the supply of water and to allow the water in the house-pipes to run off into the sewer; Fig. 2, a top view of the stop-cock, the dotted lines indicating the direct passage for the water-supply; and Fig. 3, a bottom view of the cock or valve.

Like letters denote corresponding parts in all three figures.

A is the case of the stop-cock, which has a tapered bore, as shown, and a screw-cap, *a*.

To opposite sides of the case A are connected the water-pipes B C, the pipe B being connected with the water-main in the street, while the pipe C is connected with the system of pipes in the house.

From the bottom of the case A projects downwardly a short pipe, D, surrounded by a box, E. Out of the side of this box, above the lower end of the pipe D, extends a pipe, F, which is connected with the sewer G.

H is the cock or valve, which is tapered to fit the bore of the case A. It has a water-passage, *b*, extending horizontally straight through the same on a level with the pipes B C, and at right angles to the passage *b* the valve has a curved passage, *c*, extending from the side of the valve on a level with the pipe C and through to the bottom of the valve, connecting with the waste-pipe D, and thus making a three-way cock or valve. The valve is provided with shoulders *d d'* on its bottom, which strike a stud, *e*, projecting upwardly from the bottom of the valve-case. The shoulders and stud limit the movement of the valve. When water is being supplied to the house the valve is turned so as to bring the passage *b* in line with the pipes B C, one of the shoulders *d d'* resting against the stud *e*. The water then flows from the pipe B through the stop-cock to the pipe C, and thence into the system of pipes in the house, all connection with the waste-pipe D being cut off. Now, when it is desired to shut the water off from the house, the valve is turned until the other shoulder strikes the pin *e*. This movement closes the pipe B and brings the passage *c* into connection with the house-pipe C, as shown in Fig. 1. The water in the system of house-pipes then runs back into the stop-cock and passes out through the pipe D, box E, and pipe F into the sewer G.

It will be seen that, the water having a free outlet into the sewer, and the pipes D and F being of the same size, or nearly the same size, as the pipes B C, the water will run quickly out of the house-pipes before it can possibly freeze. The water being carried off by the sewer, instead of being allowed to soak into the ground beneath the cellar-floor, no dampness can result, and other objections to the method heretofore employed will be overcome. The water-seal formed by the box E prevents the sewer-gas from entering the cock or water-pipes.

The valve-stem *f* projects up through the cap *a*, and is squared to receive the socket I. This socket is attached to the lower end of the rod K, forming therewith the turn-key for operating the valve. Heretofore the weight of this turn-key has been wholly supported by the valve-stem, and that weight, together with the pressure brought to bear upon such turn-key, has often forced the valve into the bore of the case and caused it to stick so that it could not be turned. This objection I overcome by making the stem *f* and socket I of such relative length that the socket will rest on the cap *a*, as shown, such cap being provided with a central annular projection, *g*, for that purpose.

These same devices can be applied to hydrants without material modification, as will be readily understood.

What I claim as my invention is—

1. In a stop-cock, the combination, with casing A, having water-pipe branches B C, bottom waste-pipe, D, and screw-cap *a*, of the tapered valve-plug H, having horizontal passage *b*, and the curved downward leading passage *c*, and arranged to either connect pipes B C, or with a quarter-turn to connect pipes C and D, all substantially as and for the purpose described and shown.

2. In a stop-cock for the purpose set forth, the combination, with the casing A, having screw-cap *a*, and the valve-plug H, having stem *f*, of the turn-key socket I, resting upon the screw-cap *a*, substantially as and for the purpose set forth.

3. In a stop-cock, the combination, with valve-casing A, having bottom nozzle, D, of box E, secured to said casing over nozzle D, and having waste-pipe F, substantially as and for the purpose described and shown.

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