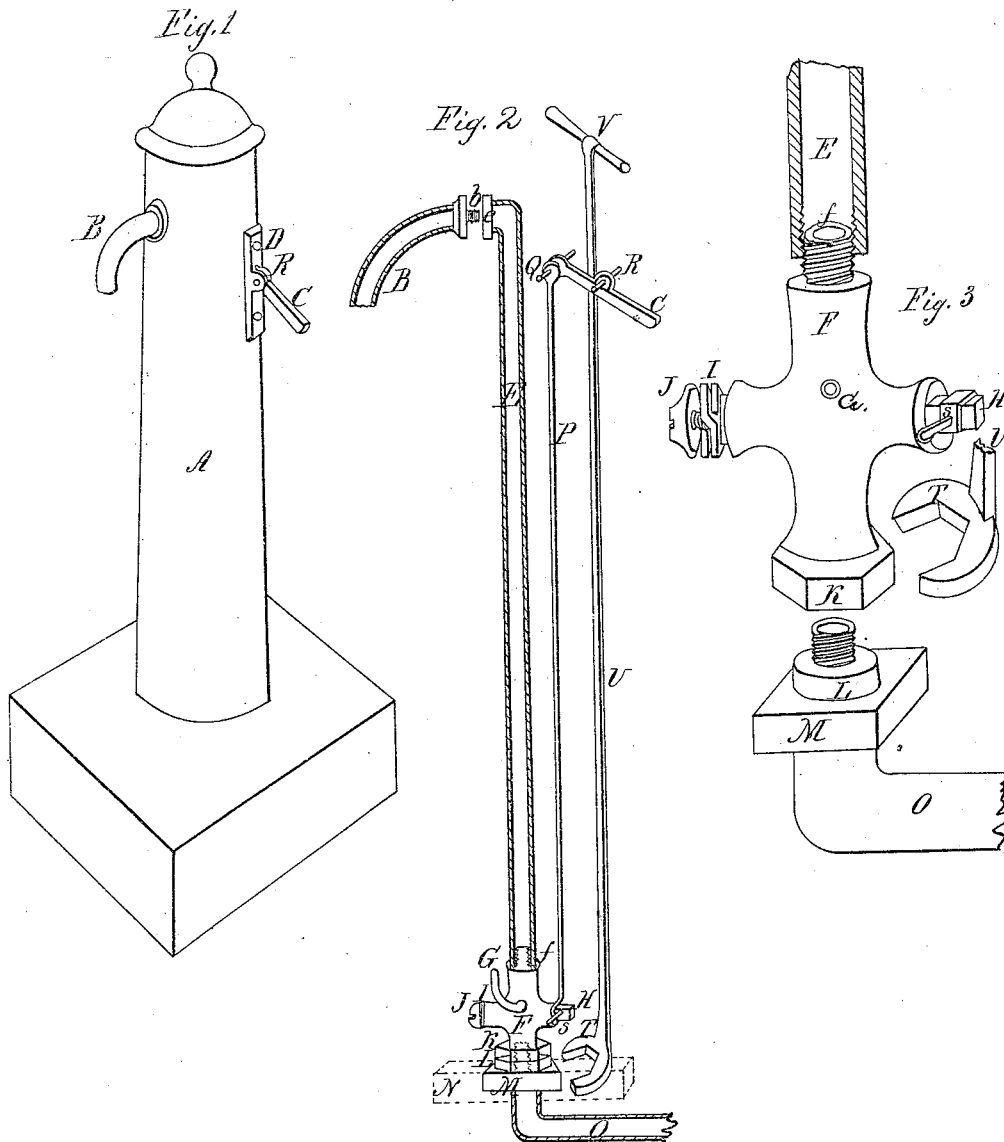


*Biggs & Flinn,*

*Hydrant.*

*N<sup>o</sup> 53,944.*

*Patented Apr. 17, 1866.*



*Witnesses*  
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*Jacob Stauffer*

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# UNITED STATES PATENT OFFICE.

HENRY C. BIGGS AND ANDREW C. FLINN, OF LANCASTER, PENNSYLVANIA.

## IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. 53,944, dated April 17, 1866.

*To all whom it may concern:*

Be it known that we, HENRY C. BIGGS and ANDREW C. FLINN, plumbers, of the city of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented a new and Improved Mode of Constructing and Operating Hydrants; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an external view. Fig. 2 shows the internal arrangement of the several parts, also the long-handled wrench. Fig. 3 is an enlarged view of the stop-cock and its connections disconnected.

The object of our invention is to overcome the disagreeable necessity of digging up the stock or hydrant-casing in order to get at the stop-cock or its parts when out of repair. This is always a dirty and laborious job, as well as attended with expense, to say nothing of the pavement taken up, injury to the stock, and other considerations. This object is accomplished by constructing the ordinary stop-cock on a different plan than heretofore used for this purpose.

Fig. 3 shows the structure of the stop-cock, either made of brass, composition-metal, or cast-iron. The key is moderately tapered, entering horizontally, with a projecting square head, H, at one end. The other is held by a screw, J, having a flat, circular, or spiral spring, I, between it and the end of the key, into which the screw enters, for the purpose of a graduated and more uniform action of the key, and in order to lessen friction and the consequent wear of the same. To the projecting end H there is an arm, either cast on or on a band around it, or in part, and held by rivets. (Shown by S.) The vertical portion of the stop-cock (for the passage of the water) has a screw-connection with the connecting discharge-pipe E on its upper end. On the lower end of the vertical cylinder F there is a stout hexagonal or otherwise angled flange, K, with a female screw and washer, by which it is connected with the supply-pipe O. The supply-

pipe has an entering-screw and jam-nut or follower, L, above the square head M. This head M is fitted into a wooden block or other material to prevent the supply-pipe from turning while unscrewing the cock, and kept in place by the jam-nut. The upper portion of the discharge-pipe E has also an enlarged neck and female screw in the short curve, into which the screw end of the nozzle B is made to fit from the outside, provided also with a covering-flange, b. To the projecting arm S on the head H of the key a rod, P, is attached and carried up to the inner end, Q, of the lever C, held by a pivot-pin. The lever C is held by a pivot-pin in the eared external plate, D, Fig. 1. By operating the lever C up or down the lever arm and connection S with the rod P turns the key and admits the passage of the water. By a reverse motion it is of course closed. In this respect the stop-cock and key are similar to those in common use, with this difference, however, that there is no weight resting on the top of the key, as is the case with those in use. The weight of the rod is relieved by its upper connection, in which it hangs at Q. Consequently the dead weight of the rod on the cock is obviated also. Otherwise the hydrant or casing may be after any desired pattern, as it admits of being put into a narrow compass and of being set the ordinary depth into the ground below the reach of freezing.

When out of repair (as the best hydrants will require repair at times) all that needs to be done is to unscrew the nozzle, take out the pin Q to disconnect the rod P from the lever C, slip down the long-handled wrench V U T, adapted to the angles on the stout base K, which grasp and unscrew the cock at its connection with the supply-pipe O and remove it from the stock for repairs. This is easily done and readily understood, and as readily replaced and again operated after the repairs are made.

We also have an opening, G, in the stop-cock F for a waste-pipe, G, Fig. 2, as shown. In the summer season, when water is scarce, this may be stopped with a plug and the waste prevented, so necessary to escape in winter, to prevent freezing.

Those several improvements, either separately or collectively considered, cannot fail to recommend this invention to all interested.

What we claim as our invention, and desire to secure by Letters Patent, is—

The construction and arrangement of the horizontal key H I J, in combination with the lever attachment P Q R S C, together with the vertical barrel F and its angled base K, in com-

bination with the claw and rod T U, all arranged and operated in the manner and for the purpose specified.

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Witnesses:

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