2 Sheets—Sheet 1.

J. F. FORNS & J. E. MOONEY.

BASIN COCK.

No. 181,929. Patented Sept. 5, 1876.

Fig. 1.

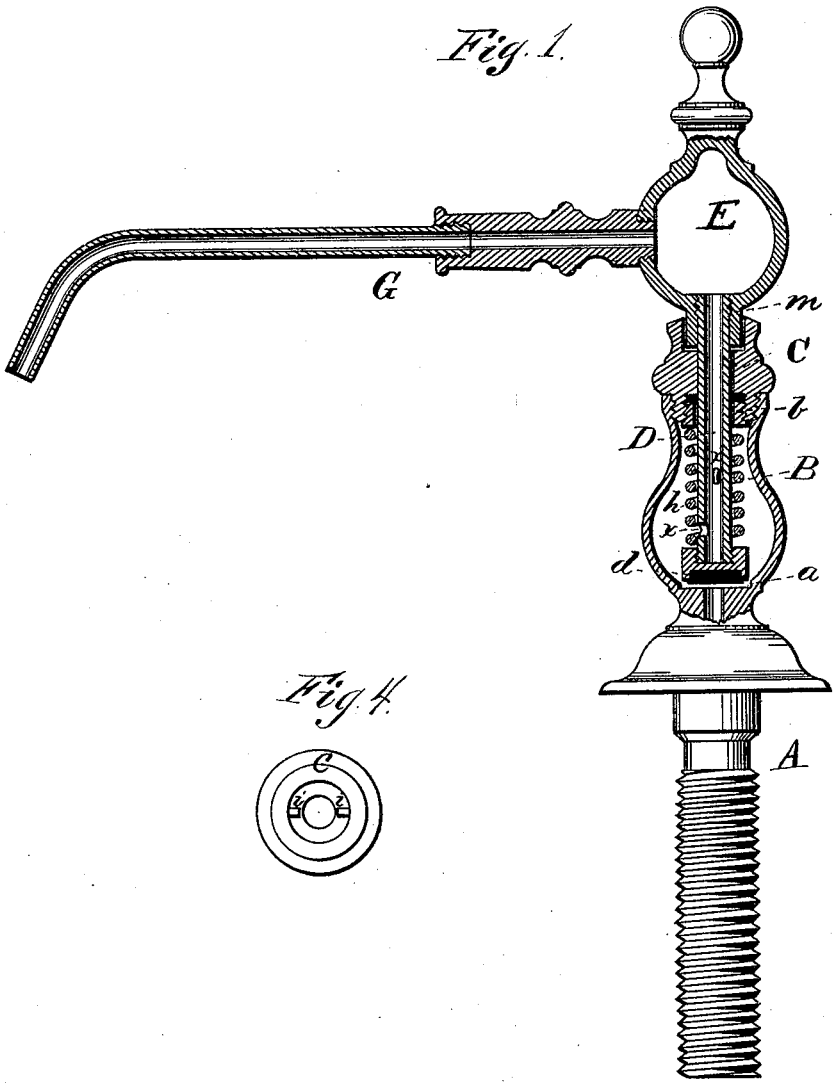

Fig. 4.

WITNESSES

Robert Everett

Eugene M. Johnson

Joseph F. Forns INVENTOR and

Joseph E. Mooney.

Gilmore, Smith & Co. ATTORNEYS

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Fig. 2.

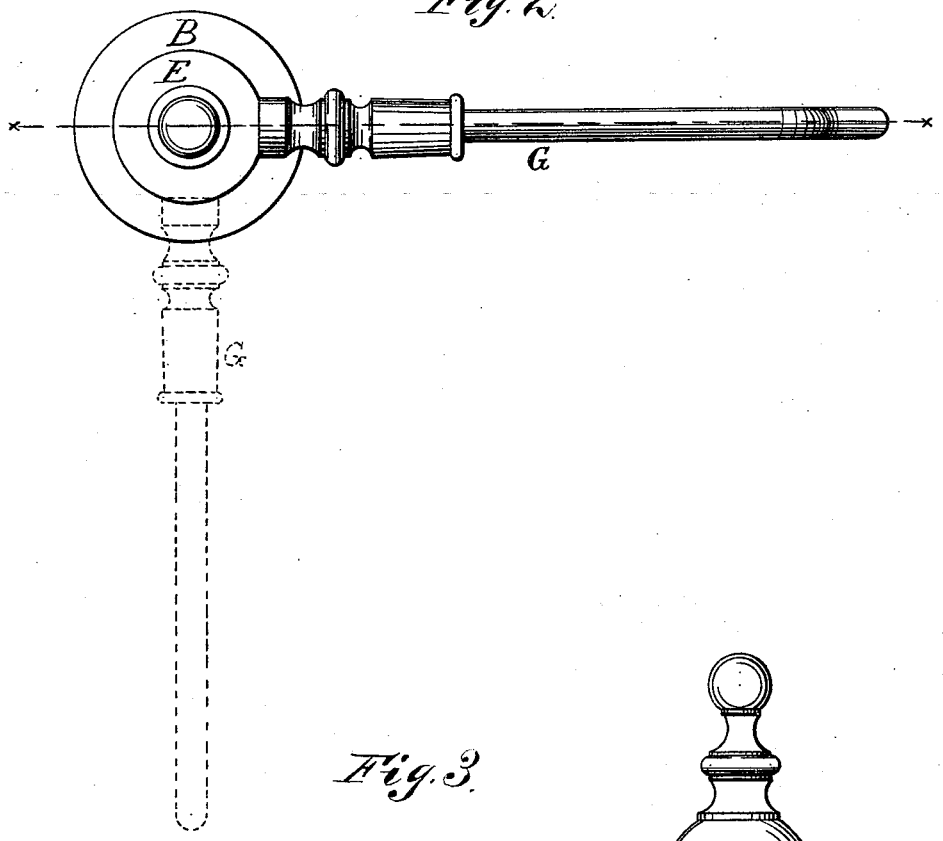
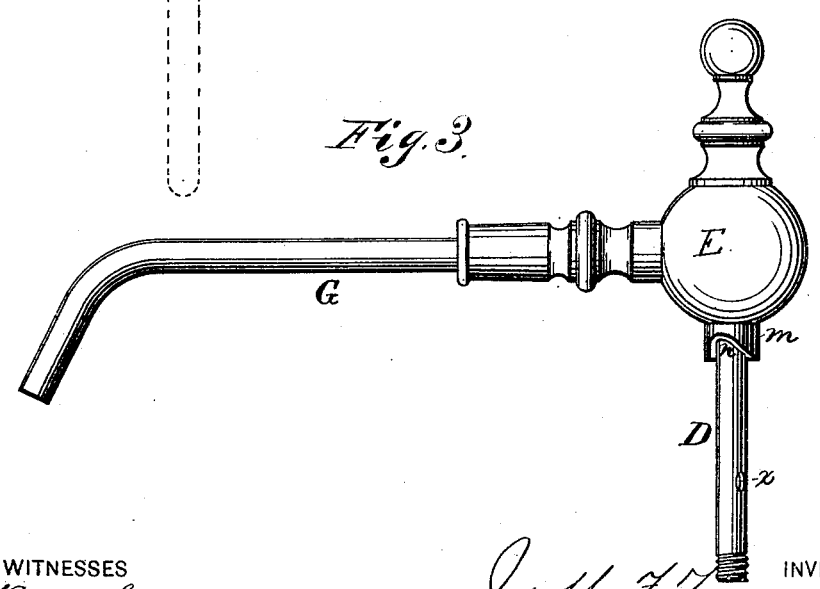


Fig. 3.



WITNESSES

Robert Everett

Eugene F. Johnson

INVENTOR

Joseph F. Forns and Joseph E. Mooney.

Gibson Smith & Co. ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH F. FORNS AND JOSEPH E. MOONEY, OF BALTIMORE, MARYLAND, ASSIGNORS OF ONE-THIRD THEIR RIGHT TO JOSEPH F. BROADBENT, OF SAME PLACE.

IMPROVEMENT IN BASIN-COCKS.

Specification forming part of Letters Patent No. **181,929**, dated September 5, 1876; application filed April 29, 1876.

To all whom it may concern:

Be it known that we, JOSEPH F. FORNS and JOSEPH E. MOONEY, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and valuable Improvement in Self-Closing Basin-Cock with Self-Swinging Nozzle; 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 annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of our basin-cock, and Fig. 2 is a plan view of the same. Fig. 3 is a side elevation, showing the cam *n;* and Fig. 4 is a detail view.

Our invention has relation to that class of basin-cocks which automatically close the valve in the water-supply pipe, and at the same time partially rotate the nozzle; and it consists in the employment of an automatic swinging nozzle having a closing-valve and a spring encircling the valve-rod, which performs the double function of operating the nozzle and closing the valve, the tension of said spring operating on the valve in a direction opposite to the force exerted by the pressure of the water from the main on the valve, whereby the liability of bursting the pipes from the pressure of water is lessened, as will be hereinafter more fully set forth.

In the annexed drawings, A represents the usual pipe to connect with the water-supply pipe, and pass through the stand for the basin, it being provided with a valve-chamber, B, at its upper end, at the bottom of which is the valve-seat *a*. In the upper end of the valve-chamber B is screwed the plug or cap C, through the center of which is passed the valve-rod D, said valve-rod being packed by a stuffing-box, *b*, in the lower end of the plug. The valve-rod D is made in one piece, so as to prevent leakage, which is liable to occur when said hollow rod is made in two or more parts. On the lower end of the rod D is secured the valve *d*, between which and the stuffing-box *b*, surrounding the valve-rod, is a spiral spring, *h*, which holds the valve *d* down on its seat *a* with sufficient force to prevent leakage.

It will be seen that the force of the spring *h* operates on the valve in a direction opposite to that of the force exerted on the valve by the pressure of the water from the main, which tends to prevent the bursting of the pipes from the pressure of water, which is liable to occur in that class of self-closing basin-cocks in which the pressure of the water and the force of the spring operating the valve are exerted in the same direction.

The valve-rod D is made hollow or tubular, open at its upper end, and provided within the valve-chamber with a series of perforations, *x x*, for the admission of water into the same. On the upper end of the hollow valve-rod D is screwed the globe or chamber E, from which the nozzle G projects. The chamber E is, on its bottom, provided with a projecting tube or collar, *m*, into which the valve-rod is screwed, and which fits within a recess made in the top of the plug or cap C. On opposite sides of the hub or collar *m* are made two notches, *n n*, each of which is formed with one perpendicular and one long inclined side. In the recess of the plug C are two pins, *i i*, which pass into said notches, and act as stops for the turning of the nozzle.

The normal position of the nozzle is away from the basin when the valve is closed, and the vertical sides of the notches *n* bear against the pins *i*. By now swinging the nozzle around till it stands over the basin the inclined sides of the notches *n* ride up on the pins *i*, raising the valve *d* from its seat, and allowing the water to pass up through the perforations *x* into the hollow valve-rod, and into the chamber E, and out through the nozzle G. As soon as the pressure on the nozzle is removed the spring *h*, in conjunction with the inclines upon the pins *i*, closes the valve, and at the same time swings the nozzle out of the way, thus leaving the basin free from obstruction.

By our invention we combine the self-swinging nozzle and the self-closing cock, the spring having double action, and therefore answering both purposes. By our invention the ba-

sin is left free from obstruction. The leverage being so great from the center of the cock to the end of the pipe, it works with ease. The water passing through the stem has less pressure against the cap than in ordinary compression-cocks. The compression-valve is less liable to wear from sand and other impurities in the water than the common or ground-joint valve.

We are aware that a basin-cock having a turning nozzle, a sliding valve, and a tubular stem has heretofore been employed, as shown in Letters Patent granted to E. G. Burnham, dated June 9, 1857, No. 17,539; and we therefore lay no claim to such invention.

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

In a basin-faucet, the combination, substantially as described, of a self-swinging hollow nozzle, having a closing-valve, with a spring encircling the hollow valve-rod D, said spring operating on the valve in a direction opposite to that exerted on the valve by the pressure of the water, whereby the valve is closed against the pressure of water from the main, and the swinging nozzle operated automatically, and the liability of the bursting of the pipes lessened, substantially as described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOS. F. FORNS.
JOS. E. MOONEY.

Witnesses:
JOHN F. ACKER, Jr.,
EUGENE W. JOHNSON.