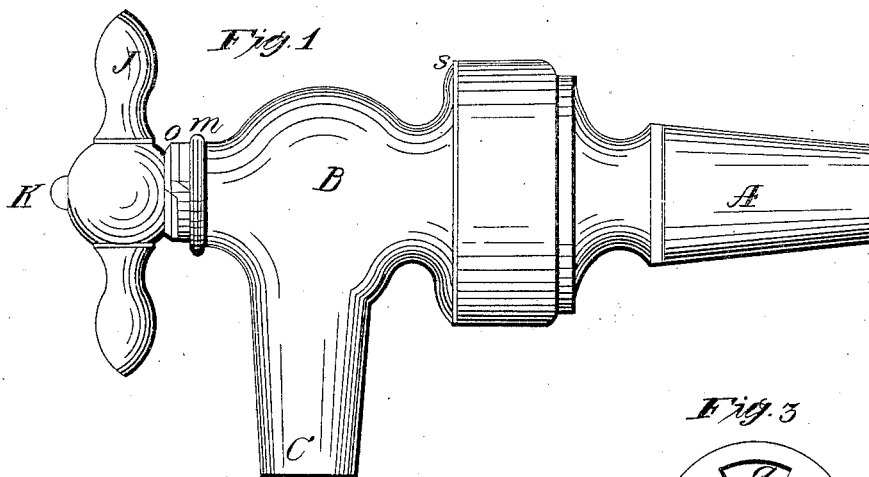


*J. Broughton,*

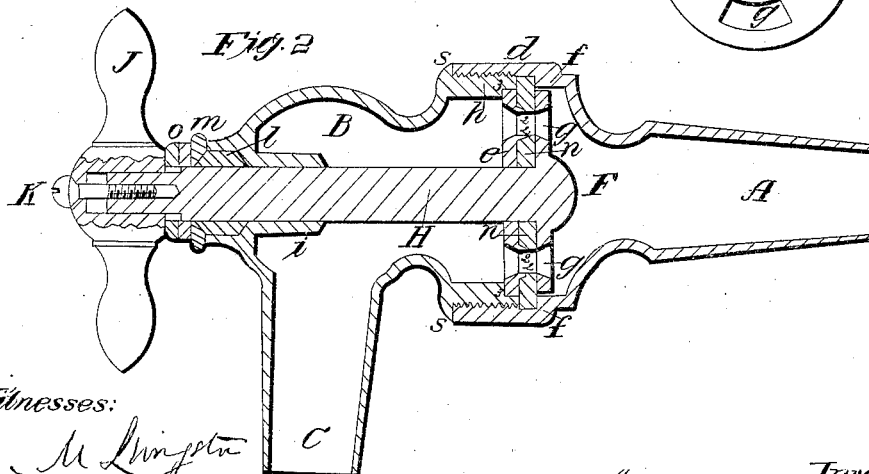
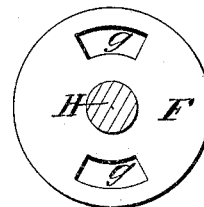
*Faucet.*

*No 44,933.*

*Patented Nov. 8, 1864.*



*Fig. 3*



*Witnesses:*

*M. M. Livingston*

*Geo. P. Hall*

*Inventor:*

*John Broughton*

# UNITED STATES PATENT OFFICE.

JOHN BROUGHTON, OF NEW YORK, N. Y.

## IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. 44,933, dated November 8, 1864.

*To all whom it may concern:*

Be it known that I, JOHN BROUGHTON, of the city, county, and State of New York, have invented a new and useful Improvement in Faucets; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view, and Fig. 2 is a view of a vertical longitudinal section, of a faucet made after my improvements. Fig. 3 is a plan of the valve.

Similar letters of reference indicate corresponding parts.

This invention relates to certain improvements in the construction of cocks or faucets, whereby the principles and features of a compression-valve and the opening and closing motions of the ordinary plug-valve are combined, and an article produced which is simple in construction, durable in wear, and which can be operated more easily than any other.

A is the shank or supply chamber of the cock, which is secured to the discharge-chamber B by a screw-joint, which unites the lower end or base, *h*, of the discharge chamber with the upper end, *a*, of the supply-chamber, the end *a* being screwed over the base *h* until it abuts against its shoulder *s*. The diameters of these chambers are enlarged at their parts *a* and *h* so as to receive the valve F. The discharge-chamber B is provided with an ejection-nozzle, C, and its neck is perforated to admit the insertion of the valve-spindle H. The neck is elongated within the discharge-chamber by the projecting collar or thimble *i*, which serves as a tubular bearing for the spindle. The neck of the chamber is enlarged at its top to receive suitable packing, *l*, which is held in place by an angular washer, *m*, which in turn is held in place by a common bibb-spring, O, upon which the ball of the handle J of the spindle rests. The spindle is squared at its outer end, and fits into a square recess cut nearly through the handle J, vertically. The square part of the spindle is recessed to receive a screw, K, which passes through the top of the handle J into the square recess within. The valve-spindle extends down within the chamber B, and below its base into

the shank A, to the line where it first reaches its greatest diameter, where it is secured to the disk-valve F, whose diameter is nearly equal to the diameter of the interior of the shank A. A shoulder, *f*, is formed in the end *d* of the shank, whose face must be in the same plane with the inner face of the valve F, so that an annular washer, *n*, of cork or other suitable material, may lie upon the said shoulder and be held against it by the lower end of the base *h* of chamber B, where said base is properly screwed into the shank A. When the valve is properly adjusted for use, it should rotate in contact with the face of the washer. An annular plate, *e*, is fitted around the valve-spindle H, its circumference being secured under a shoulder, 3, cut in the inner wall of the base *h* of the discharge-chamber, or this plate may be cast with the base.

*g g* are openings or water-ways in the disk-valve F, and like openings, to coincide with them when the valve is open, are made through the washer *n* and plate *e*, and around the edges of these openings in the plate are teeth, 2 2, which project downward and indent themselves in the washer to hold it in position.

Fig. 2 represents the valve as open.

When the handle J is turned at right angles to the position shown, the openings in the washer-plate are closed, and the pressure of the fluid acts against the back of the valve and compresses its elastic seat, thus tightening the joint, the valve being perfectly free to move forward in the direction of the pressure. Whatever the extent of its longitudinal movement may be, the joint of the spindle at *l m* will not leak, owing to the presence of the packing *l*, through which the spindle moves.

The valve F may be adjusted to compress the elastic seat by turning the screw K in the handle J until the joints of the spring O close up and it assumes the shape of an annular ring, the ball of the handle J being in contact with it, and remaining stationary while the valve-spindle and valve are drawn forward by the action of the screw. This insures a certain contact between the valve and its elastic seat, independent of the pressure of the fluid within the shank A of the faucet, and prevents any rebound of the valve beyond that point, while vibrating on its elastic seat, under the effect of suddenly stopping the flow of the

liquid. Should the pressure on the back of the valve compress the elastic seat still farther, and allow the valve to move forward, the spring O will open to that extent, and, by its action against the ball of the handle J, will take up the slack and insure the contact of the valve with its elastic seat.

I claim as new and desire to secure by Letters Patent—

1. The arrangement of the rotating disk-valve F, working in the interior of the supply-chamber, in combination with the elastic

seat n, spindle H, and handle, substantially as described.

2. The employment of the spring O, to keep the valve in contact with its elastic seat, independent of the pressure of the fluid, when arranged in conjunction with the spindle H, the discharge-chamber B, and the handle J, substantially as described.

JOHN BROUGHTON.

Witnesses:

M. M. LIVINGSTON,

C. L. TOPLIFF.