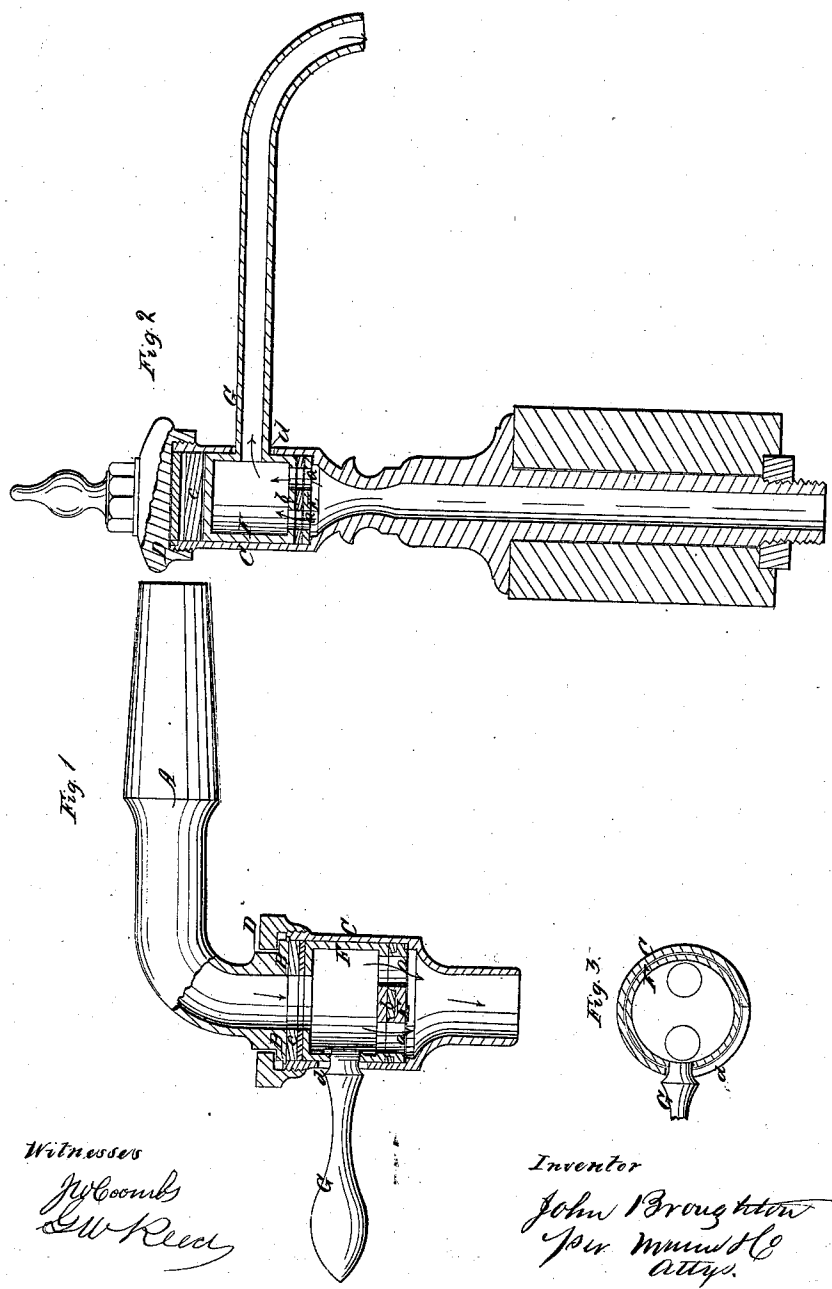


*J. Broughton,  
Basin Faucet,*

*No 39,795*

*Patented Sept. 8, 1863.*



*Witnesses  
J. W. Coombs  
G. W. Reed*

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John Broughton  
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# UNITED STATES PATENT OFFICE.

JOHN BROUGHTON, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. 39,795, dated September 8, 1863.

*To all whom it may concern:*

Be it known that I, JOHN BROUGHTON, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Faucets; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a vertical central section of a bib constructed according to my invention. Fig. 2 is a similar section of a basin cock. Fig. 3 is a transverse section of the same.

Similar letters of reference in the throughures indicate corresponding parts.

This invention relates to certain improvements in the manufacture of cocks or faucets, whereby all the parts can be readily finished on the turning-lathe, no grinding of the plug or any other part is required, and an article is produced which is not liable to wear perceptibly, and which will remain tight for a long time.

I will proceed to describe the construction of the bib, shown in Fig. 1, and point out the difference between the bib and basin-cock as the description progresses.

A represents the ordinary connecting pipe or shank provided at its lower end with a projecting rim or flange, B.

C is a hollow shell or casing forming the body of the cock, and contracted at its lower end to form the proper nozzle or outlet; or it may be provided with a screw-thread to fit to a hose or other device or vessel, from which or to which water or other liquid is to be conducted. The shell C is bored out cylindrical, and the flange B fits and drops a short distance into the cavity of said shell. It is provided with one or more feathers projecting from its periphery, and corresponding slots are made in the shell C, thus preventing the same from turning round or changing position when connected together.

D is a screw cap or nut with a central opening large enough to allow it to pass over and along the shank A until it drops onto the shoulder formed by flange B, at which position it connects with the shell C by a screw-thread, as shown. A circular plate, E, is inserted in the shell C, forming a false bottom of the same. This plate is provided with two

outlet-holes, *a a*, and it is prevented from turning or changing position by dropping onto a feather cast on the shell C.

F is a hollow cylinder or barrel, whose external diameter corresponds to the internal diameter, or nearly so, of the shell C. The upper end of this barrel has a central opening corresponding to the opening passage through the shank A, while its lower end has two openings corresponding to the holes or openings through the plate E. Between the plate E and lower end of barrel F a washer, *b*, provided with corresponding holes or openings, of cork, leather, india-rubber, or any other suitable material, is inserted, and another similar washer, *c*, is placed between the upper end of the barrel F and the flange B. The washer *b* is held in position by ribs or projections cast on the plate E. These ribs or projections indent themselves into the elastic washer and keep the outlet-holes in focus.

G is a handle inserted or screwed into the body of the cylinder F, an extra thickness of metal being left in the interior at the point of insertion. This handle passes through a slot, *d*, in the shell, said slot extending round one quarter (more or less) of its circumference, and allowing the handle and cylinder F to be revolved or turned in a horizontal direction.

The arrangement of parts, when being put together, is as follows: Taking up the hollow shell C, the plate or false bottom E is pushed down until it rests on the shoulder, as shown in Fig. 1 of the drawings. On top of plate E the washer *b* is next placed. The cylinder F is then inserted, and on top of that the washer *c*. The shank A is then placed in position, its feathers entering the slots in shell C. The screw-cap D is passed over the shank A and screwed onto the shell C, thus connecting the whole together, and compressing the elastic washers to any desired degree, and forming a tight joint. The handle G is then secured into the cylinder F through the slot *d*, and the whole is ready for operation. The passage of the water through the cock is indicated by arrows, and in order to close and open the cock the handle and barrel are revolved from one end of the slot *d* to the other. The water or liquid being in the interior of the cylinder F, when shut off, it will be observed that, provided the area of the two

lower holes corresponds to the area of the upper central opening, any pressure of the fluid would have no effect or tendency to compress the elastic washers, and, the upward and downward pressure being equal, the barrel F will form a perfectly-balanced valve. The ends of the barrel F, when they work against the washers, are turned off true and polished, and but little if any wear could take place between the polished metal and soft elastic surfaces; but should they become worn by long use the cap D can be screwed down slightly, thus tightening the whole, and making it equal to new. The same construction is applicable to other kinds of cocks, such as a basin-cock, as shown in Fig. 2. In this case the water does not enter the cylinder F until

the cock is opened and the outlet or nozzle corresponds to the position of the handle in the bib.

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

The arrangement of the cylindrical barrel F, working in the interior of the shell C, in combination with elastic washers *b c*, screw-cap D, and handle G, or its equivalent, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

JOHN BROUGHTON.

Witnesses:

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