(No Model.) 2 Sheets—Sheet 1.

D. DEVLIN.

FAUCET.

No. 513,092. Patented Jan. 23, 1894.

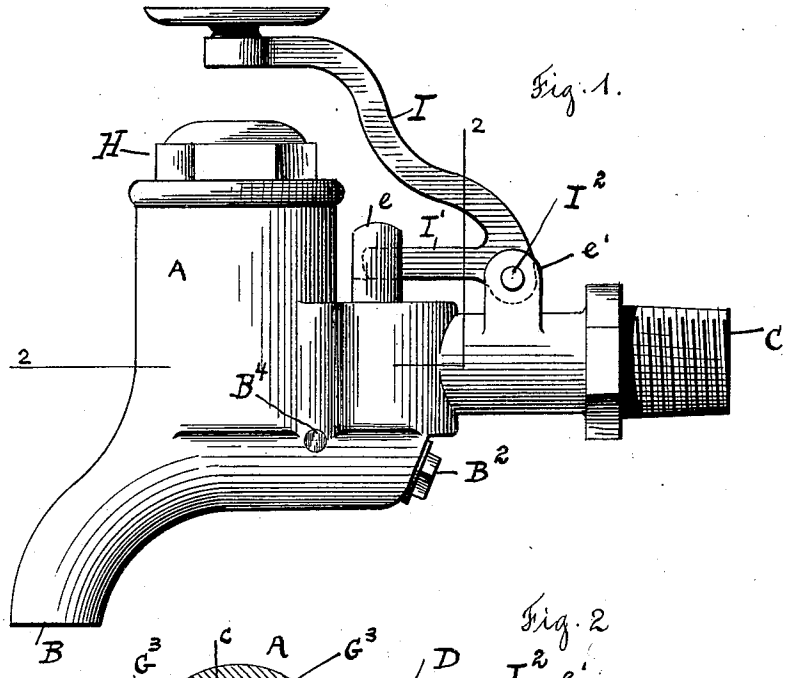

Fig. 1.

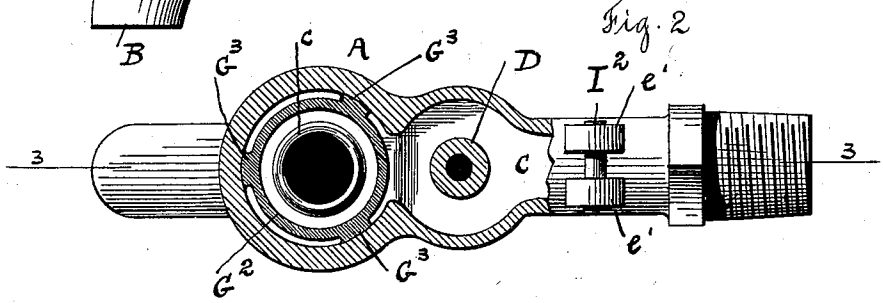

Fig. 2

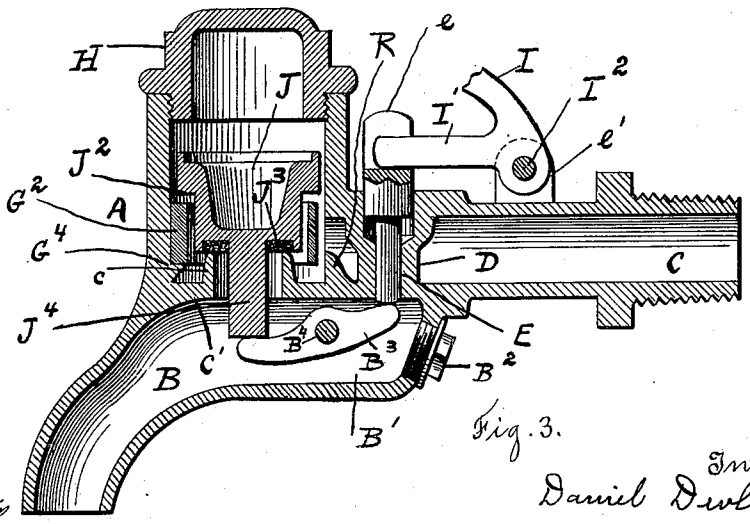

Fig. 3.

Witnesses
Chas. F. Schmeltz
E. M. Healy

Inventor
Daniel Devlin
By his Attorney
Louis W. Southgate

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

D. DEVLIN.

FAUCET.

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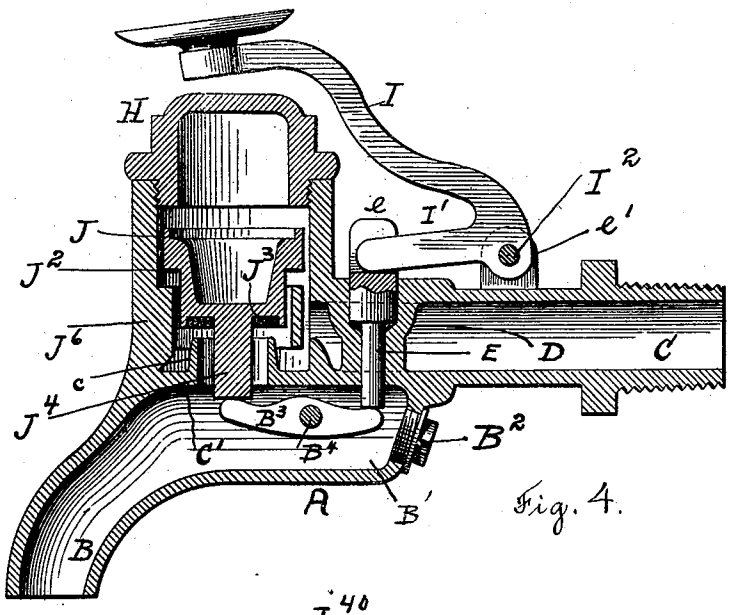

Fig. 4.

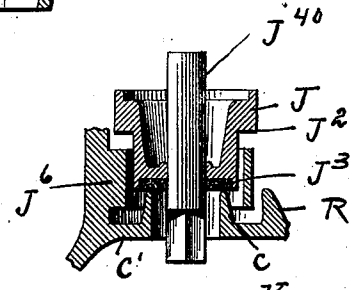

Fig. 5.

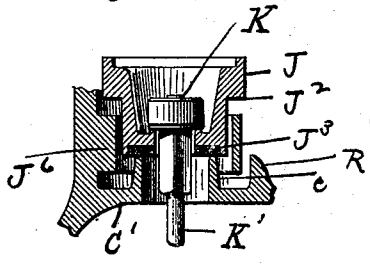

Fig. 6.

Witnesses
Chas. F. Schmelz
E. M. Healy

Inventor
Daniel Devlin
By his Attorney
Louis W. Southgate

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DANIEL DEVLIN, OF WORCESTER, MASSACHUSETTS.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 513,092, dated January 23, 1894.

Application filed November 15, 1892. Serial No. 452,057. (No model.)

To all whom it may concern:

Be it known that I, DANIEL DEVLIN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Faucets, of which the following is a specification.

The aim of this invention is to produce a new and improved faucet which will be self-closing and very easy in action.

To this end, the invention consists of the device described and claimed in this specification, and illustrated in the accompanying two sheets of drawings, in which—

Figure 1 is a side elevation of a faucet embodying my improvements. Fig. 2 is a section or plan view taken on line 2—2 of Fig. 1. Fig. 3 is a sectional elevation taken on line 3—3 of Fig. 2. Fig. 4 is a similar view illustrating the valve open, and a slightly different form of deflector, as hereinafter described, and Figs. 5 and 6 represent modifications of the valve.

Referring to the drawings and in detail, A represents a suitable casing, of which C is the induction and B the eduction passage, and the induction and eduction passages are separated by the partition C′, which has a raised portion or rim *c*, which forms the valve-seat. Extending through the induction passage C is a tube D, into which fits the bifurcated piston or plunger E, which has the arms *e*, and into this plunger fits the extending arm I′ of the operating lever I, which is pivoted between the lugs *e′*, formed on the main casing, on the pin or screw I^2. The eduction passage is extended back under this plunger E, as at B′ and a lever B^3 is pivoted on a pin B^4, driven into the casing, as shown, and this lever B^3 may be inserted in place by means of a plug B^2 which is screwed into the end of the chamber B′ of the eduction. A suitable cap H is screwed into, and covers the top of the faucet, as shown.

Formed on the inside of the main casing are small ears G^4, and driven down, and fitting nicely into the main casing A, is a part that I term the "deflector" G^2, which has extending ribs G^3, whereby the same fits into the main casing.

J represents the main valve, and the same fits very nearly snugly to the main casing, and the same has the shoulder J^2, which extends over the deflector, as shown, and arranged in the main valve is the packing J^3, which bears on the seat *c;* and the valve has an extending stem J^4, which rests against the lever B^3.

It will be seen that by depressing the handle I, the plunger E will be pushed down, and the valve raised up; and, as all this mechanism is arranged in the eduction passage, no packing whatever is necessary. Also, it will be seen that the pressure of the water, when the valve is open, strikes both on the under side of the valve, and on the under side of the shoulder J^2. This is an important point, because the valve, as shown, closes with the pressure, but against the impact of the incoming water, whereby the same will move nicely and easily to its seat, the stream being directed by a shoulder R against the deflector whereby the same will strike against the deflector, and by the latter be directed against the lower face of the valve J and the shoulder J^2. The deflector can be cast and made solid with the main framing as at J^6, as shown in Fig. 4.

The valve, instead of having a stem cast integral therewith, may have a stem J^{40} driven into the same, which can be removed, and if desired a small valve K used instead of the same. This small valve K has an extending stem K′, which rests against the lever B^3; and when the faucet is organized as thus described, the operation is of the well-known piston-valve type; that is, the pressure will normally keep the valve to its seat, but, if the valve K should be raised, the water could flow out through the main valve, faster than it could come up around the shoulder J^2, whereby the pressure acting upon the under side of the shoulder J^2 will raise the valve; and then when the valve K is allowed to drop to its seat, the pressure will be restored above the main valve, and the main valve forced to its seat. The principal point, and the important feature of this valve which I wish to cover broadly, is in a valve which closes with the pressure, arranging the induction so that the stream will be forced against the face of the valve, or against a shoulder thereof to force the valve to close against the impact of the water. This will prevent, under all conditions, any hammering of the valve to its seat.

The details herein shown and described may be greatly varied by a skilled mechanic without departing from the scope of my invention, as expressed in the claims.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination in a valve of the casing having a valve-seat arranged therein, a valve arranged on the induction side of the valve-seat, and having a shoulder formed thereon, means for operating the valve, and a suitable stationary deflector arranged in the main casing above the valve-seat, and around the valve, beneath the shoulder thereon so as to direct the induction against the shoulder of the valve, substantially as described.

2. The combination in a valve of the casing having a valve seat arranged therein, a valve arranged on the induction side of the valve-seat, means for operating the valve, said valve having a shoulder formed near the upper edge thereof, and a deflector arranged in the casing above and extending below the valve-seat, around the valve and below the shoulder thereof, so as to direct the impact of the incoming stream both against the shoulder and the bottom of the valve, substantially as described.

3. The combination in a valve of the casing, a suitable valve-seat arranged therein, a valve J arranged on the induction side of the valve-seat, said valve having a shoulder as J^2, means for operating the valve, and a removable stationary deflector as G^2 arranged in the casing below the shoulder on the valve, and having ribs G^3 fitting to the main casing, whereby the impact of the incoming stream will be directed both against the shoulder and the lower face of the valve, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

DANIEL DEVLIN.

Witnesses:
LOUIS W. SOUTHGATE,
S. HERBERT WESSON.