

W. L. BROWNELL.
FAUCET.

No. 170,704.

Patented Dec. 7, 1875.

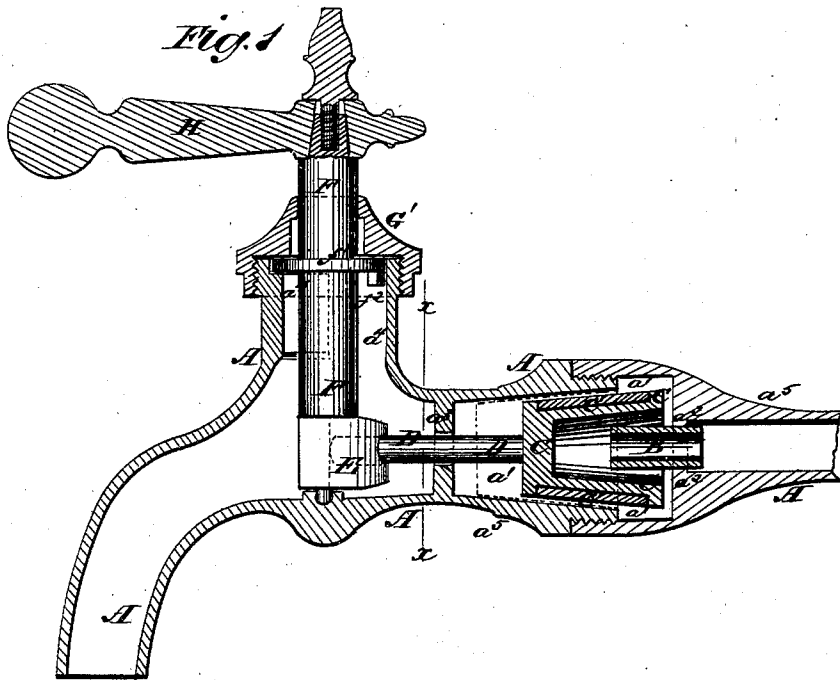
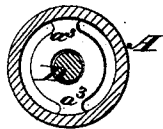


Fig. 3



Fig. 2



WITNESSES:

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WILLIS L. BROWNELL, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. **170,704**, dated December 7, 1875; application filed October 29, 1875.

To all whom it may concern:

Be it known that I, WILLIS LORD BROWNELL, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Faucets, of which the following is a specification:

Figure 1 is a longitudinal section of my improved faucet. Fig. 2 is a cross-section of the same, taken through the line *xx*, Fig. 1. Fig. 3 is a detail view of the lower end of the cam-shaft.

Similar letters of reference indicate corresponding parts.

The invention relates to a faucet in which the valve or plug acts upon a cam or eccentric portion of the lever-shaft in such manner that the latter is turned automatically when the lever or handle is relieved of (hand) pressure, thus allowing the valve to close tightly on its seat.

The invention further relates to the arrangement of a short rigid tube to deliver the water into the hollow valve, and to act as a support or guide for the same when open; also, to a combined stop and packing-disk on the lever-shaft, as hereinafter described.

A represents the body of the faucet, which is made with an enlargement in the supply-pipe *a*⁵, to form a valve-chamber, *a*¹, and is made in two parts screwing together, to enable the valve piston or plug to be conveniently put in and taken out. In the body A, at the inner end of the valve-chamber *a*¹, is formed a cross-partition, *a*². Through the center of the partition *a*² is formed a screw-hole, into which is screwed a short pipe or hollow stem, B. The pipe B serves as a passage for the liquid and as a guide and support to the valve when open or being opened. The valve-chamber *a*¹ is made to taper outward, and in it is placed a tapering plug or piston, C, which is provided with a packing, *c*¹, kept in place upon it by narrow rims formed upon the ends of the said plug C. The base or inner end of the plug C is concaved, to receive the pipe or stem B, and to cause the full outward pressure of the liquid to be received by said plug, so that the said plug may be held forward to its seat by said pressure without the use of a spring or other device. In the body A, near the outer end of the valve-

chamber *a*¹, is formed a cross-partition, *a*³, having openings in its side parts for the passage of the liquid, and a hole in its center for the passage of the valve-stem D, so that the said partition may serve as a guide and support to keep the said valve-stem in its proper relative position. The forward end of the valve-stem D rests against the cam E, formed upon the lower part of the shaft F of the opening device E F H, the lower end of which works in a socket formed in the inner surface of the lower part of the body A. The shaft F passes up through the chamber *a*⁴, and through the cap G, screwed upon the top of said chamber, and has a lever-handle, H, secured to its upper end. To the cam-shaft F, just below the cap G, is attached, or upon it is formed, a ring-flange packing or collar, *f*¹, which is pressed upward against the cap G by the pressure of the outflowing liquid, so as to prevent any leakage about the shaft F while the liquid is flowing out. To the under side of the edge of the flange or collar *f*¹ is attached, or upon it is formed, a projection, *f*², which works in a groove in the inner surface of the chamber *a*⁴, to prevent the opening device from being turned in the wrong direction, or more than a quarter of a revolution, so that the cam E can never be turned away from the end of the valve-stem D.

By this construction, when the opening device is turned by the handle H, the cam E, pressing against the end of the stem D, forces the valve C back, and allows the liquid to flow out around the said valve so long as the handle H is held. When the handle H is released, the pressure of the liquid against the valve C forces it forward into its seat, the pressure of the stem D against the cam E turning the opening device into its former position.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a valve closing with the pressure of water, of a cam or eccentric stem, the latter restricted in its movement in such a manner that the pressure will always automatically close the valve and return the handle to its proper position for opening the valve, substantially as set forth.

2. The combination of the hollow tapered valve C with the fixed tube B, the latter serving to deliver water within the valve, and also to support the same when opened, substantially as and for the purpose specified.

3. The valve-operating shaft F, provided with the disk f^1 , having a projection, f^2 , where-

by said disk is adapted to act both as a packing and stop for arresting the movement of the shaft, as set forth.

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Witnesses:

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