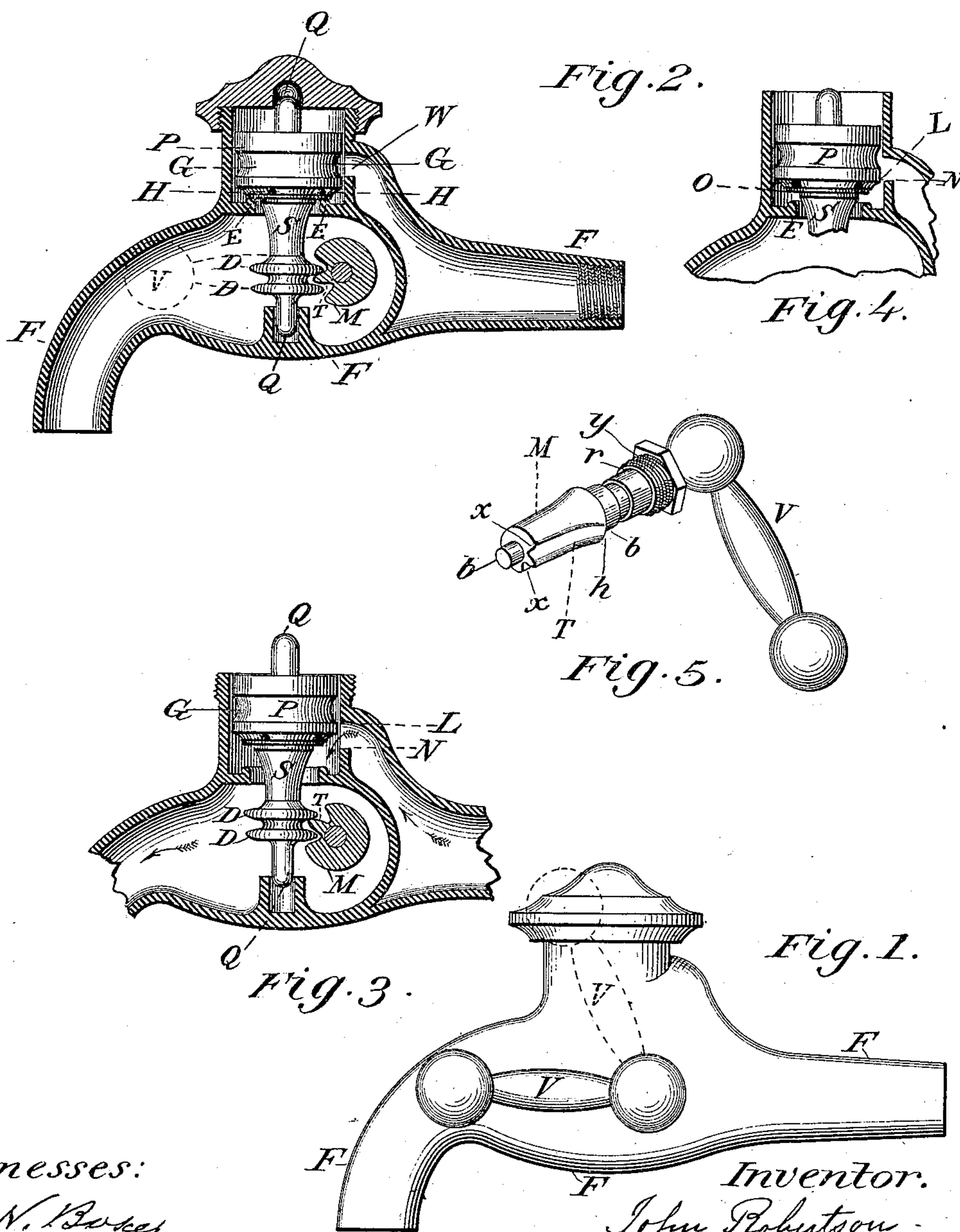


J. ROBERTSON.
Faucet.

No. 230,963.

Patented Aug. 10, 1880.



Witnesses:

F. N. Baker
C. Wellstead

Inventor.

John Robertson

UNITED STATES PATENT OFFICE.

JOHN ROBERTSON, OF MONTREAL, QUEBEC, CANADA.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 230,963, dated August 10, 1880.

Application filed December 27, 1879.

To all whom it may concern:

Be it known that I, JOHN ROBERTSON, of the city of Montreal, in the district of Montreal, Canada, machinist, have invented new and useful Improvements in Faucets, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to construct a faucet which shall have a self-closing automatic action, by means of which the piston-valve, while being raised or lowered, opens or closes the water-way, thereby opening or cutting off the water at the water-way, and also reducing the pressure and counteracting the reaction in the pipes when the valve is taking its seat. I attain these objects by the mechanism illustrated in the accompanying drawings.

Figure 1 is a side view of the faucet; Fig. 2, a longitudinal section, showing the position of the valve, spindle, toe or lever, &c., and also, by the dotted lines, the position of the handle when the water-way is closed. Fig. 3 shows a longitudinal section of the faucet with the valve raised to allow the water to flow out of the faucet. Fig. 4 shows the position of the piston when its lower edge reaches the lower edge of the port or water-way, thus cutting off the water in the pipe before the valve reaches its seat. Fig. 5 is a view of the weighted handle and side spindle attached thereto, showing the toe or lever formed out of the body of the spindle for matching into the grooves or disks in the spindle of the piston-valve.

Similar letters refer to similar parts throughout the several views.

In the accompanying drawings, V represents the weighted handle; P, the piston-valve; O, the leather or rubber valve; G, a groove around the piston-valve; H H, holes perforated vertically through the body of the piston, to carry off any water that may accumulate on its top; W, the port or water-way; E E, the valve-seat; D D, the disks; Q Q, guide-pins; S, the spindle attached to the piston-valve. M, in Fig. 2, is shown a transverse section of the side spindle, and the point of transverse section is shown in Fig. 5.

In Figs. 3 and 4, L represents the lower end of the piston-valve, and N the lower edge of the port or water-way.

In Fig. 5, *b b* denote the bearings of the side spindle; *y*, the thimble; *r*, the recess for the packing; T, the toe or lever formed by the grooves, as shown at *x x*.

The arrows, Fig. 3, indicate the line of the flow of water, and the dotted lines in the different views show the position of the weighted handle when the valve is raised off or sitting down on its seat.

In explanation of this device, I will now describe the action of the several parts.

In Fig. 2 the piston-valve is shown shut down and the water cut off. When the handle of the faucet V is raised to draw water (see dotted lines, Fig. 1) the toe or lever T on the side spindle, M, acting on one of the disks D, raises the piston up to the position shown at L' in Fig. 3, and opens the port or water-way W, and admits the water, as shown by the arrows. The water will continue to flow as long only as the handle is held up; but as soon as the handle is released it will by its own gravity, aided by the leverage of the weighted handle, descend upon the valve-seat and shut off the water. The piston in descending gradually reduces the size of the port or water-way, so that when the lower edge of the piston (see Fig. 4) reaches the lower edge, N, of the port or water-way the pressure is reduced to a minimum, and the valve drops gently down upon its seat E without any concussion or knocking in the pipes, caused by reaction. The groove G allows the water to flow around the piston, and acts as a packing to keep the piston in a central position.

To the bottom of the piston P is attached a rubber valve-face, O, which is screwed tight up to its place by the spindle S. One or more disks, D, are cast on or turned out on this spindle, which match with the toe or lever T on the side spindle, M, and by this mechanical device the piston-valve is raised or lowered. The end of the piston-valve P and the spindle S are each provided with a guide-pin, Q Q, to keep the piston-valve in a central position while being raised or lowered.

In Fig. 5 is shown the weighted handle V and side spindle, M, also its bearings *b b* and the space for introducing a packing at *r*. On this spindle is shown the grooving *x x*, to form the toe or lever T, which matches into the

disks D D. On the outer end of this spindle is attached a weighted handle, and when the spindle passes through the side of the faucet the aperture is kept water-tight by the following device: The hole in the side of the faucet is made large enough to allow a thimble, *y*, to be screwed into it and to form a bearing for the spindle to revolve in, and also large enough to allow for a recess to be turned out for the packing *r*. This space may be filled with cotton or other kind of packing, which, when the thimble is screwed up, makes a water-tight bearing.

The body of the faucet itself I cast with the water-way also in one piece. The body is then bored out to receive the piston-valve.

Having thus described my invention and the operation thereof, I may state that I am aware that prior to my invention faucets have been made in some respects somewhat similar.

I therefore do not claim such combination broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with an ordinary faucet, the piston P, having the groove G, disks D D, and holes H H, the spindle S, guide-pins Q Q, valve-seat E, and water-way W, all substantially as before described.

2. The weighted handle V, groove G, and the horizontal or side spindle, M, working in combination with the piston P, disks D D, holes H H, guide-pins Q Q, valve-seat E, and water-way W, all substantially as shown, and for the purposes specified.

Montreal, February 17, 1880.

JOHN ROBERTSON.

Witnesses:

FREDK. N. BOXER,
R. HENNESSEY.