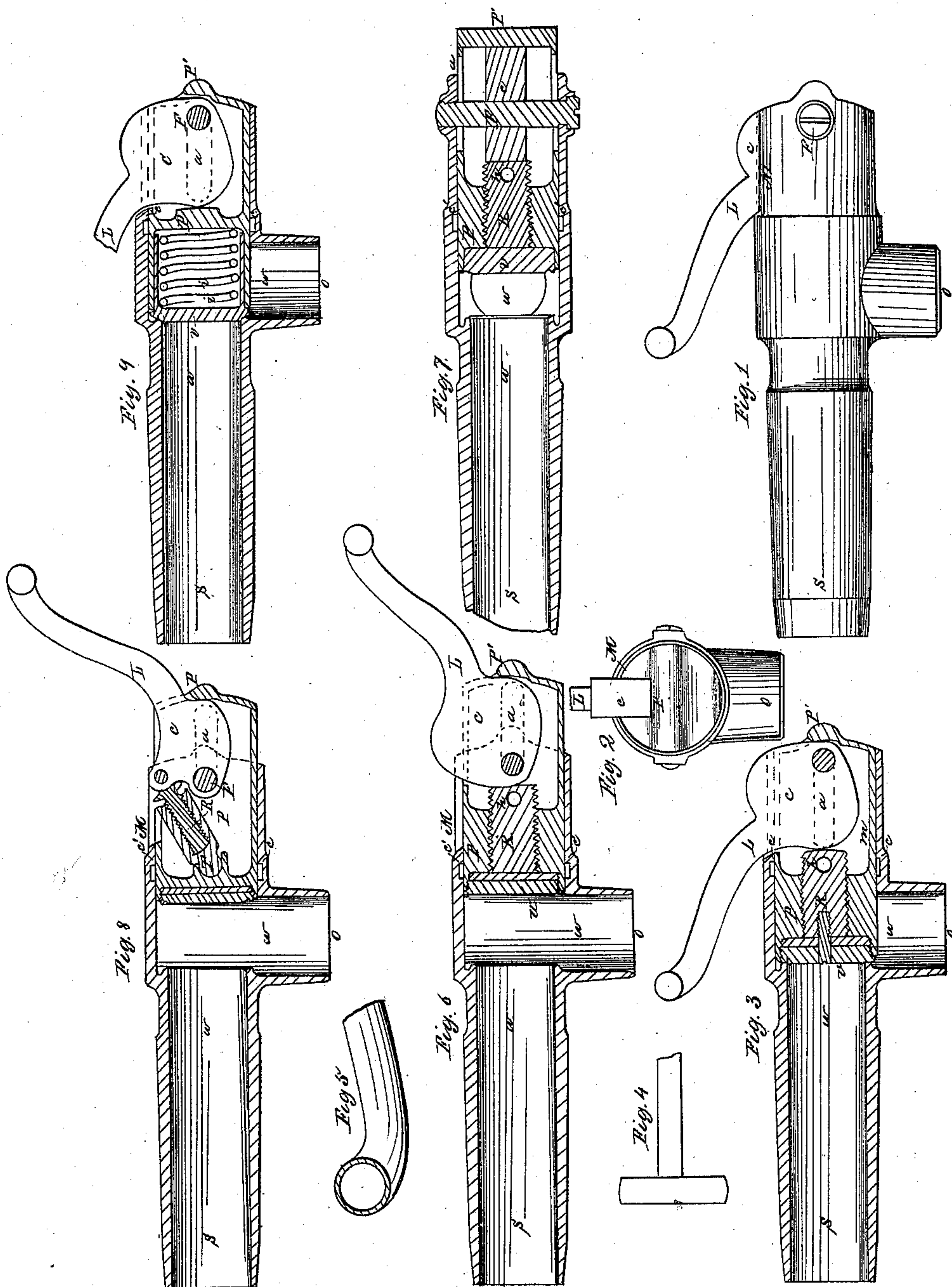


R. M. Bouton,

Faucet.

N^o 10,800.

Patented Apr. 18, 1854.



UNITED STATES PATENT OFFICE.

R. M. BOUTON, OF WEST TROY, NEW YORK.

FAUCET.

Specification of Letters Patent No. 10,800, dated April 18, 1854.

To all whom it may concern:

Be it known that I, RICHARD M. BOUTON, of West Troy, in the county of Albany and State of New York, have invented a new and useful Improvement in Faucets or Liquor-Cocks, which I name "Adjustable Valve-Faucets;" and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference accompanying the same and marked thereon, the same letters always indicating the same parts, in which—

Figure 1 represents the exterior of the faucet (the valve closed); Fig. 2, front-end view of Fig. 1, showing the head of the faucet. Fig. 3 is a perpendicular longitudinal section of Fig. 1 through the axis of the waterway (*w*), showing the internal structure, (*s*) the shank, (*v*) the valve, (*P*, *P'*) the piston or valve porter, (*R*), the adjusting screw, (*C*), the cam, and *L* its lever, (*O*), the outlet or mouth, (*F*), the fulcrum, or center pin of cam, and (*M*), the cam-mortise in faucet and piston. Fig. 4, T-head of cam lever. Fig. 5, head of cam lever with one eye for inserting a wood or other (*T*), in large cocks. Fig. 6, section same as Fig. 3, showing the valve open. Fig. 7, horizontal section longitudinally, at right angle to Figs. 3 and 5, through the axis of the fulcrum, (*F*), representing the valve half open. Fig. 8, section, same as Fig. 3, showing the introduction of a toggle or knee joint, to close the valve, while it is opened by the cam, *C*. Fig. 9, section, same as Fig. 3, showing one way of adapting a metallic valve (closed) which is kept adjusted by a spring (*i*, *i*).

The prominent defects pertaining to most of the faucets now in the market, are: 1st, the impossibility of refitting while in use, should a leak occur without detaching the faucet from its place; 2d, the mechanical skill requisite to make a refit by grinding. 3d, the almost universal contraction of the waterway through the valve-seat, or, turning piston. 4th, the disagreeably slow motion of the valve when moved by a screw, or, if the threads of the screw be made quick, the liability of the valve to open by pressure of the liquid, or, by other causes. It is believed all the above and other defects are obviated in this improved faucet, as, should a leak occur while in use, it may be

checked immediately, and without displacing the faucet, merely by increasing the pressure on the valve, by means of the adjusting screw (*R*), and the cam is so shaped that the valve can not be opened by pressure of the liquid nor by accident, and as there is no contraction in any part of the waterway; therefore a purchaser need not pay for a faucet of an inch and half bore, to obtain an efficient inch waterway.

To enable others, skilled in working metals, to make and use my invention, I will proceed to describe its construction and operation.

The valve is attached to one end of a piston, or sliding valve porter (*P*, *P'*), working in the head of the faucet, and moving over and beyond the outlet or mouth (*O*), to the valve seat as is represented in Figs. 3, 6, 7 and 8, and is opened and closed by the reciprocating motion of the piston and valve, by means of the cam (*C*), and its lever (*L*). It is closed by the pressure of the cam (*C*), on the head of the adjusting screw (*R*), as in Figs. 3, 6, or on the shoulder (*P*), in Fig. 9, or by straightening the toggle-joint (*T*, *R*), in Fig. 8, and is opened by the reverse motion of the lever (*L*); the cam (*C*), pressing on the shoulders (*P'*), as in Figs. 3, 6, 7, 8, 9 or the toggle joint may both close and open the valve by having its lower end hinged to the piston, (*P*), without a cam to press on the shoulder (*P'*).

The pressure on the valve may be increased or diminished at any time, while the faucet is in use, by turning the screw *R*, by means of a circle of holes in its head, of which *h* represents one, or, by means of a toothed head, not represented, or, by turning the screw of the toggle joint *T*, *R*. The valve may in all cases be a disk; either metallic as in Fig. 9, elastic, as in Figs. 3, 6, 7, 8, or, nonelastic, as the purpose shall indicate. For acids I make the waterway of glass or porcelain. To prevent the liquor penetrating the head of the faucet from *O*, to the fulcrum, while operating, a packing is inserted in a circular groove at *c'*, and *c*. The cam works in a mortise through the circumference of the faucet at *M*, and a corresponding one in the piston (*P*). By detaching the screw *F*, the piston and valve may be withdrawn from the head of the faucet, for examination or, refitting.

I wish to have it distinctly understood that I do not intend to limit myself to the precise construction above described; but intend to vary the arrangement of parts as
5 shall suit my object, while the combination remains unchanged, as: the lever L, may be detached from the cam (C,) and affixed to one or both ends of the fulcrum, outside of the faucet, the fulcrum (F,) in this case be-
10 ing fast or fixed in the cam, and turning in the sides of the faucet, and, the lever (L,) instead of being of a piece with the cam, may be inserted in a mortise made in the cam and by being thinner than the cam, it
15 may work through a slot cut through P', and perform a greater portion of a circle; while the surplus thickness of the cam on each side of the lever, will act on the remaining portions of the shoulder P', to open
20 the valve, this will give more acting periphery of the cam, and consequently more power of pressure. The application of a

cam to close and secure a valve, is evidently superior to any other means now in use.

Having fully described my invention, and 25 some of the modes of construction which I intend to use, I wish it to be understood, that I do not claim the discovery of any new principle; neither do I claim any of the parts, separately considered, as they may 30 have been used for a similar purpose by others; but—

What I claim as new, and as my invention, and desire to secure by Letters Patent, is— 35

The combination of the piston, cam and lever, substantially as described and represented, with or without the toggle joint for the purpose of closing the valves of liquor faucets.

R. M. BOUTON.

Witnesses:

C. H. DENIO,
T. S. BANKER.