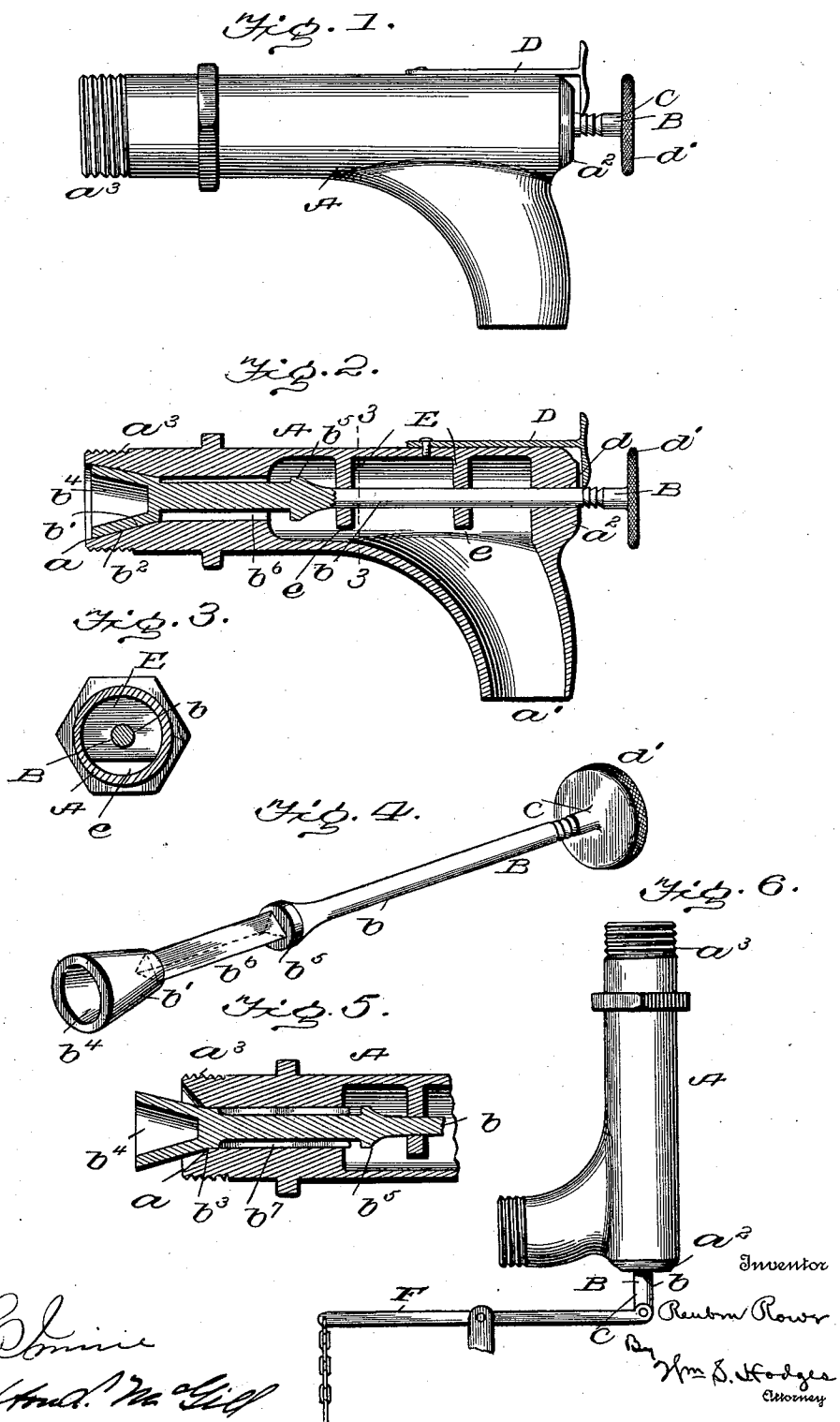


(No Model.)

R. ROWE.
FAUCET.

No. 588,357.

Patented Aug. 17, 1897.



Witnesses

John D. Miller
Capt. W. C. Hill

UNITED STATES PATENT OFFICE.

REUBEN ROWE, OF DOVER, NEW JERSEY.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 588,357, dated August 17, 1897.

Application filed April 20, 1897. Serial No. 633,003. (No model.)

To all whom it may concern:

Be it known that I, REUBEN ROWE, of Dover, in the county of Morris and State of New Jersey, have invented certain new and useful Improvements in Faucets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in faucets.

The object of the invention is to produce a simple and inexpensive faucet in which the valve will be automatically seated by the pressure of water therein and one in which the use of packing around the valve and valve-stem and springs for aiding in the seating of the valve are entirely dispensed with. These objects I accomplish by providing a cylindrical casing with an inlet and outlet, the former serving as a valve-seat, a valve-stem being projected through said casing and having its rear end enlarged and tapered to form a valve which is normally seated in said inlet by the water-pressure. The thickened end of said valve is hollowed out in order to present a greater surface for the action of the water in seating the valve, and this latter operation is assisted by an annular flange formed on said stem, the latter being cut away between said flange and said valve portion. Within the faucet-casing are formed a series of transverse partitions or deflectors which serve to prevent the water, especially when under high pressure, from striking the forward end of said casing, thereby obviating the necessity of placing packing around said valve-stem where it projects through the casing, said partitions or deflectors being cut away to allow the free passage of the water to the outlet.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view illustrating my improved faucet. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a transverse section view on line 3 3 of Fig. 2. Fig. 4 is a perspective view of the valve and its stem. Fig. 5 is a longitudinal sectional view of a slight modification. Fig. 6 is a view of a second modification.

Referring to the drawings, A designates the casing, having an inlet-opening *a* and an outlet-opening *a'*, the forward end *a²* of said casing being made solid. Adjacent the inlet-opening *a* the said casing is exteriorly threaded, as at *a³*, whereby the same may be readily connected to a water-pipe.

B designates a stem, which is provided with a forward cylindrical body portion *b* and a rear thickened tapering portion *b'*, forming a valve, which latter is designed to normally fit against the edges of inlet-opening *a*, said edges being tapered, as at *b²*. I have found, however, that good results are also obtained in the form illustrated in Fig. 5, in which form the edges *b³* of the inlet-opening are not tapered. The rear end *b⁴* of valve *b'* is preferably hollowed out, and a flange or enlarged portion *b⁵* is formed on said stem intermediate of said valve and the cylindrical body portion *b*, whereby the water upon striking against said flange and said hollowed end will automatically seat said valve. Said stem is also cut away in approximately triangular form at *b⁶* to allow of the passage of water therearound when the valve is unseated, or grooves or cut-outs *b⁷*, as illustrated in Fig. 5, may be formed in said stem in lieu of the form just described.

The forward end C of the valve-stem B is projected through a hole or opening *d*, formed in the solid end *a²* of said casing, and a suitable button *d'* is secured thereon, whereby said stem may be moved as against water-pressure to unseat the valve. For the purpose of preventing the reseating of the valve when it is desired to draw a large quantity of water I employ a spring-catch D, which comprises a plate-spring secured to the exterior of casing A and provided with an angular end adapted to engage a series of teeth or the like formed in the stem B, whereby the flow of water may be regulated.

In order to prevent water, especially when under high pressure, from being forced through the opening *d*, I secure a series of plates or deflectors E within casing A, said plates being coincident with the bore of said casing and extending thereacross, cut-outs *e* being formed therein to permit of the free passage of the water.

In Fig. 6 I have illustrated my improved

faucet as the same is employed in connection with water-closet tanks and the like. In this form the seating of the valve is assisted by gravity, said valve being operated by a suitable lever F', as shown.

In practice when it is desired to draw water from my improved faucet the valve-stem is pushed inward, causing the immediate unseating of the valve. As the water passes to the outlet-opening it will strike against the deflecting partitions and will thus be prevented from passing out of the hole or opening in the end of the casing. As soon as the operator releases said stem the water striking against the annular flange and hollowed end of the stem will immediately effect the automatic reseating of the valve without the use of springs or any auxiliary force.

It will be noted that by employing the deflecting partitions the use of packing around the valve-stem is rendered unnecessary, and hence I dispense with the usual packing-plug. It will be specially observed that by making the valve of tapering form an exceedingly tight joint is obtained against the valve-seat, rendering the employment of a packing-ring unnecessary and all wear on the valve and its seat will be automatically taken up, thus rendering unnecessary adjustment of any kind.

My improved faucet is extremely simple and inexpensive, and being composed of but few parts is not liable to readily get out of order or become deranged, the use of all elements likely to be destroyed by the action of the water being entirely dispensed with.

I claim as my invention—

1. The herein-described improved faucet, comprising a casing having an inlet and an outlet, a stem working in said casing having an enlarged tapered valve end adapted to automatically close said inlet, said end being hollowed, and an annular flange formed on said stem against which water is designed to strike, substantially as set forth.

2. The herein-described improved faucet,

comprising a casing having an inlet and an outlet, a stem working in said casing having an enlarged tapered valve end adapted to automatically close said inlet, and an annular flange formed on said stem against which water is designed to strike, said stem being cut away intermediate of said flange and said valve end, substantially as set forth.

3. The herein-described improved faucet, comprising a casing having inlet and outlet openings, said inlet-opening being tapered, and a stem working in said casing having an enlarged tapered end adapted to fit in said tapered inlet-opening and close the same, said end being hollowed, and an annular flange formed on said stem, the latter being provided with cut-away portions intermediate of said flange and said enlarged portion, substantially as set forth.

4. The herein-described improved faucet, comprising a casing having an inlet and an outlet, plates or partitions secured in said casing between said inlet and said outlet, said plates or partitions having cut-away portions, and a stem projected through said plates or partitions and having an enlarged tapered end adapted to automatically close said inlet, said stem having cut-away portions adjacent said enlarged end, substantially as set forth.

5. The herein-described improved faucet, comprising a casing having an inlet and an outlet, a stem working in said casing having an enlarged tapering end adapted to automatically close said inlet, said stem having teeth near its forward end, and a spring secured to the exterior of said casing and having an angular end adapted to engage said teeth, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

REUBEN ROWE.

Witnesses:

RICHARD FITZHERBERT,
HORACE L. DUNHAM.