J. N. Smith,

Faucet,

No. 46,862. Patented Mar. 14, 1865.

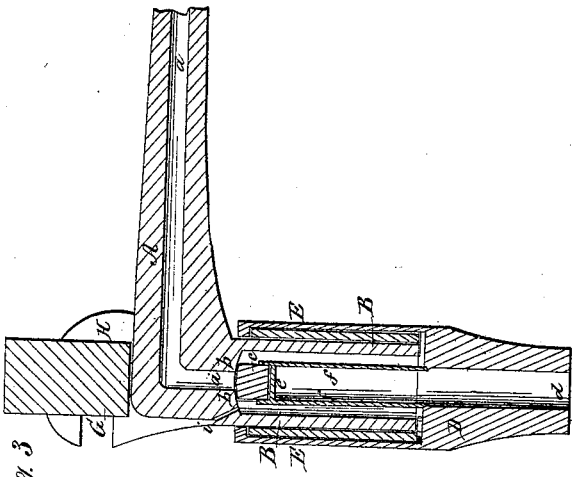

Fig. 3

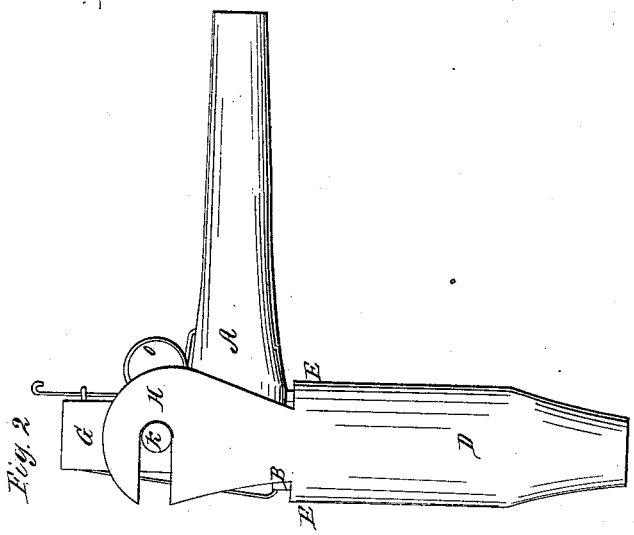

Fig. 2

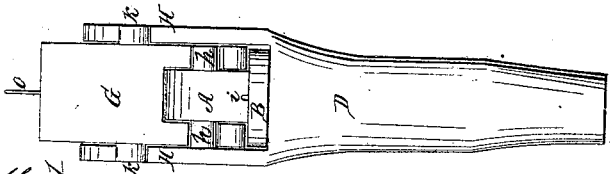

Fig. 1

Witnesses;
J. B. Woodruff
Edm. F. Brown

Inventor;
Joseph Nottingham Smith

UNITED STATES PATENT OFFICE.

JOSEPH NOTTINGHAM SMITH, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. **46,862**, dated March 14, 1865.

To all whom it may concern:

Be it known that I, JOSEPH NOTTINGHAM SMITH, of Jersey City, in the county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Faucets; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a front elevation of a faucet provided with my improvements; Fig. 2, a side elevation thereof; Fig. 3, a central longitudinal vertical section of the same.

Like letters designate corresponding parts in all of the figures.

The barrel or faucet proper, A, may be of nearly the ordinary form, the outer end being bent downward, as usual, and it is entire throughout, not having any spigot to close its aperture. Instead of this, I close the aperture by the employment of a valve or stopper in the orifice itself, and it is in the application of this improvement that the features of my invention consist.

In order properly to apply my invention, the mouth of the faucet-aperture *a* is enlarged at the lower end for some distance up in its vertical part, so as to admit the valve or stopper and also to allow room for the passage of the liquid, substantially as shown in Fig. 3. This enlargement of the orifice furnishes a shoulder or valve-seat, *b*, against which the valve or stopper *c* shuts upward. This valve or stopper may be a simple cork, or a piece of india-rubber, or other suitable material, and may be contained in a socket-holder, *e*, so that it may be easily removed and replaced. The socket-holder *e* occupies the middle of the enlarged orifice, and there is a space around it therein for the liquid to escape by when the valve is lowered from its seat. The movements of the valve and its holder are simply up and down.

For the purpose of holding and actuating the valve, and also to furnish a suitable discharge-spout for the faucet, I employ a tube, D, the upper end of which surrounds the lower end, B, of the faucet, and has a vertical sliding movement thereon, and its lower end is contracted to the proper size for the outlet of a faucet. The valve-holder *e* is connected with this inclosing-tube by suitable radial supports *f f* or their equivalents, with sufficient spaces between for the free passage of the water down to the discharge-outlet. In order to facilitate the escape of the liquid through this discharging-tube without the interference of the air contained around the valve, there is a vent-aperture, *i*, leading upward, out through the side of the faucet, from just below the valve-seat *b*.

The discharge-tube may be packed at its upper end around the faucet, to prevent the liquid escaping thereby; but this is not necessary if the discharge-orifice below is of sufficient size to allow a free escape of the liquid.

Various ways of operating the discharge-pipe D may be employed. The device which I have adopted is substantially thus: Two ears, H H, extend upward from the discharge-pipe, respectively on the opposite sides of the faucet, and have horizontal notches or slots thereon, substantially as shown in the drawings. Inside of these ears is located a lever or handle, G, by which the whole is operated. This handle or lever has fulcrum-pivots *h h*, Fig. 1, projecting from the sides of the faucet or their equivalent, on which the handle turns, and from the sides of the handle itself project cam-pins *k k*, which work in the slots or notches of the ears H H. As the lever is turned forward and downward, the consequent lowering of the cam-pins *k k* slides the discharge-tube D downward on the faucet and opens the valve within; and as it is again raised or turned to a vertical position it raises the discharge-tube and closes the valve, the parts all being so arranged that this position of the lever or handle G tightly shuts the aperture of the faucet.

To insure the closing of the valve in all cases, and, if desired, to make the faucet entirely self-acting, a spring, *o*, constructed and applied in any desired manner, may be employed to raise the handle to its vertical position.

This invention supplies all the important requisites for a good faucet: cheapness of construction, requiring no accurate fitting and finishing, no liability to leak or get out of order, readiness of repairing, durability, and no liability to be left open.

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

1. Closing the faucet by a valve or stopper shutting upward in its orifice, substantially as and for the purpose herein specified.

2. The inclosing spout or discharge-tube D, arranged and applied substantially as and for the purposes herein set forth.

3. The combination of the handle G with or without a spring, *o*, in combination with the slotted ears H H of the discharge-tube D, substantially as and for the purpose herein described.

4. The vent-aperture *i*, in combination with the valve *c* and discharge-tube D, for the purpose specified.

JOSEPH NOTTINGHAM SMITH.

Witnesses:

EDM. F. BROWN,

J. B. WOODRUFF.