H. W. FULLER.

Faucet.

No. 217,361. Patented July 8, 1879.

Fig. 1.

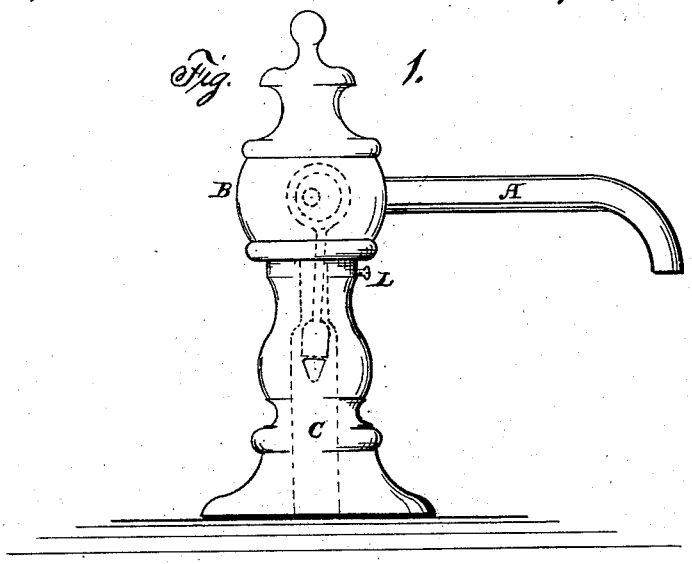


Fig. 2.

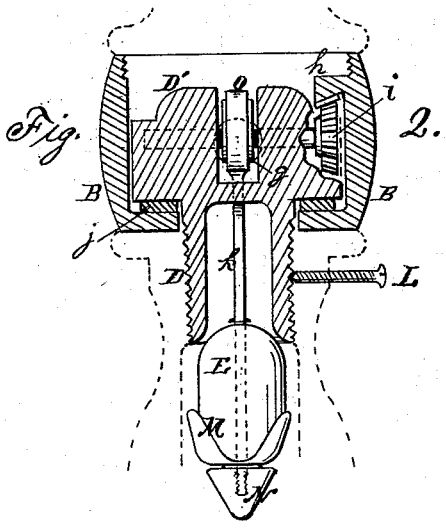
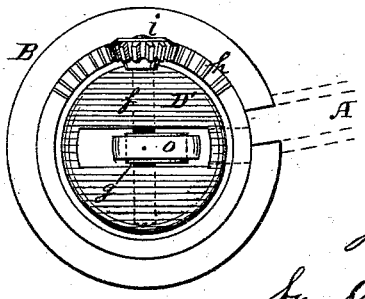


Fig. 3.



Witnesses

D. H. P. Drake

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UNITED STATES PATENT OFFICE.

HENRY W. FULLER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. **217,361**, dated July 8, 1879; application filed May 19, 1879.

To all whom it may concern:

Be it known that I, HENRY W. FULLER, of Brooklyn, Kings county, New York, have invented certain Improvements in Faucets, whereof the following is a specification.

The nature of my invention consists in the combination, with a puppet-valve and stem, and a crank or eccentric for actuating the same, of a set of gearing operated by a swinging nozzle or spout.

In the annexed drawings, which illustrate my invention, Figure 1 is an exterior view. Fig. 2 is a vertical section; Fig. 3, a horizontal section, showing the mechanism as seen from beneath.

A is the usual spout or outlet of a swing-nozzle faucet. B is a chamber affixed thereto and forming part thereof, and arranged to turn upon the hollow standard C. D is a tube having an enlarged head, D′, that entirely fills the chamber B from side to side. At the lower end of this tube is located the puppet-valve or plug E, the seat of such valve being in or at the lower end of the tube D, this being the valve of the faucet.

My invention relates to the means for conveying an opening-and-closing motion to the said valve by the swinging movement of the nozzle A. Such means consist in a cam or eccentric, *g*, affixed to a small shaft, *f*, (dotted,) having its bearings in the head D′ of the tube D, and on which shaft is also mounted a pinion, *i*, which is engaged by the teeth of a segment or rack, *h*, and this rack is made fast to and moves with the chamber B and nozzle A when the latter is swung around to open the faucet by an oscillatory movement. Affixed to the valve is a stem, *k*, the upper end of which is formed into a strap or follower, *o*, of the eccentric *g*, whereby an up-and-down or opening-and-closing motion is given to the valve E by the rotary motion of the eccentric, imparted by the rack and pinion aforesaid.

The tube D is threaded on the outside, and screws into the top of the standard C, which may be of any desired height. A packing, *j*, is placed at the joint between the head D′ and the bottom of the chamber B. This joint or coupling is above—that is, nearer the final outlet than the valve E of the faucet.

To prevent the tube D from unscrewing from the standard in operating the faucet by the swing-nozzle, I apply a set-screw, L, the same passing through the standard C, and entering a depression in the tube D. N is a conical nut to aid in securing the valve E to the stem *k*. M is a guide sliding in the standard, and serving to hold the valve centrally as to its valve-seat on the lower end of tube D.

The eccentric is sometimes called a "cam," and in the foregoing improvement means a crank or any device affixed to the shaft for opening and closing the valve by a valve-rod worked by said device.

I do not confine myself to the rack and pinion in themselves. The rack of cogs represents an instrumentality made fast to the movable chamber B, and the pinion represents a fixture on the shaft, to form a connection with and for transferring the movement of the nozzle (and chamber B) to the shaft, and thence to the valve E, at right angles to the motion of the nozzle.

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

1. The combination, with a plug or puppet-valve and stem, and a crank or eccentric for operating the same, of a segment and pinion, or equivalent gearing, operated by a swing nozzle or spout, for opening and closing the faucet by the swinging movement of such nozzle.

2. The combination of the tube D and tube-head D′, carrying the pinion-shaft, to which is affixed the cam or eccentric for operating the valve.

3. The combination, with the standard, of the tube and head D D′, and the oscillatory chamber, having affixed thereto the segmental rack for turning the pinion.

H. W. FULLER.

Witnesses:

EARLE H. SMITH,

I. H. P. INSLEE.