I. C. Clarke,

Water Filter,

No. 13,027. Patented June 12, 1855.

Fig. 2.

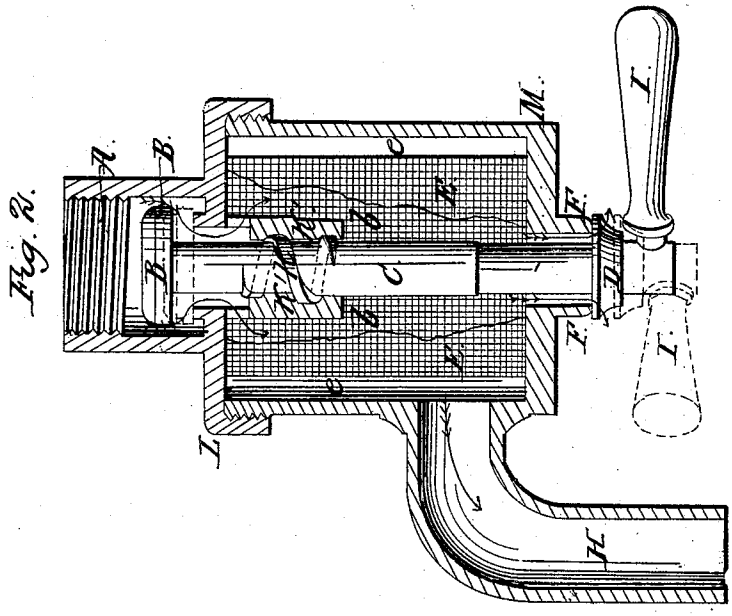
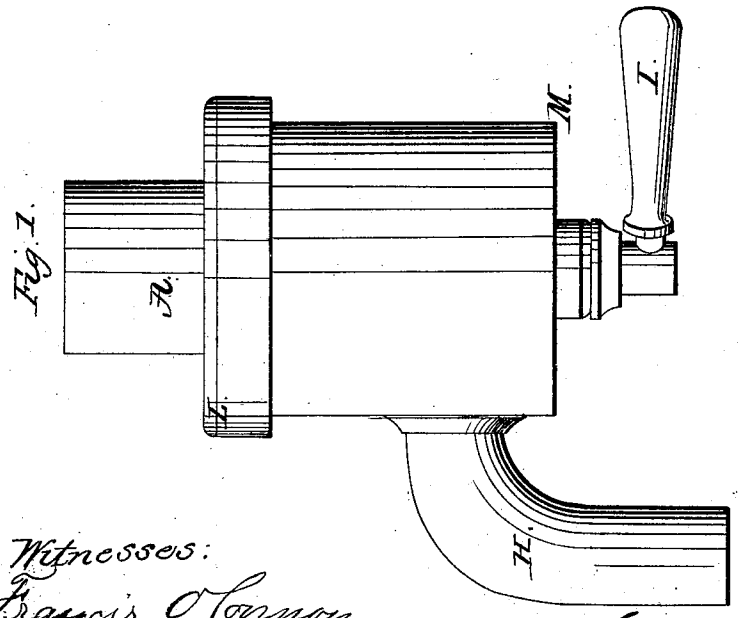


Fig. 1.



Witnesses:
Francis O'Connor
John H. B. Jenkins

Inventor:
J. Cottrell Clarke

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS C. CLARKE, OF CAMDEN, NEW JERSEY.

HYDRANT-FILTER.

Specification of Letters Patent No. 13,027, dated June 12, 1855.

To all whom it may concern:

Be it known that I, THOMAS C. CLARKE, of the city of Camden and State of New Jersey, have invented a new and useful Improvement in the Construction of Hydrant-Filters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a perspective view and Fig. 2 represents a vertical section of my improved filter as attached to the pipe of a common hydrant.

In a former specification I described an improvement in filters in which the force or pressure of the running water acted against a spring and opened a lateral passage for the water through the filter and as soon as the water ceased to run, the spring reacted and opened a plug valve in the bottom of the filter and permitted the sediment and dirty water to pass out below. This arrangement however, required a separate faucet to be placed in the pipe above the filter and depended for its action solely on the spring. In my present arrangement I have combined the faucet and filter together in such a manner that the single operation of opening the faucet simultaneously puts the filter in operation and the closing of the faucet simultaneously opens a waste passage for the sediment and wastings of the filter.

In the accompanying drawings A is a screw attachment to connect my faucet filter with a supply pipe.

B is a puppet valve attached to the upper end of a vertical stem or rod C. D is another puppet valve attached to the lower extremity of the same vertical stem C. When the valve B rises from its seat it opens a passage around B for the water from the pipe A into the interior cavity L M.

L M is an enlarged cylindrical chamber attached to the supply pipe A above and having a passage at H for the water to be drawn off at.

E, E, is a thin wire cylinder extending from the top to the bottom of the interior of the chamber L M and being about one half of the diameter of L M. This wire gauze separates L M into two chambers *b* and *e*. *b* is occupied by the water and *e* by sand or other filtering material.

At K a thread or male screw is cut on the vertical rod C and this works in a female screw at *k k*. The valve B and the valve D are so attached to the rod C that when C is elevated B rises from its seat and opens a passage around B and at the same time D rises against its seat F F and closes the passage around D, and when C is depressed B falls on its seat and closes the water passage around B and D falls from its seat and opens the water passage around it. The rod C is raised or depressed by the male screw K turning in the female screw in *k k* and the rod C is turned by the key or lever I.

The operation of the improved faucet filter is as follows: The water enters through the pipe A. When the key or lever I is turned to the right the rod C turning in the screw at *k* rises and opens a passage at B for the water to pass into the filtering chamber L M. The same operation of the rod C by the key I closes the aperture at F and the water having no other mode of escape is forced through the filter E and passes out at H. Whenever the water is to be stopped off at H the key I is turned to the left, this depresses the rod C thus closing the passage at B and preventing the entrance of water there and at the same time the passage at F is opened and the sediment and washings on the inside of the filter are carried out at F.

The rod C instead of being raised and depressed by turning in a female screw at *k k* may be raised and lowered by a lever or equivalent device or the plug valves at B and D may be perforated so that by turning the rod C in a horizontal plane a similar result may be obtained or the rod C may be fixed to the chamber L M and made to revolve with it and thus the rod C be raised or depressed.

Having thus described my improvement what I claim as my invention is—

The combination of the filtering chamber, the rod C and the valves B and D whereby the single operation of starting the water brings into operation the filter and the stopping off the water opens the escape for the sediment.

T. COTTRELL CLARKE.

Witnesses:

FRANCIS O'CONNOR,

JOHN H. B. JENKINS.