(No Model.)

S. ADAMS.

WATER FILTER.

No. 261,119. Patented July 18, 1882.

Fig 1

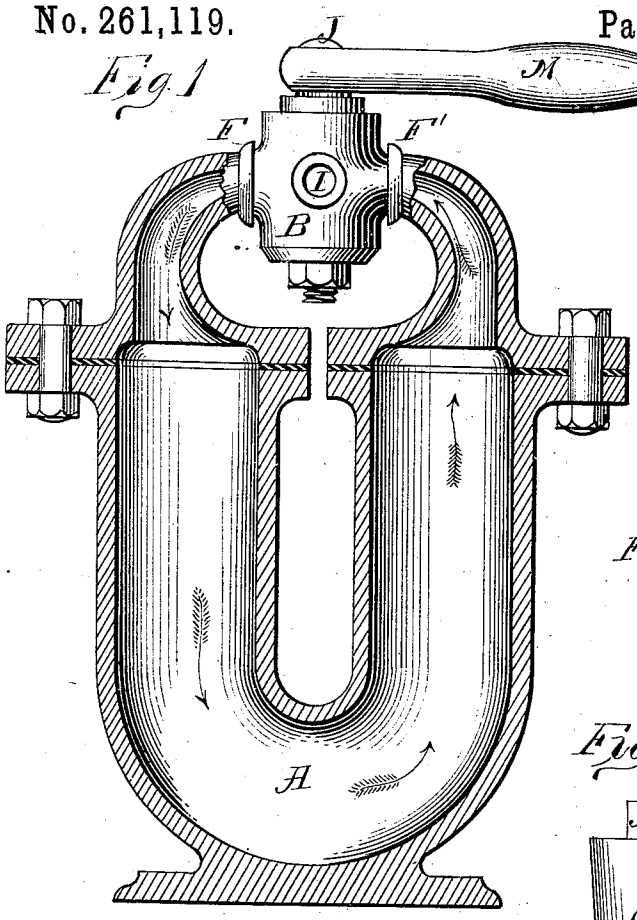


Fig 2.

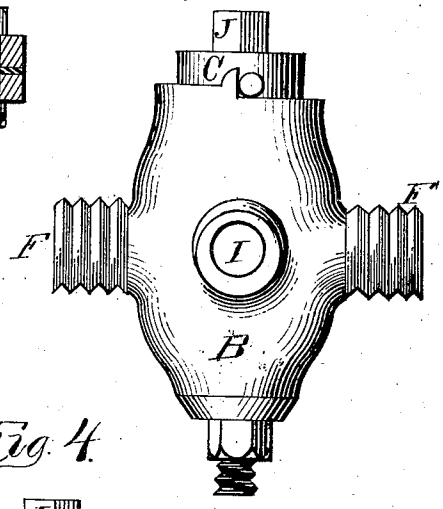
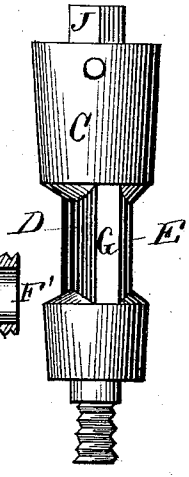


Fig 4.





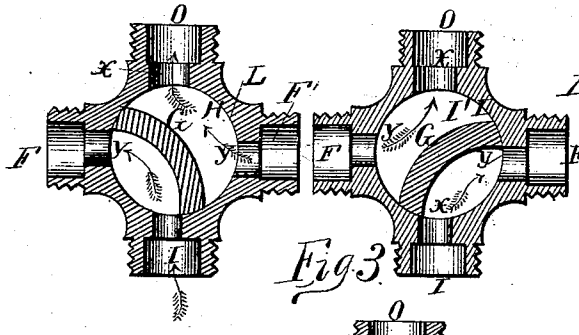
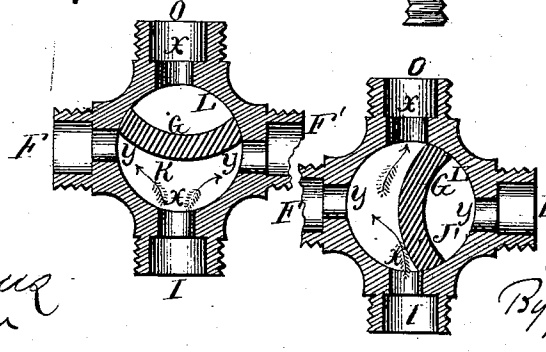


Fig 3.



Witnesses:
E. G. Asmus
O. R. Erwin

Inventor:
Samuel Adams
By Jas. P. Ennis
Attorney.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL ADAMS, OF MILWAUKEE, WISCONSIN.

WATER-FILTER.

SPECIFICATION forming part of Letters Patent No. 261,119, dated July 18, 1882.

Application filed August 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL ADAMS, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Water-Filters; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in self-cleansing or reversible filters, and pertains more especially to the device by which the direction of the water is reversed in its course through the filter from right to left or from left to right, and by which it may also be stopped or permitted to pass directly through the faucet without passing through the filter, all of which changes are made by turning the stopper of the faucet in the ordinary manner.

My invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a vertical section. Fig. 2 represents the faucet or device by which the course of the water is governed as it appears when removed from the filter. Fig. 3 represents a horizontal section through the faucet, showing the four positions of the stopper. Fig. 4 represents the stopper removed from the faucet.

Like parts are represented by the same reference-letters through the several views.

A is the filter. B is the case of the faucet. C is the stopper. I is the inlet to the faucet. O is the outlet. F′ is the right-hand way or passage communicating with the filter. F is the left-hand way or passage communicating with the filter. J is a shoulder formed on the stopper, to which a handle, M, or wrench N is applied for turning the same.

The stopper C is provided with a concave groove, D, upon one side and a convex groove, E, upon the opposite side, whereby a concavo-convex wall or partition, G, is formed, as shown in cross-section in Fig. 3.

When desirous to direct the course of water toward the left the stopper C is turned so that the partition G is brought in the position shown at H, when it is obvious that the water entering the inlet I will be directed toward the left through the passage F′, when it passes in a downward and upward course through the filter, as indicated by the arrows, and enters the faucet again from the opposite passage, F, upon the opposite side of the partition G, when it is at liberty to pass on out through the outlet O.

When desirous to reverse the course of the water from left to right the stopper is turned so as to bring the partition G in the position shown at I, whereby the course of the water is turned toward the right, as indicated by the arrows, when it passes out through the passage F′, and downward and upward in an opposite course through the filter, when it enters the faucet again upon the opposite side of the stopper from that which it escaped, and passes through the outlet O.

When desirous to draw water from the hydrant or other supply direct without permitting it to pass through the filter the stopper is turned so as to bring the partition G in the position shown at J′, when it is obvious that the water may flow in a direct course from the inlet to the outlet, as indicated by the arrows.

When desirous to stop the flow of water the stopper is turned so that the partition G is brought in the position shown at K, whereby the outlet O is closed and the water prevented from escaping.

It is obvious that the four ports X X and Y Y to the passages of the faucet are not, as usually arranged, at equal distances apart, but, instead, the inlet and outlet ports X X are respectively formed at one side of the central line of said passage, (it being immaterial which side,) so that the sides of the partition G, when adjusted as shown at J, will be both brought upon the same side of said inlet and outlet ports, whereby the water may pass uninterruptedly from the inlet to the outlet.

It is obvious that the respective ports Y Y are also formed at one side of the central line of passages F F′, so that the sides of the partition G, when adjusted as shown at K, will

be both brought upon the same side of said ports Y Y, whereby the escape of water from the faucet is prevented.

To facilitate in laying out the ports of the faucet it will be observed that the circle L, which describes the opening for the stopper, is subdivided into spaces equal to about one-fifth of its circumference, and that the ports to the passages O and F′ are formed about two-fifths of the circumference of the circle apart, while the other three ports are formed at about equal distances apart within the other three-fifths of the circle, or a distance of about one-fifth of the circle apart, whereby a broad beaming is formed between one of the direct and one of the side passages of the faucet.

The partition G is so curved that when in the position J′ its respective sides are brought upon the same side of both the inlet and outlet ports, and when in position K said sides are brought upon the same side of both of the side ports, Y Y, by which peculiar curved shape it is adapted to close and open the respective ports and direct the water in any course desired through them.

A handle or wrench, as shown at M and N, may be used for turning the stopper, as desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the filter A, case B, and stopper C, said case being provided with oppositely-arranged inlet and outlet passages I and O and side passages, F and F′, one of the ports to the respective opposite passages being formed at one side of the central line of said passages, all substantially as and for the purpose specified.

2. The combination of case B, one of the direct passages of which is provided with port X, formed at one side of its center, and one of the side passages of which is provided with port Y, formed at one side of its center, stopper C, provided with curved partition G, handle M, and filter A, all substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL ADAMS.

Witnesses:
JAS. B. ERWIN,
J. V. V. PLATTO.