No. 816,440. PATENTED MAR. 27, 1906.

F. A. DUNHAM.

FAUCET.

APPLICATION FILED OCT. 3, 1905.

Fig. 1.

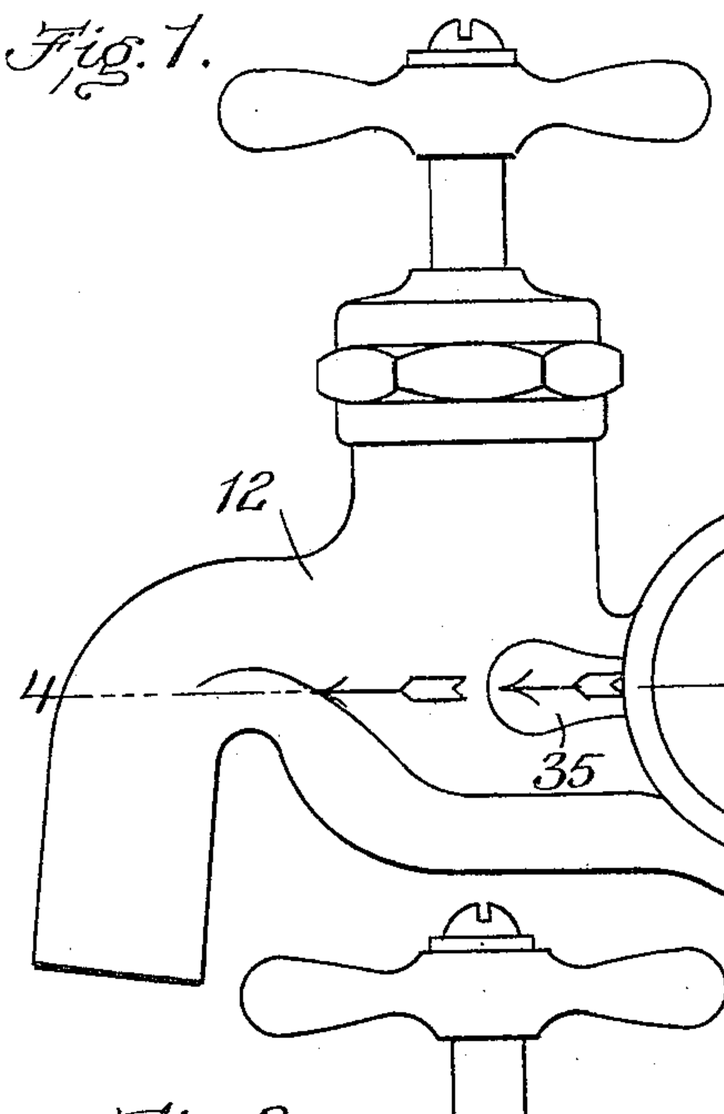


Fig. 3.

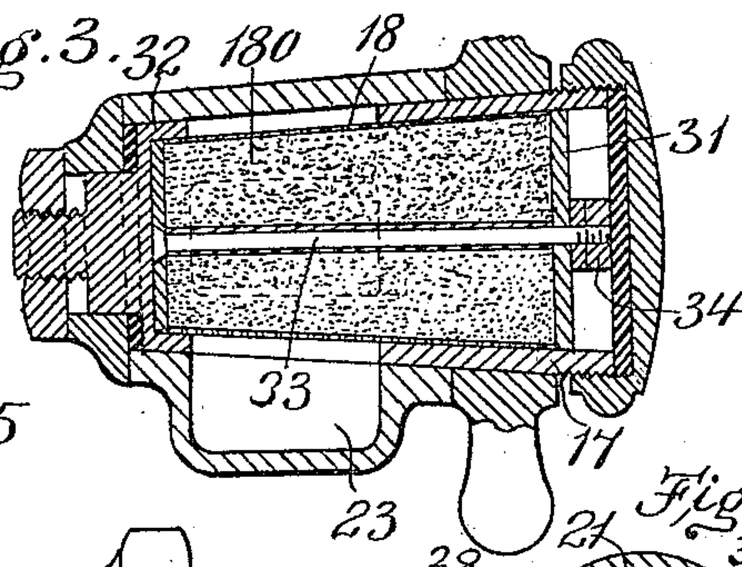


Fig. 8.

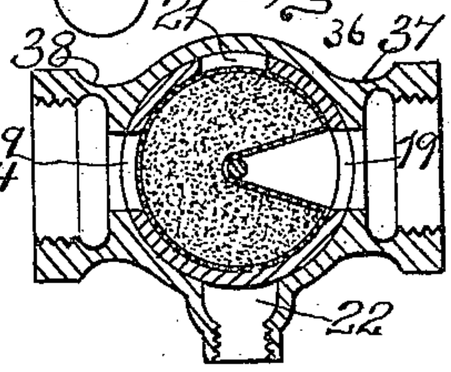


Fig. 7.

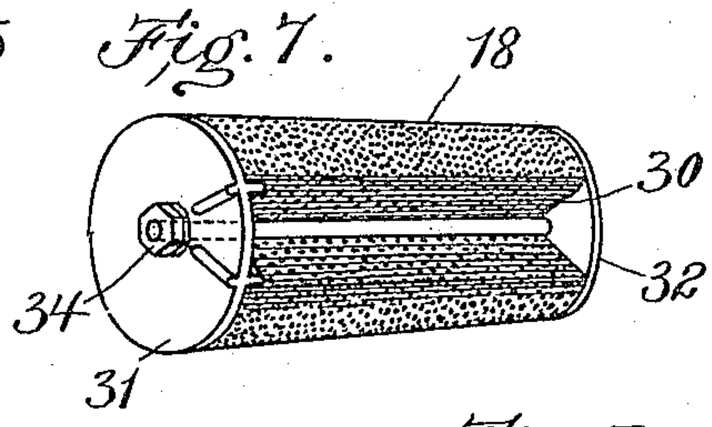


Fig. 2.

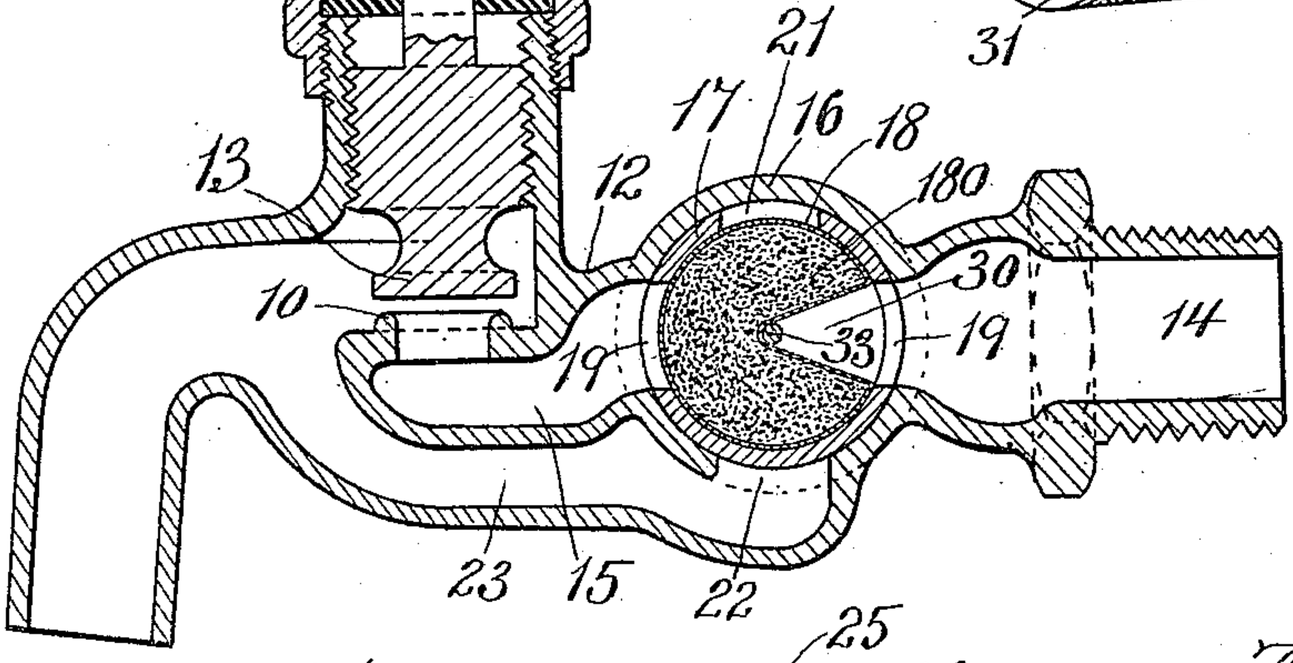


Fig. 5.

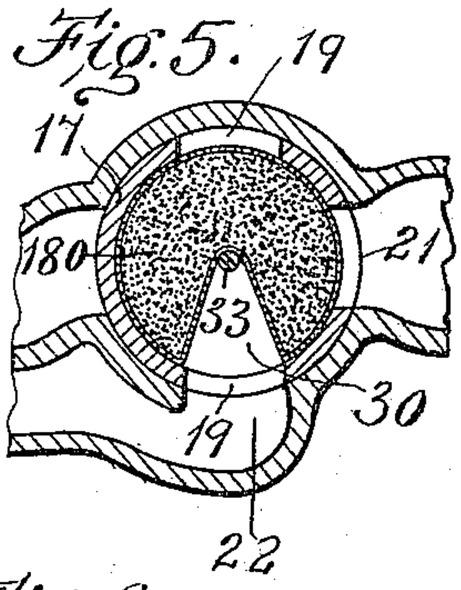


Fig. 4.

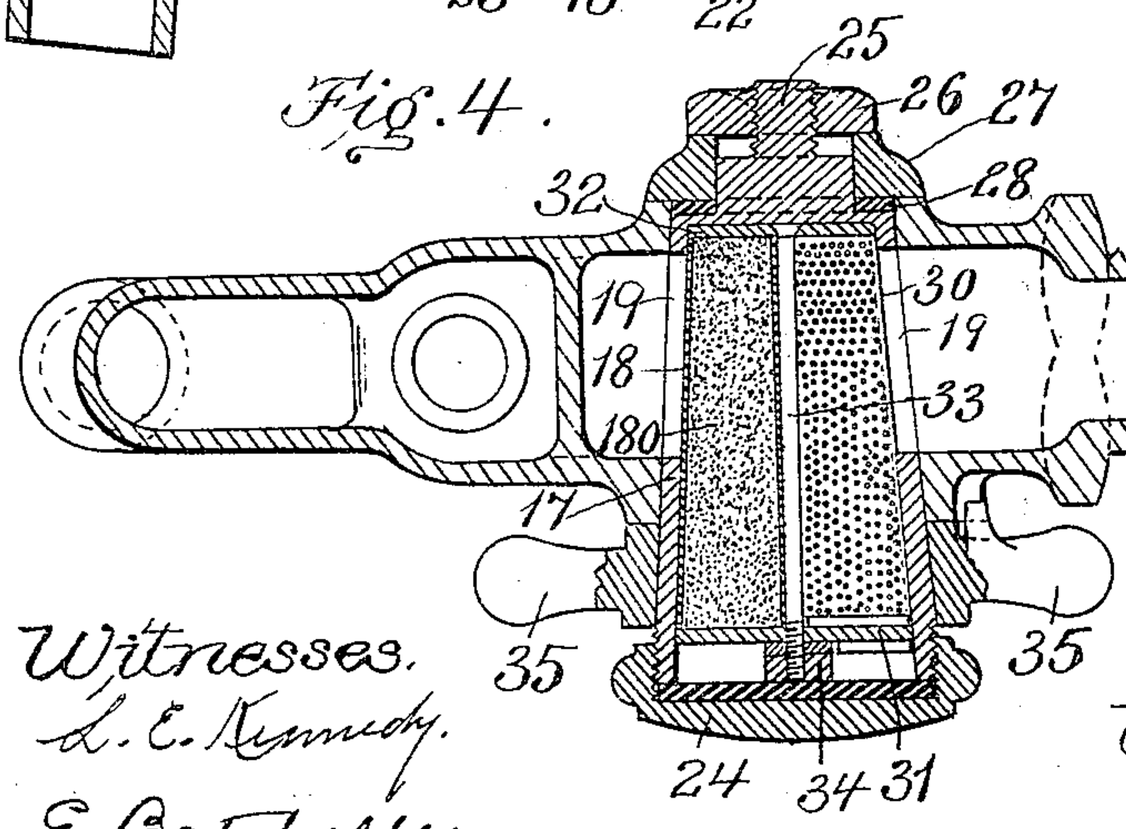
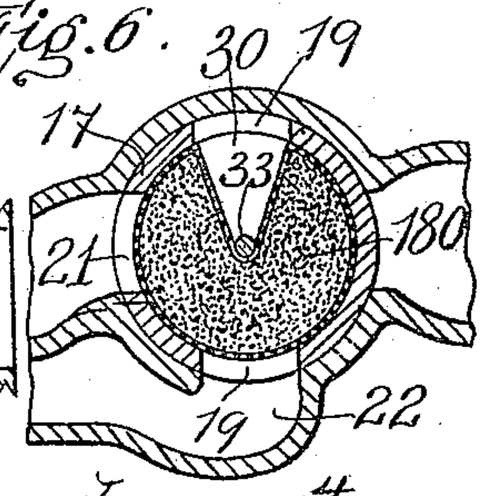


Fig. 6.



Witnesses.
L. E. Kennedy.
E. Batchelder

Inventor.
F. A. Dunham
By Wright Brown Quinby & May
Atty's.

UNITED STATES PATENT OFFICE.

FRANK A. DUNHAM, OF BROCKTON, MASSACHUSETTS.

FAUCET.

No. 816,440. Specification of Letters Patent. Patented March 27, 1906.

Application filed October 3, 1905. Serial No. 281,129.

To all whom it may concern:

Be it known that I, FRANK A. DUNHAM, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Faucets, of which the following is a specification.

This invention has for its chief object to provide the casing of a faucet with a filter-holder interposed between the ordinary valve of the faucet and the inlet end of the faucet-casing, the said filter-holder being constructed to cause the water to pass through filtering material on its way to the faucet-valve and also to shut off the liquid from the faucet-valve whenever this operation is desirable, as when the valve needs a new washer or other repairs.

This invention also has for its object to provide for the convenient cleansing of the filtering material in the holder.

The invention consists in improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a faucet embodying my invention. Fig. 2 represents a longitudinal section of the same. Fig. 3 represents a section on line 3 3 of Fig. 1. Fig. 4 represents a section on line 4 4 of Fig. 1. Fig. 5 represents a section similar to a portion of Fig. 2, showing the filter-holder adjusted to cause the liquid to clean the filter. Fig. 6 represents a view similar to Fig. 5, showing the filter-holder adjusted to shut off the liquid from the faucet-casing. Fig. 7 represents a perspective view of the filter removed from its holder and the casing. Fig. 8 represents a sectional view of a modification.

The same reference characters indicate the same parts in all the figures.

In the drawings, 12 represents the casing of a faucet, and 13 represents the usual or any suitable valve adapted to control the flow of liquid between the inlet 14 and the filtered-water outlet 15 of the casing, the latter having an outer valve-seat 10 for the valve 13. At a suitable point in the casing, between the seat of the valve 13 and the inlet end 14, is formed a socket or inner valve-seat 16, which intersects the passage through the casing and is preferably tapering and of circular form in cross-section.

17 represents a filter-holder which is formed as a rotary plug-valve adapted to closely fit and turn in the socket or inner valve-seat 16, said holder being internally chambered to receive a filter of any suitable construction. I have here shown the filter comprising a foraminous tube 18, of perforated sheet metal, and a filling 180, which may be composed of charcoal, sponge, or other suitable material; but it is obvious that any other suitable filter construction may be employed. The holder 17 is provided at opposite sides of its periphery with ports 19 19, which coincide with the passage through the casing when the holder is in the position shown in Fig. 2, and thus permits the passage of liquid through the filter to the outlet 15. The holder is formed so that when turned to the position shown in Fig. 6 it will close the inlet 14 and shut off the liquid from the valve 13, thus enabling the valve to be removed for repairs. The function of shutting off the liquid from the valve is preferably performed by one of the portions of the holder located between the ports 19, the opposite portion being provided with an opening 21, which communicates with the inlet end of the casing when the holder is turned to the position shown in Fig. 5, said opening permitting the entrance of liquid into the filter for the purpose of washing out sediment from the interior thereof. The casing is provided at its lower side with a waste-outlet 22 for the escape of the liquid thus entering the filter and the sediment carried thereby. The outlet 22 is preferably connected by a passage 23 with the outlet end of the casing at a point beyond the valve 13. The larger end of the holder 17 has an opening to receive the filter and is, or may be, provided with a movable filter-retaining cap or plug 24, having a screw-thread connection with the holder. The opposite end of the filter-holder is closed and provided with a screw-threaded stem 25, with which a nut 26 is engaged, said nut holding a collar 27, which confines a washer 28 against a shoulder on the filter-holder.

It will be seen that the construction above described provides for the convenient application of a filter to a faucet-casing and also for the shutting off of the liquid from the faucet-valve.

The filter-tube 18 is preferably provided with a depression or sediment-pocket 30, which is preferably V-shaped and registers with one of the ports 19, the sides of said pocket being foraminous and presenting a

large area of foraminous surface to the entering water when the filter is in the position shown in Fig. 2. Circular end pieces or heads 31 32 are secured to the ends of the filter-tube by a rod 33, having at one end a head engaging one end piece and at the other end a nut 34 engaging the other end piece. When the filter-holder is in the position shown in Fig. 5, the sediment-pocket 30 communicates with the waste-outlet 22 in the casing, so that the sediment in said pocket is forced therefrom by water passing through the filter from the inlet side.

The filter-holder may be provided with suitable handles 35 for convenience in turning it. If desired, the holder may have a squared or polygonal portion adapted to be engaged by a wrench. This is preferable in the larger sizes, and particularly when the casing and the filter-holder are used as a filter and shut-off, comprising a socket 36, having an inlet branch 37 and an outlet branch 38, as shown in Fig. 8. In this case the filter acts on water which flows from the filter to a distant point and may be cleansed by the entering water.

I claim—

1. An appliance of the character stated, comprising a casing having an inlet, a filtered-water outlet, and an intermediate socket, a chambered filter-holder, a bodily-removable filter having a sediment depression or pocket with foraminous sides and located in the holder, said holder being adapted to be given a half-rotation in the socket and provided with oppositely-arranged ports, one of the portions of the holder between the ports being closed to shut off liquid from the casing-outlet, while the other portion of the holder between the ports is provided with an opening to permit the entrance of liquid into the holder and filter, the casing having also a waste-outlet which communicates with one of said ports to permit the escape of waste water and sediment.

2. An appliance of the character stated, comprising a casing having an inlet, a filtered-water outlet, and an intermediate socket having a waste-outlet, a chambered filter-holder, a bodily-removable filter having a sediment depression or pocket with foraminous sides and located in the holder, said holder being adapted to be given a half-rotation in the socket and provided with oppositely-arranged ports, one of the portions of the holder between the ports being closed to shut off liquid from the casing-outlet, while the other portion of the holder between the ports is provided with an opening to permit the entrance of liquid into the holder and filter, the holder having also a waste-outlet adapted to receive water and sediment from the filter.

3. An appliance of the character stated, comprising a casing having an inlet, an outlet, and an intermediate socket, a chambered filter-holder adapted to be given a half-rotation in the socket and provided with oppositely-arranged ports which permit the passage of liquid from the inlet to the outlet, and a foraminous filter removably mounted in said holder and adapted to turn with said holder and having a depression or sediment-pocket in one side, said pocket having foraminous sides and coinciding with one of said ports.

4. A filter comprising a foraminous tube or shell having a depression or sediment-pocket with foraminous sides, and a filling of filtering material within said shell.

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

FRANK A. DUNHAM.

Witnesses:
C. F. BROWN,
E. BATCHELDER.