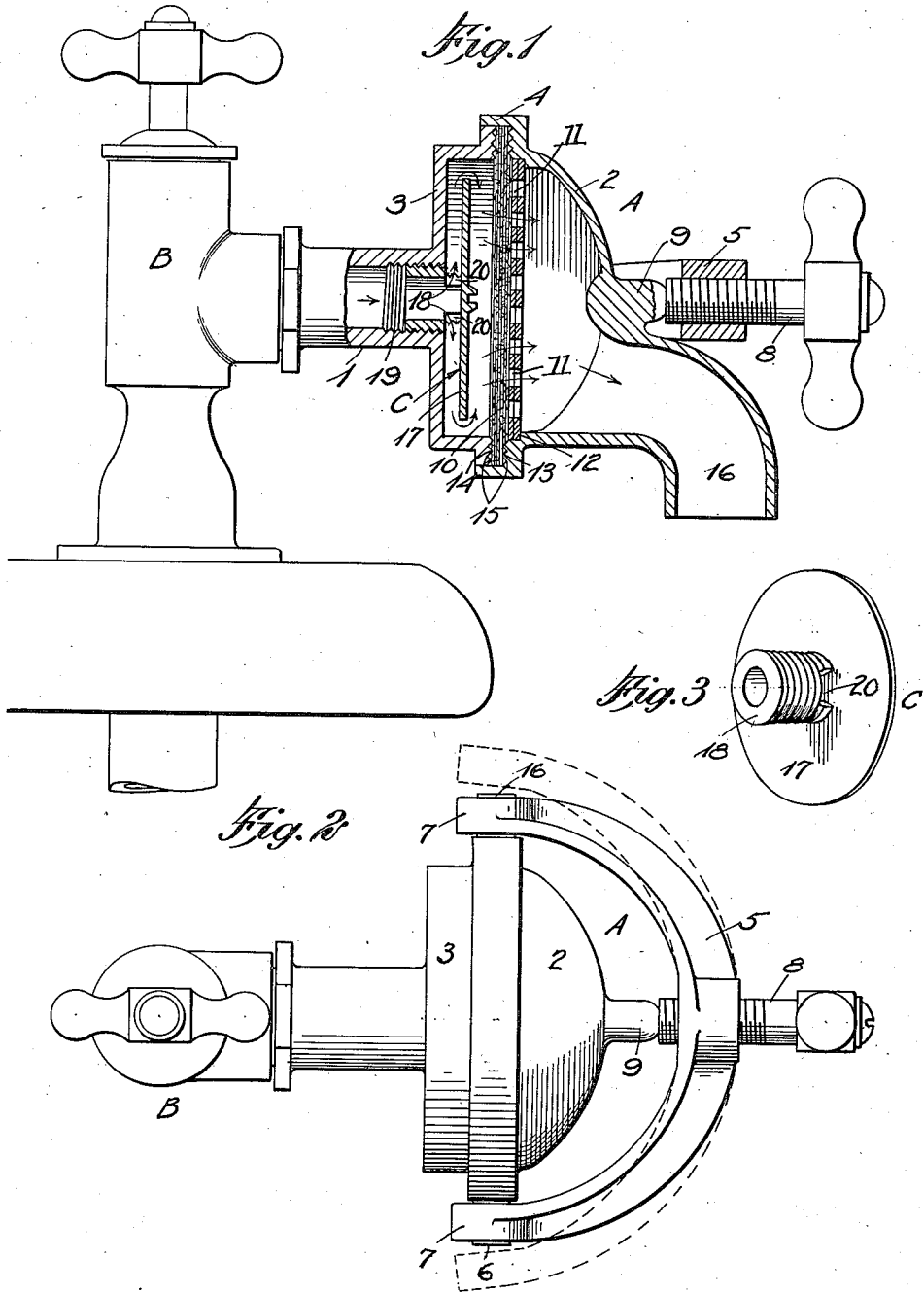


J. BOULARD.
 FAUCET FILTER.
 APPLICATION FILED SEPT. 2, 1914.

1,139,331.

Patented May 11, 1915.



WITNESSES
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UNITED STATES PATENT OFFICE.

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FAUCET-FILTER.

1,139,331.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH BOULARD, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Faucet-Filter, of which the following is a full, clear, and exact description.

This invention relates to a filtering device which is adapted to be used in connection with various types of faucets whereby water can be drawn off free from sediment and deleterious matter and at a comparatively fast rate.

The invention has for its general objects to provide a comparatively simple and inexpensive filtering device of that type in which the filtering element is a fibrous disk or wafer suitably clamped and supported within the body of the device and capable of being easily renewed.

A further object of the invention is the provision of a novel and effective device for so directing the flow of the incoming water that it is better distributed over the filtering element and without having any injurious effect thereon.

Another object of the invention is the provision, in combination with the water distributor or deflector, of means for regulating the pressure of the incoming water according to the pressure of the service supply pipe, whereby the filtering element will not become destroyed by excessive pressure.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention and wherein similar characters of reference indicate corresponding parts in all the views, Figure 1 is a sectional view of the filtering device; Fig. 2 is a plan view thereof; and Fig. 3 is a perspective view of the combined pressure regulator and water distributor.

Referring to the drawing, A designates the body of the filtering device, which is shown with an inlet nipple 1 that can be attached to any suitable faucet or valve B through which water is supplied to the fil-

tering device. The body of the filtering device comprises a front section 2 and a rear section 3, the latter fitting into an annular flange 4 on the front section. The parts of the body A are clamped together in any suitable manner, as, for instance by a yoke 5 which is pivotally connected to the rear section 3 by lugs 6 that pass through eyes 7 in the ends of the yoke, and this yoke, which is semi-circular in form, has a central screw 8 which bears against the central boss 9 on the front section, whereby the tightening of the screw will cause the sections of the casing or body A to be drawn together. When the sections are to be separated the screw 8 is unscrewed so as to release the stud 9 to permit the yoke 5 to be thrown upwardly out of the way of the section 2, so that the latter can be detached. If the studs are integral the yoke is preferably made of malleable metal, and its initial form is shown by dotted lines, Fig. 2, and in assembling the yoke the arms thereof, after the eyes 7 are brought into alinement with the respective lugs 6, are compressed together to the final form shown by full lines, whereby the yoke is permanently connected with the filtering device.

Clamped between the two sections 2 and 3 is a disk or wafer 10 of suitable fibrous material to constitute the filtering element. On the front side of this is a perforated plate or support 11 which withstands the pressure of the water on the inner or rear side of the filtering element. This perforated plate or support 11 has its periphery resting on a shoulder 12 formed on the front section 2, and the filtering element has its periphery clamped between the surfaces 13 and 14 of the sections 2 and 3, which surfaces are provided with circular grooves 15 to embed into the fibrous material and thereby enable a watertight joint to be obtained when the sections of the casing are clamped together, thus doing away with packing rings or equivalent means. The water in passing through the filtering element is relieved of its impurities and the filtered water discharged through a spout 16.

To prevent the water from passing directly through the nipple 1 and against the center of the filtering element, a distributor or deflector C is provided. This is in the form of a circular disk 17 arranged within

the rear section 3 of the casing A, and this disk has a central hollow boss 18 which is exteriorly threaded to engage the threads 19 in the nipple or neck 1. In this boss 18 are one or more openings 20 through which the water passes into the body of the filtering device, and in passing the water flows outwardly in all directions along the rear side of the disk or distributor 17, and thence inwardly toward the center along the front side thereof, so that the water is distributed more or less evenly over the entire filtering element 10. By screwing this distributor in or out, more or less of the ports 20 can be closed, according to the pressure of the water supply system. If this pressure is high the distributor will be screwed in to a considerable extent so as to reduce the effective outlet areas of the ports 20 and thereby reduce pressure of the water in the filtering device, and by unscrewing the distributor C, the pressure in the filtering device can be raised. The only attention required is the renewal of the filtering element 10 when it becomes clogged, and to do this it is merely necessary to separate the two parts of the casing and take out the old filtering element and put in a new one, which operation is so simple that a person of ordinary intelligence can perform it.

From the foregoing description taken in connection with the accompanying drawing, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes

may be made when desired as are within the scope of the appended claims.

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

1. A filtering device comprising a body having an inlet, a filtering element in the body, a distributing plate interposed in front of the inlet, whereby liquid is deflected radially from the center to the periphery of the plate and thence flows on the opposite side of the latter so as to be quickly distributed over the filtering element, and a boss on the plate and having a port adjacent the latter, and means for connecting the boss adjustably with the inlet to vary the effective area of the port of the boss, and thereby regulate the pressure of the water passing through the filtering device.

2. A filtering device comprising a body having an inlet, a filtering element mounted in the body, a distributing disk arranged between the inlet and the filtering element for directing the water outwardly from the inlet on one side of the disk and inwardly along the opposite side and along the filtering element, and a hollow boss on the disk connected with the inlet and having ports through which the water flows from the inlet to the body of the device, said boss being adjustable with respect to the inlet to change the area of the ports and thereby regulate the pressure of the water entering the filtering device.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH BOULARD.

Witnesses:

A. H. DAVIS,
PHILIP D. ROLLHAUS.