(No Model.)

N. BEAUREGARD.

BIB FILTER.

No. 396,799. Patented Jan. 29, 1889.

Fig. 1.

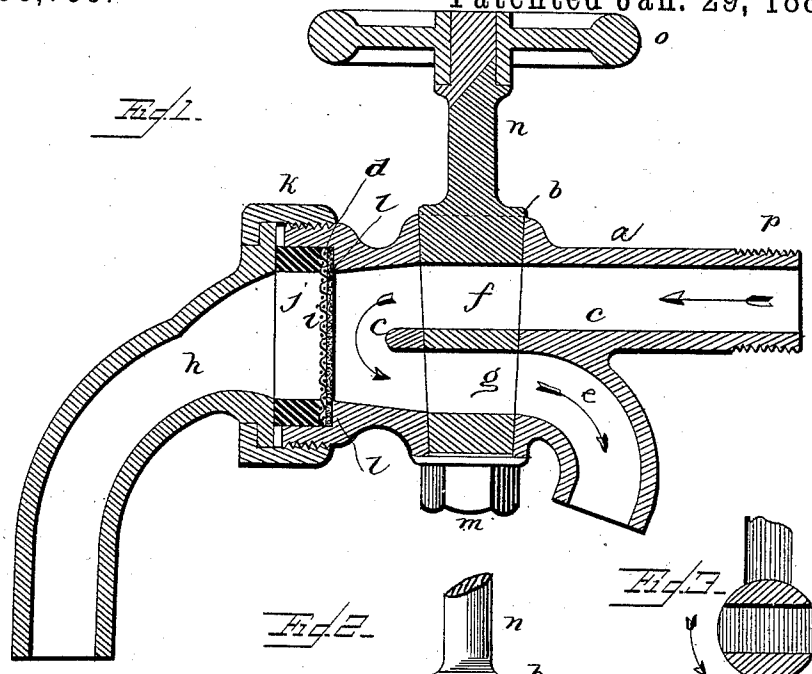


Fig. 2.

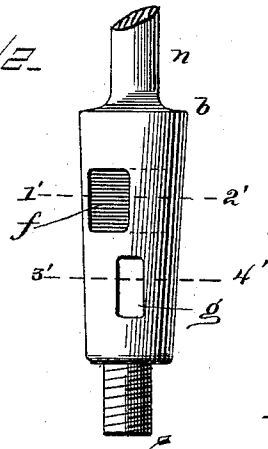


Fig. 3.

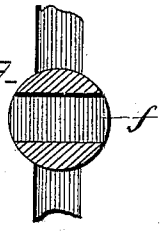


Fig. 4.

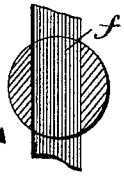


Fig. 5.

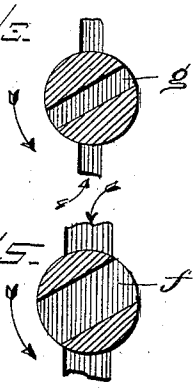


Fig. 6.

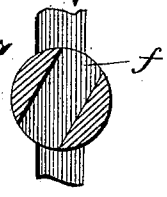


Fig. 7.

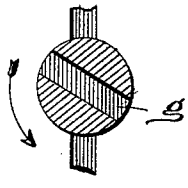


Fig. 8.

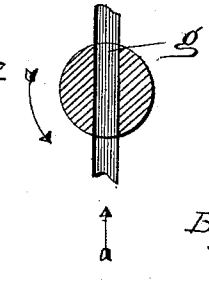
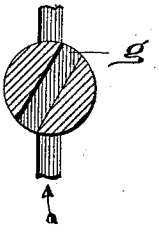


Fig. 10.



WITNESSES

F. L. Durand

A. M. Vandeventer.

INVENTOR.

N. Beauregard.

By L. L. Pierce

Attorney.

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

UNITED STATES PATENT OFFICE.

NAPOLEON BEAUREGARD, OF SAN FRANCISCO, CALIFORNIA.

BIB-FILTER.

SPECIFICATION forming part of Letters Patent No. 396,799, dated January 29, 1889.

Application filed December 30, 1887. Serial No. 259,432. (No model.)

To all whom it may concern:

Be it known that I, NAPOLEON BEAUREGARD, a citizen of the United States, and a resident of the city and county of San Francisco, in the State of California, have invented a new and useful Improvement in Bib-Filters for Filtering Water, of which this is a specification.

The object of my invention is to produce a self-cleaning filter—one that can be kept clean without any special care on the part of those who use it, consequently cannot become foul or neglected.

I am aware that a filter having a special device attached for flushing purposes has been made and patented to W. H. Cummings, May 17, 1887, No. 363,120, in which it will be seen that the flushing-cock may or may not be used, depending on the amount of care bestowed upon it; but if neglected only for a few days the water passing through the bib will be filtered through all the accumulated filth having been collected by the filtering-diaphragm; but I propose by the ordinary motion of the hand in opening and closing the bib the flushing will not only take place but cannot be prevented. How I accomplish this is clearly shown in the accompanying drawings, in which—

Figure 1 is a longitudinal section; Fig. 2, a detail of the plug. Figs. 3, 4, 5, and 6 are sections of plug on the line 1′ and 2′; and Figs. 7, 8, 9, and 10 are also sections of the plug on the line 3′ and 4′, and will be explained as the description proceeds.

Similar letters refer to like parts throughout the several views.

The shell *a*, Fig. 1, is divided into two chambers at that point where the double parted plug *b* passes by the partition *c*. Said partition does not reach, but leaves a space between it and the filtering-diaphragm *d*, which communicates with the lower chamber, *e*. The plug *b* is provided with two ports or passages, *f* and *g*, and when the plug is in the position shown in Fig. 1 water will flow freely through, as shown by the arrows. The ports *f* and *g* will be in the position shown in sections, Figs. 6 and 9, and any accumulation that had taken place between the plug *b* and the diaphragm *d* will be washed out through the port *g* and spout *e;* but by continuing to turn the plug until it reaches the position represented in the sections Figs. 4 and 7 it will be observed that the port *f* is entirely open and that the port *g* is closed. In this position the water is forced against and through the filtering-diaphragm, and in a strained or filtered condition is discharged through the spout *h*, and the bib is now said to be open. The plug *b* having been turned one-quarter of a circle, or ninety degrees, to close it the reverse will take place, first returning to the position shown in sections, Figs. 6 and 9, when again the chambers behind the diaphragm will be flushed out, and the port *g* again closed as it reaches the position shown in sections, Figs. 3 and 8. The relative positions of the ports in the plug *b* to each other is that of sixty degrees, while those in the shell *a* are parallel to and directly under each other; but the port *g* is but one-half as wide but of the same length as port *f*, and consequently but one-half its area, which is sufficient to keep the chamber perfectly clean.

The diaphragm *d*, Fig. 1, is made of felt or any suitable material for filtering water, held in place by an equal-sized diaphragm of heavy wire-cloth, *i*, to strengthen the filtering-diaphragm against the pressure of water of the main. Against the wire-cloth is placed the loose ring *j*, against which the spout *h* is held fast by the union-coupling *k*, which when screwed up makes a water-tight joint against the shoulder *l*.

The plug *b* is held in place by the nut *m*. *n* is the neck or shank of the plug *b*, and *o* is the handle or hand-wheel for turning the same. The whole apparatus is secured to the service-pipe in any convenient place by the screw-thread at *p*.

The operation is very simple and is as follows: Connect the bib in the usual manner to the main, closed, as shown in the sections, Figs. 3 and 8. Now turn the plug from left to right until it has passed over one-quarter or ninety degrees of a circle, and the plug will be in position shown in sections, Figs. 4 and 7, which is with the top port, *f*, wide open and the bottom port, *g*, closed, when the water will flow through the filter into the spout *h*. Now it is evident that in turning the plug as above described it must have passed the position shown in sections, Figs. 6 and 9, which

is with the bottom port wide open and the top one half open. In this position, if it is desired, water may continue to flow, flushing out the chamber and washing the surface of the diaphragm as long as is desired; but in usual household kitchens, where the bib is used hundreds of times each and every day, and as flushing takes place twice—once in opening and again in closing—it is not necessary to keep it open any particular length of time, but use it as a common bib, and to become foul is an impossibility.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

In a faucet-filter, the combination of a body having two longitudinal passages and a plug passing through both passages, said plug having two perforations on the planes of the passages in the body, but askew with reference to each other, a filtering-diaphragm on the side of the plug away from the inlet, and an outlet on the side of the plug away from the diaphragm, all substantially as described.

In witness whereof I hereto set my hand as of and for the 23d day of December, 1887.

NAPOLEON BEAUREGARD.

Witnesses:
G. L. PIERCE,
OTIS H. SAWYER.