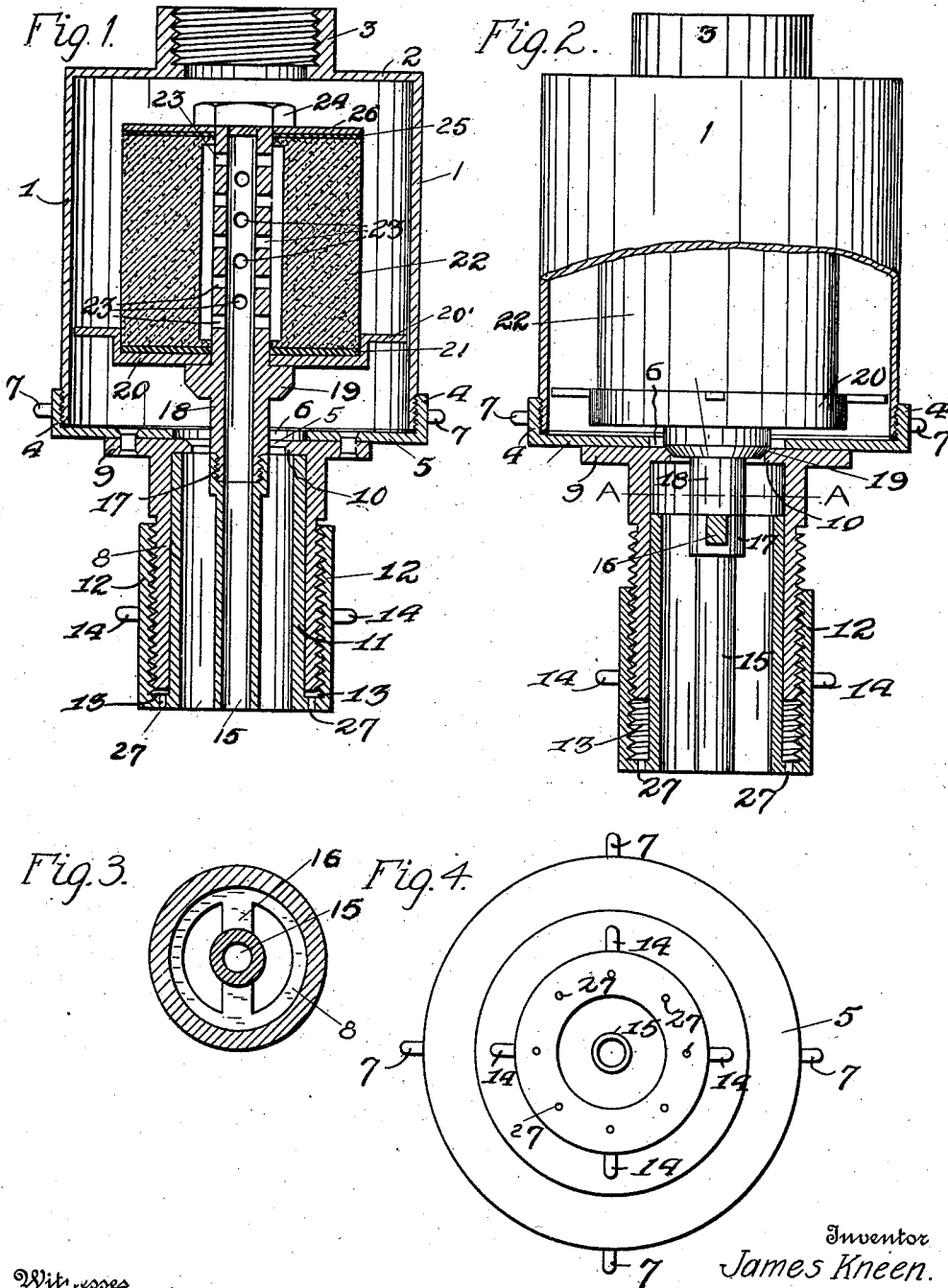


J. KNEEN.
WATER FILTER.
APPLICATION FILED MAY 26, 1910.

986,998.

Patented Mar. 14, 1911.



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WATER-FILTER.

986,998.

Specification of Letters Patent.

Patented Mar. 14, 1911.

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To all whom it may concern:

Be it known that I, JAMES KNEEN, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Water-Filters, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to water filters and the principal object of the same is to provide a filter that can be attached to a faucet and which is provided with means whereby an unfiltered flow of water can be had when desired, which also permits the filter to be flushed for cleaning purposes.

In carrying out the objects of the invention generally stated above it will be understood, of course, that the essential features thereof are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:—

Figure 1 is a central vertical sectional view showing the improved filter in position to deliver unfiltered water. Fig. 2 is a part section and part elevation showing the device in a filtering position. Fig. 3 is a transverse sectional view taken on the line A—A, Fig. 2. Fig. 4 is a bottom plan view.

Referring to the accompanying drawings by numerals, it will be seen that the improved filter comprises a body 1 that is preferably cylindrical and having a top 2 that is provided with a central internally threaded tube extension 3 by means of which the filter may be readily attached to a faucet or other source of water supply, not shown. The lower end of the body is open and provided with external threads that are engaged by the internal threads of the flange 4 of the bottom 5. Said bottom is provided with a central opening 6. The flange 4 of said cover is provided with finger grips 7 which facilitate the necessary manipulations of the bottom 5 to detach the same from the receptacle or attach it thereto.

A tube 8 has an upper flange 9 that is riveted or otherwise rigidly attached to the bottom 5 to place said tube in communication with the opening 6. The upper end of said tube is provided with an internal valve seat 10, and externally, said tube is threaded. A cylinder 11 is fitted within tube 8, said cylinder being provided with a surrounded

annular wall 12 that is internally threaded. Said wall 12 provides a recess 13 into which tube 8 extends and the thread of said tube and wall are engaged to retain the tube and cylinder in adjustable relation. Said threads are preferably what is known as quick action threads so that a partial rotation of cylinder 11 will result in a material adjustment of the same relative to said tube. Wall 12 is provided with finger grips 14 which facilitate the adjustments of the cylinder. Cylinder 11 carries a centrally located longitudinally arranged discharge pipe 15 which is connected to said cylinder by the bridge 16.

The upper end of pipe 15 is provided with an internally threaded recess 17 that engages the externally threaded end of a filter pipe 18. Said pipe 18 carries an annular flange 19 the lower portion of which is beveled to provide a valve adapted to be rested on seat 10 to seal the upper end of cylinder 11. A cup 20 is seated on flanges 19 and carries a gasket 21 on which the lower end of the filtering material 22 rests. The cup 20 is provided with a number of outstanding rods 20', which extend to the sides of the body, and insure the filter pipe remaining plumb in the body. Pipe 18 extends through the open center of the filtering material and is provided with a plurality of openings 23 which permit the filtered water that passes through the filtering material to enter said pipe. The upper end of pipe 18 is closed and provided with a nut 24 that clamps a gasket 25 and top plates 26 to the upper end of the filtering material so that said material will be held to cup 20.

From the foregoing it will be seen that with the parts of the filter in the position shown in Fig. 1, the water can flow through the body 1 and out through the cylinder 11 without being filtered. This provides means whereby a quick supply of water can be obtained, and also means whereby the interior of the filter can be flushed. When filtered water is desired, cylinder 11 is adjusted on tube 8 to cause the flange valve 19 to rest on seat 10 and close said cylinder, whereupon the water will be compelled to ooze through the filtering material 22 and enter pipe 18 and be discharged through pipe 15.

As shown in Figs. 1 and 2, the recess of cylinder 11 is provided with bottom openings 27 through which water that may enter between said cylinder and tube 8 will drain out.

It will be seen that this invention provides a strictly sanitary filter through the described means that make the same self-cleaning, and also that the various parts of the filter being
 5 in threaded engagement, they may be readily separated when necessary or desirable.

What I claim as my invention is:—

1. A filter comprising a hollow body portion provided with liquid inlet and discharge outlet, a tube secured to said body and provided with a valve seat communicating with said outlet, a filter pipe adjustably connected to said tube, a valve formed upon said filter pipe, a cup mounted upon
 10 said valve, a plurality of rods formed upon upper edge of said cup and extending to the side of said body, filtering material mounted within said cup and a means for retaining said filtering material in place.

20. 2. A filter comprising a casing provided with inlet and outlet openings, an outlet

pipe secured to said casing and communicating with said outlet opening, a filter pipe secured to said outlet pipe, a cup secured to said filter pipe, a plurality of rods formed
 25 upon said cup and filtering means within said cup and surrounding said filter pipe.

3. A filter comprising a casing provided with outlet and inlet openings, a tube secured to said casing, a pipe removably secured to said tube, an outlet pipe secured to said pipe, the inner portion of said outlet pipe being enlarged and provided with an internal thread, a filter pipe threaded within said outlet pipe, and filtering means mounted upon said filter pipe.
 30 35

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

JAMES KNEEN.

Witnesses:

H. C. SCHROEDER,

F. J. SCHROEDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
