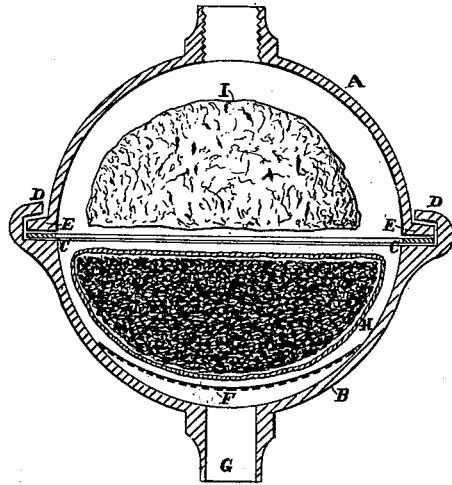


W. S. FLEMING & A. BURNS.

WATER-FILTER.

No. 190,569.

Patented May 8, 1877.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM S. FLEMING AND ARTHUR BURNS, OF SAN FRANCISCO, CAL.

## IMPROVEMENT IN WATER-FILTERS.

Specification forming part of Letters Patent No. **190,569**, dated May 8, 1877; application filed March 17, 1877.

*To all whom it may concern:*

Be it known that we, WILLIAM S. FLEMING and ARTHUR BURNS, of the city and county of San Francisco and State of California, have invented an Improved Water-Filter; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

Our invention relates to an improvement in water-filters, such as are intended to be applied directly to faucets and exit-pipes for water for drinking and other purposes.

In that class of small filters which are intended for direct application to the faucet much difficulty is experienced in cleansing them from the impurities which collect very rapidly in so small a space. Many of these filters are made reversible, so that by changing ends the water itself will force out a portion of the accumulation, while others have a cap which may be screwed off after removing the filter from the faucet.

Our invention contemplates the construction of a filter-case in two parts, which are united by a locking-coupling, so that while the upper portion remains permanently attached to the faucet the lower part can be removed by a slight turn, so as to expose the material composing the filter for the purpose of cleaning or renewal, the joint being made perfectly tight.

Referring to the accompanying drawings for a more complete explanation of our invention, Figure 1 is a view of the two parts of our filter.

A is the upper, and B the lower, half of the shell or case of our filter. These parts are made of any convenient shape, but we prefer to construct them hemispherical in shape. The lower half has a broad circular seat at C, and just above this seat are two inclined flanges, D, which project inwardly from the rim, and are each formed opposite to the other, being of considerable length. The upper half of the case has inclined flanges E projecting from its lower edge, and these flanges

are fitted to set down inside of the rim of the lower half until the face of the upper half rests upon the seat C. The two parts may then be united by simply turning them until the flanges E bind beneath the flanges D.

In order to make a perfectly water-tight joint an angular plate of rubber is placed upon the seat C, or preferably a groove is made in the face of the seat, and a ring of some elastic substance is forced into this groove, to form the seat, so that a simple turn of less than one-fourth will lock or unlock the hemispheres.

The interior construction of my filter consists of a gauze or perforated bottom, F, which covers the discharge-opening G, and about this gauze is placed a flannel bag, H, containing charcoal. The upper part of the filter is filled with a sponge or other porous substance, I, which will diffuse the water as it enters, and cause it to flow evenly through the charcoal.

The filter is easily made, and is large enough to be efficient without being inconvenient or expensive. The parts are easily separated and the interior filter cleansed or renewed.

We are aware that various coupling or locking devices somewhat similar to that herein described have been employed for connecting hose or solid articles, and we do not claim, broadly, a locking device for the different parts; but

We do claim as new and desire to secure by Letters Patent—

The water-filter herein described, consisting of the case A B, having the inclined locking and uniting flanges D and E, with the annular grooved seat C, gauze or perforated bottom F, purifier H, and sponge I, as and for the purpose specified.

In witness whereof we have hereunto set our hands and seals.

WILLIAM S. FLEMING. [L. S.]  
ARTHUR BURNS. [L. S.]

Witnesses:

FRANK A. BROOKS,  
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