J. B. SHALER.
Filter.

No. 217,906. Patented July 29, 1879.

Fig1.

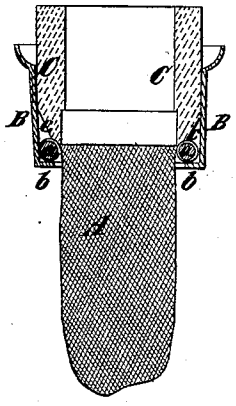


Fig2.

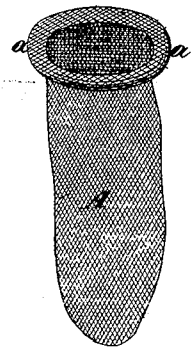


Fig3.

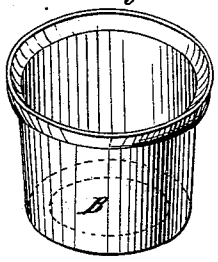


Fig4.

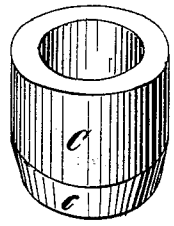


Fig5.

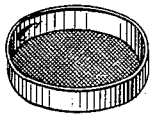


Fig7.

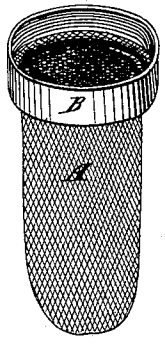
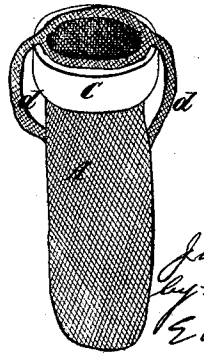


Fig6.



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UNITED STATES PATENT OFFICE.

JUSTIN B. SHALER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FILTERS.

Specification forming part of Letters Patent No. **217,906**, dated July 29, 1879; application filed November 15, 1878.

To all whom it may concern:

Be it known that I, JUSTIN B. SHALER, of Brooklyn, in Kings county, and State of New York, have invented certain new and useful Improvements in Filters, of which the following is a specification.

The object of my invention is to provide a simple, cheap, and effective filter for use in connection with faucets and other draft apparatus, which may be easily applied for use and removed for cleansing.

The invention consists in the combination, with such a bag or sieve, of a ring of india-rubber or other elastic material, whereby the same may, without alteration, be secured to faucets or other draft apparatus of different sizes, and a tubular socket fitting outside the said ring and supporting the same.

The invention also consists in the combination, with a bag or sieve of woven or other reticulated material, provided at the mouth with a metal or other ring, of a socket adapted to be secured to a faucet or other draft apparatus, and provided at its lower end with an inwardly-projecting flange for supporting the bag or sieve, and a ring of india-rubber or other elastic material adapted to fit between the said socket and the faucet or other draft apparatus, whereby the same may, without alteration, be secured to faucets or draft appara tus of different sizes.

The invention also consists in the combination, with a bag or sieve of woven or other reticulated material, provided at the mouth with a metal or other ring, of a socket adapted to be secured to a faucet or other draft apparatus, and provided at its lower end with an inwardly-projecting flange for supporting the said bag or sieve.

The invention also consists in details of construction to be hereinafter explained.

In the accompanying drawings, Figure 1 represents a central vertical section of a filter embodying my invention. Fig. 2 represents a perspective view of the bag of such filter detached from other parts. Fig. 3 represents a perspective view of the socket before referred to. Fig. 4 represents a perspective view of the india-rubber ring above mentioned. Fig. 5 represents a perspective view of a disk-shaped strainer or filtering device adapted for use in lieu of the bag aforesaid. Figs. 6 and 7 are perspective views illustrating modified forms of my filter.

Similar letters of reference designate corresponding parts in all the figures.

A designates a bag or sieve made of a woven fabric, preferably muslin, and provided at the mouth with a metal or other ring, *a*, which is secured thereto in any suitable manner—for instance, by having the top edge of the bag lapped or folded over it and fastened by sewing or otherwise to the main portion or body of the bag. B designates a socket, consisting of a shell, preferably made of sheet metal, with an inwardly-extending flange, *b*, at the bottom for sustaining the ring *a*, and a hole sufficiently large for the passage of the bag A through it. This socket is represented as made tapering slightly from the top toward the bottom; but this is not an essential feature of my invention.

The socket is made sufficiently large to admit of the insertion between it and the tip or end of a faucet of a ring or band of india-rubber, C, which, in order that it may extend down upon the bag A inside of the ring *d*, is made preferably tapering externally toward the bottom edge, as shown at *c* particularly in Fig. 1. This ring C is intended to be made internally of a shape to fit any particular faucet with which it is to be used, in order to adapt it the better therefor.

It will be seen, by reference to Fig. 1, that if the bag A is slipped through the hole in the bottom of the socket B, and the india-rubber ring C fitted into the latter, a complete filter and means for attaching the same to a faucet are formed, and one so simple that it is only necessary, in order to secure it in place for use, to slip it over the end of a faucet, the india-rubber ring C, by its friction thereon and in the socket B, serving to secure it in place, and as a packing to preclude leakage.

Whenever it is necessary or desirable, the filter may be detached from the faucet, the bag slipped out of the socket, and turned inside out and washed so as to thoroughly clean it. This will be found to form a very simple, cheap, and effective filter, especially desirable and advan-

tageous because of the great facility afforded for thoroughly cleansing it when it is requisite, and of renewing the filtering material whenever it may be desirable so to do.

In lieu of the bag A, I may use, in connection with the socket B, a ring, C, and disk or sieve-like device, such as is represented in Fig. 5, as this may prove to have sufficient surface for filtering waters which are not impregnated or charged with impurities to any considerable extent. The bag, however, I esteem the better device, for the reason that it has a far greater or more extensive filtering-surface.

The modified form of filter represented in Fig. 6 consists of a bag, A, having an elastic band, (preferably of india-rubber,) C, secured to it by means of straps *d*, fastened to the bag longitudinally and passing transversely across said ring. This form of filter is exceedingly simple, and may be slipped upon and detached from a faucet or other draft apparatus with facility, the elastic band serving to retain it in place for use.

The modified form of filter shown in Fig. 7 comprises a bag, A, of muslin or other reticulated material, and a supporting ring or socket, B, internally screw-threaded for attachment to an externally screw-threaded faucet or other draft apparatus.

By my invention I am enabled to employ for filtering purposes, with facility and in a very superior manner, bags of muslin or other woven fabric, which have generally heretofore been acknowledged to be so effective as filtering agents, but have been comparatively abandoned because of the inconvenience of attaching them for use and detaching them.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a bag or sieve of woven or other reticulated material, of a ring of india-rubber or other elastic material, whereby the same may, without alteration, be secured to faucets or other draft apparatus of different sizes, and a tubular socket fitting outside of and supporting the same, substantially as specified.

2. The combination, with a bag or sieve of woven or other reticulated material, provided at the mouth with a metal or other ring, of a socket adapted to be secured to a faucet or other draft apparatus, and provided at its lower end with an inwardly-projecting flange for supporting the bag or sieve, and a ring of india-rubber or other elastic material adapted to fit between the said socket and the faucet or other draft apparatus, whereby the same may, without alteration, be secured to faucets or other draft apparatus of different sizes, substantially as specified.

3. The combination, with a bag or sieve of woven or other reticulated material, provided at its mouth with a metal or other ring, of a socket adapted to be secured to a faucet or other draft apparatus, and provided with an inwardly-projecting flange for supporting the said bag or sieve, substantially as specified.

4. The combination of the bag A, provided at the mouth with the ring *a*, the socket B, provided at the bottom with the flange *b*, and the india-rubber ring C, fitting within the socket B, and beveled externally toward the bottom edge, as at *c*, so as to lap over the ring *a*, substantially as and for the purpose specified.

JUSTIN B. SHALER.

Witnesses:
OWEN PRENTISS,
THOMAS E. BIRCH.