

F. P. Griffitts,

Water Filter.

N^o 54,894.

Patented May 22, 1866.

Fig 1

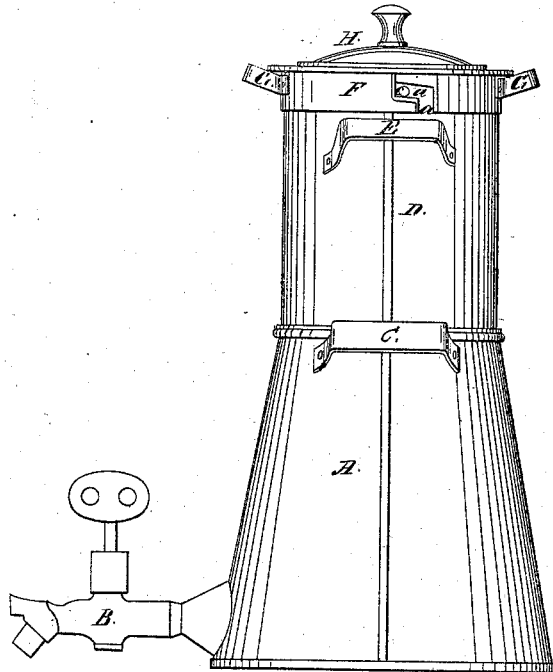


Fig 2

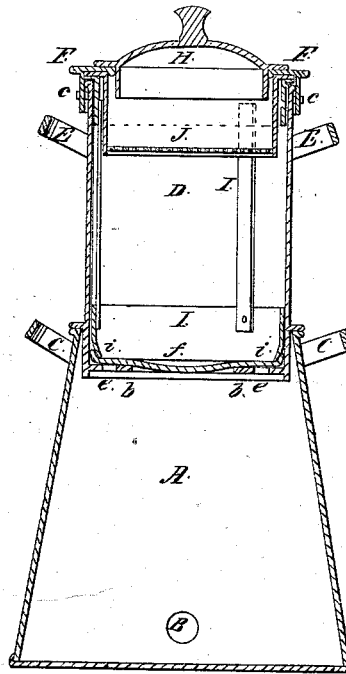
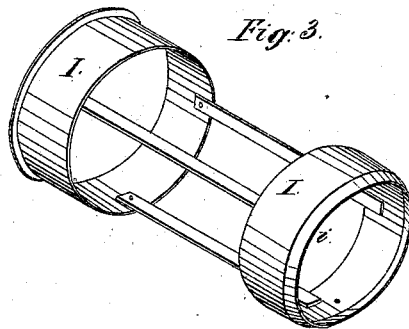


Fig 3



Witnesses:
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By atty AB Stoughton.

UNITED STATES PATENT OFFICE.

FRANK P. GRIFFITTS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FILTERS.

Specification forming part of Letters Patent No. 54,894, dated May 22, 1866.

To all whom it may concern:

Be it known that I, FRANK P. GRIFFITTS, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Filters or Strainers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents an external view of the filtering or straining apparatus. Fig. 2 represents a vertical section taken centrally through the same; and Fig. 3 represents in perspective, and detached from the apparatus, an interior frame or stand for holding the diaphragm of felt in its position in the interior of the apparatus.

Similar letters of reference, where they occur in the separate figures, denote like parts in all the drawings.

My invention consists, mainly, in the means of holding the felt, or its equivalent, in the filter so that it may be readily removed, replaced, or turned, as may be desired.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The apparatus consists of two vessels—viz., an under one, A, furnished with a draw-cock, B, and with handles C, by which it may be moved about an upper vessel, D, which sits on, in, and over the said lower one, A, which upper vessel is furnished with handles E, by which it may be lifted into place or removed from the under vessel, with a flanged ring, F, with cam-slots *a*, to take over pins or studs *c*, secured to the vessel D, so that it may be tightly drawn down to the said vessel, and handles G, to work it by, and with a cover, H, which fits into said flanged ring.

In the interior of the vessel D there is, first, a flange, *b*, perforated with holes *e*, upon which flange and over which holes is placed a felt diaphragm, *f*, (in red lines, Fig. 2,) through which the liquid is filtered or strained, and whence it falls and is collected in the lower vessel, A.

It will be perceived that the central portion of the felt diaphragm is not supported, and hence can bag or sag down, the flange *b* supporting it at the edges.

Inside of the upper vessel, D, there is a removable frame or stand, I, (shown detached in Fig. 3.) The lower edge of this frame or stand I is slightly turned inward, as seen at *i*, so as to catch upon the felt diaphragm a short distance from its perimeter and hold it firmly against the flange *b*. This frame extends up a little above the top of the vessel D, so that when the flanged ring F is put on and drawn down by its slots *a* it will crowd down said frame also and cause it to bind tightly upon the felt diaphragm and thus hold it in place; and by reversing the operation the felt may be as readily removed to be cleansed or for any other purpose. While the edge *i* of the frame I mainly holds the felt in place, the pressure of the air upon the felt, or the suction through the holes *e*, also aids to hold the felt in place.

A sieve, J, is placed at the top of the vessel D, into which the material to be filtered is poured. This sieve has a finely-perforated metallic bottom, which catches all the grosser material and allows the liquid to pass through. This sieve is also held down or in place by the flanged ring F.

I have mentioned but a single piece of felt. Two or more pieces may be used; and instead of a perforated metallic diaphragm in the sieve J, it may be made of woven wire, or even of cloth, or other equally well-known material.

Having thus fully described my improvement, what I claim therein as new, and desire to secure by Letters Patent, is—

The frame or stand clamped between the permanent flange *b* and the movable flanged ring F, for the purpose of firmly clamping the felt diaphragm to its seat and allowing it to be readily removed, cleansed, and replaced, substantially as described and represented.

FRANK P. GRIFFITTS.

Witnesses:

WM. F. GRIFFITTS,
MARK WILLCOX.