

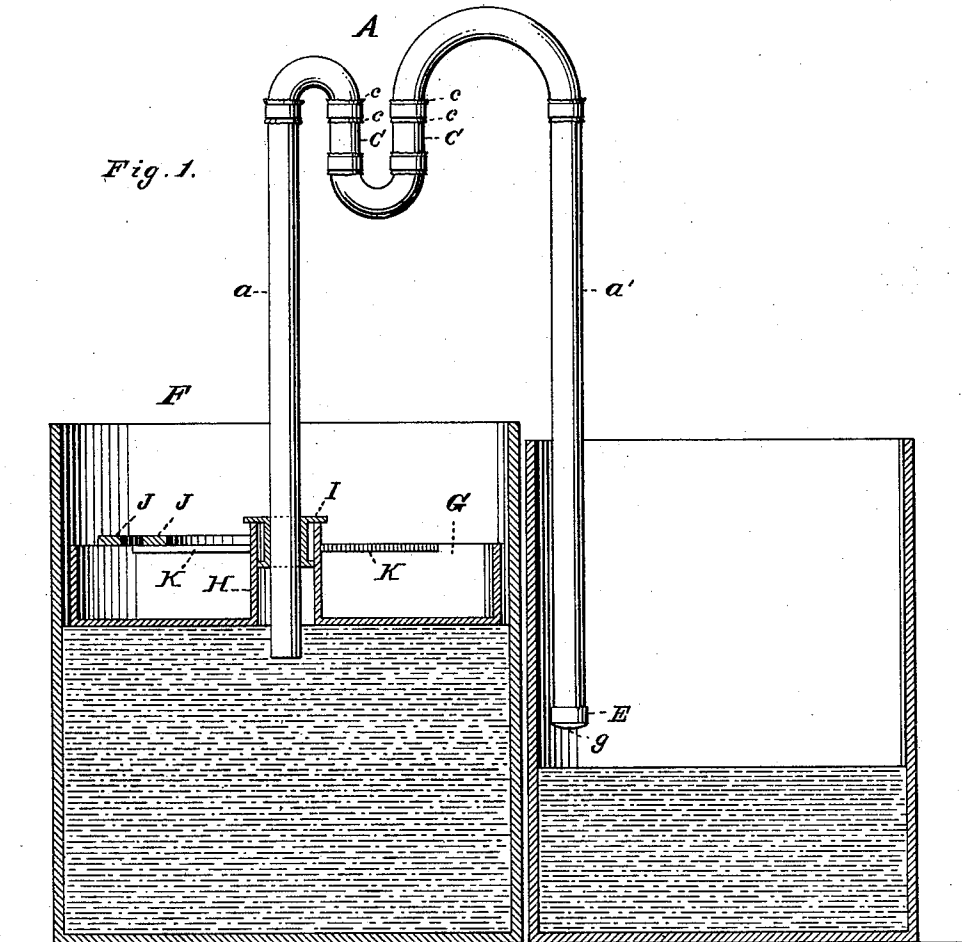
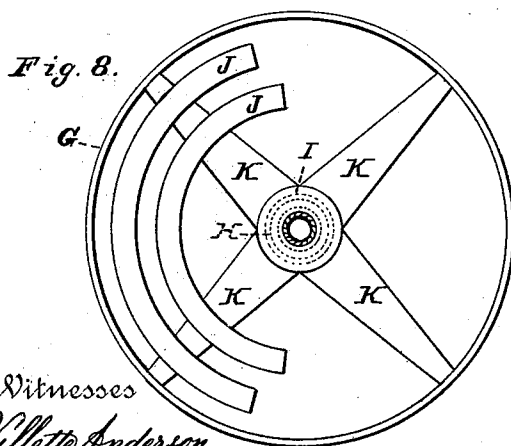
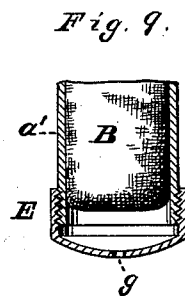
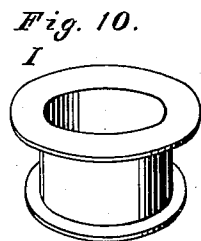
(No Model.)

2 Sheets—Sheet 1.

T. SLEVIN.
SIPHON FILTER.

No. 409,071.

Patented Aug. 13, 1889.



Witnesses
Villette Anderson,
Mary Taylor

Inventor
Thomas Slevin,
By his Attorney
E. W. Anderson.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

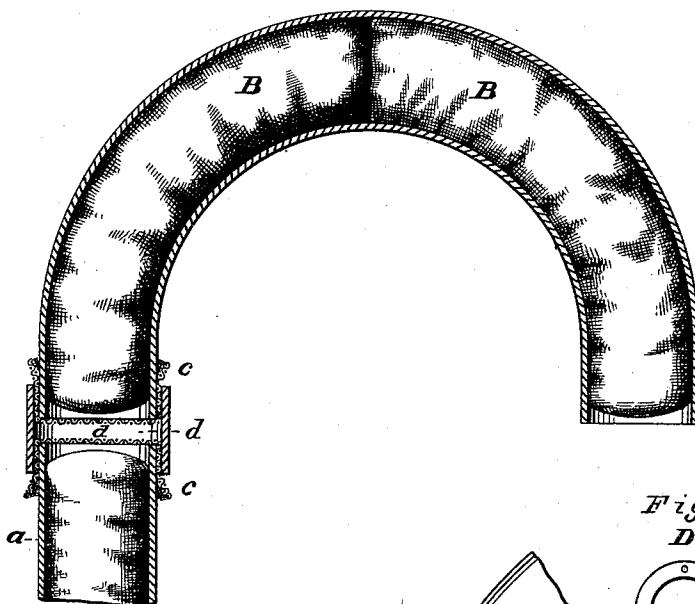


Fig. 3.

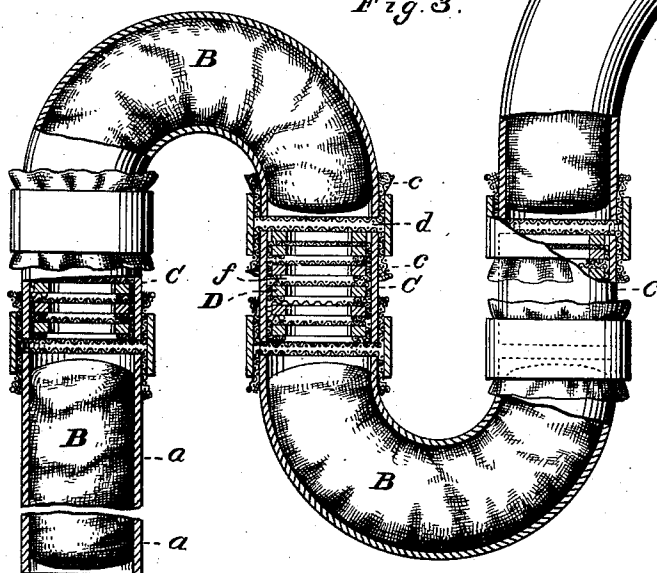


Fig. 4.

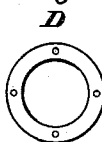


Fig. 5.

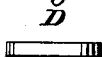


Fig. 6.

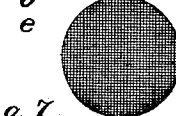
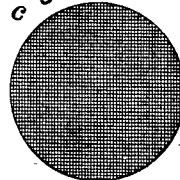


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS SLEVIN, OF ST. LOUIS, MISSOURI.

SIPHON-FILTER.

SPECIFICATION forming part of Letters Patent No. 409,071, dated August 13, 1889.

Application filed December 21, 1888. Serial No. 294,291. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SLEVIN, a citizen of the United States, and a resident of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Siphon-Filters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, a side view of the tubes, and a vertical section through the float and vessels containing water. Fig. 2 is a vertical section through the arched tube connecting the two legs of the siphon. Fig. 3 shows a vertical section of short connecting-tubes. Figs. 4, 5, 6, 7, 8, 9, and 10 are details.

The invention relates to improvements in filters; and it consists in the construction and novel combination of parts, as herein after set forth.

The object is to provide a cheap and durable filter in siphon form that may be quickly inserted into a vessel from which liquid is to be filtered, and to automatically start the flow thereof. It will also be found useful, when constructed upon a large scale, in connection with water-reservoirs, in drawing water from one reservoir to another.

Referring to the drawings, A designates a siphon-tube having one of its legs *a* shorter than the other *a'*, and the connection at the top of which may be curved, as shown; or the two legs may be connected by a horizontal tube; or the legs may form an angle at the top.

B represents cloth cut in strips of a convenient width and wound in rolls, which are closely packed within the tube so that their adjacent ends will touch.

Other filtering material—such as sand, gravel, or charcoal—may be substituted for the cloth rolls without departing from the spirit of my invention. I prefer, however, that the cloth be used.

C designates tube-sections, of metal or other material, designed to be connected to

the ends of the siphon by means of band-rings, securing the cloth strainers *c*, which cover the ends, and have their edges turned around the sides of the tube. A series of these sections and strainers may be used, and the sections are designed to be sufficiently long to provide an interval *d* between adjacent strainers.

The rings D, of porcelain, slate, or other material, having the cloth disks *e*, are sometimes employed as strainers. The rings having the cloth disks are packed in the short tube-sections, one upon the other, in such a manner as to form interspaces *f* between adjacent disks.

The outer or long leg of the siphon is provided with a cap E, having a small opening *g* for the outflow of liquid.

In operating this siphon I first fill the tube by pouring the liquid into the opening of the short leg, during which the tube should stand in a vertical position. Then by reversing the tube and placing the end of the short leg into the vessel the liquid will flow through the tube and filtering material. When a sufficient quantity of liquid has been drawn, the siphon may be taken out, with liquid remaining in it, and placed away with the open ends upward, so that it is ready for instant use when required.

For filtering water I provide within the vessel F a float G, which has its flanged edge turned upward, and has a tube H extending upward from an opening in its bottom. The tube H is connected near the top to the upper edge of the float by radial braces K, and the tube is sufficiently large to allow the short leg of the siphon to be entered therein, the longer leg extending over the outer side of the vessel F.

I is a movable flanged ring adapted to fit snugly on the leg *a*, so as to regulate the dip of the leg in the water, the flanged portion of said ring resting on the top of the tube H.

To counteract the weight of the long leg of the siphon and prevent it from tipping the float to one side, the removable curved counter-weights J are placed in the float at the side opposite that over which the siphon extends.

Having described my invention, what I claim is—

1. The filter-siphon consisting of the curved tube, the cloth rolls packed therein, and the cap provided with the outlet-opening, substantially as specified.
2. The combination, with the siphon-tube, of the cloth rolls packed therein, the tube-sections adapted to fit thereon, the strainers, and the interspaces between said strainers, substantially as specified.
3. The combination, with the siphon-tube, of the filtering material therein, the tube-sections C, the rings D, and the cloth disks forming the interspaces, substantially as specified.
4. The combination, with the vessel F and the siphon provided with filtering material, of the float having the central tube-opening, the counter-weights, and the removable flanged ring, substantially as specified.

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

THOMAS SLEVIN.

Witnesses:

M. L. KELLY,

J. WILL BARRON.