(No Model.) 3 Sheets—Sheet 1.

A. J. GIBERSON.

FILTER.

No. 343,519. Patented June 8, 1886.

FIG. 6.

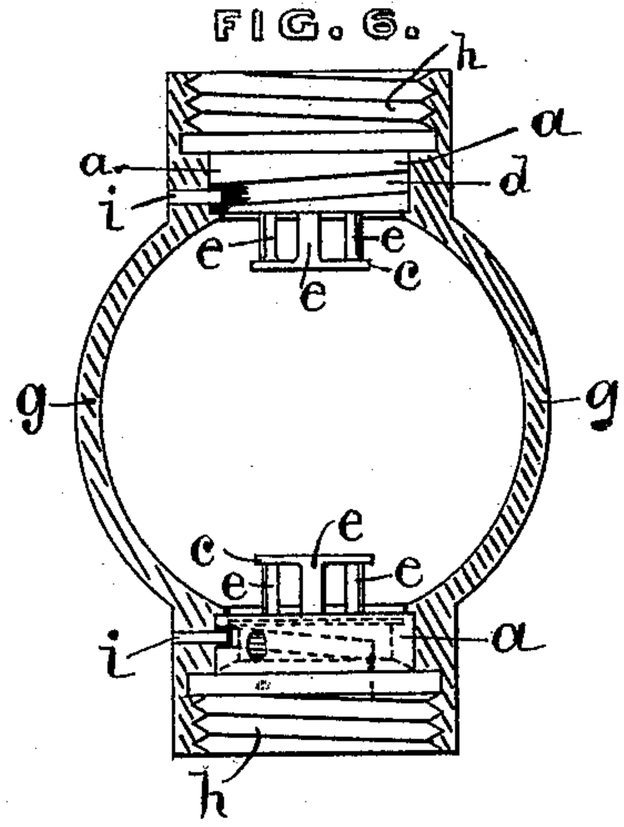


FIG. 4.

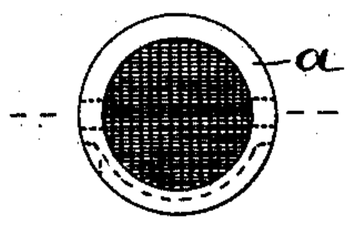


FIG. 3.

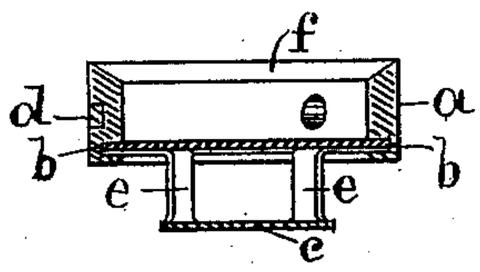


FIG. 5.

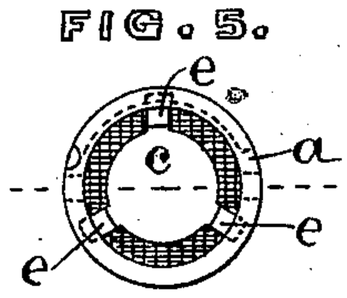


FIG. 2.

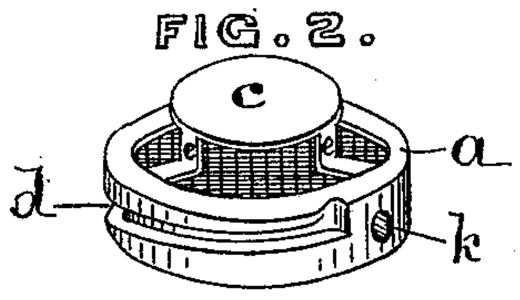
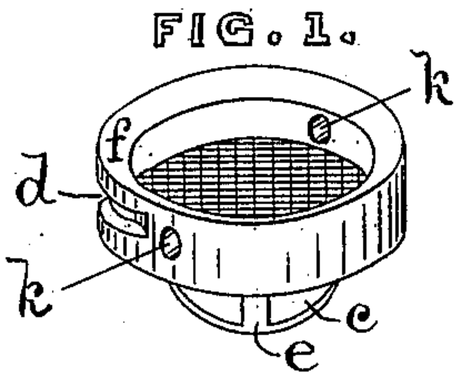


FIG. 1.



WITNESSES.

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David N. B. Coffin

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Alfred J. Giberson

(No Model.)

3 Sheets—Sheet 2.

A. J. GIBERSON.

FILTER.

No. 343,519. Patented June 8, 1886.

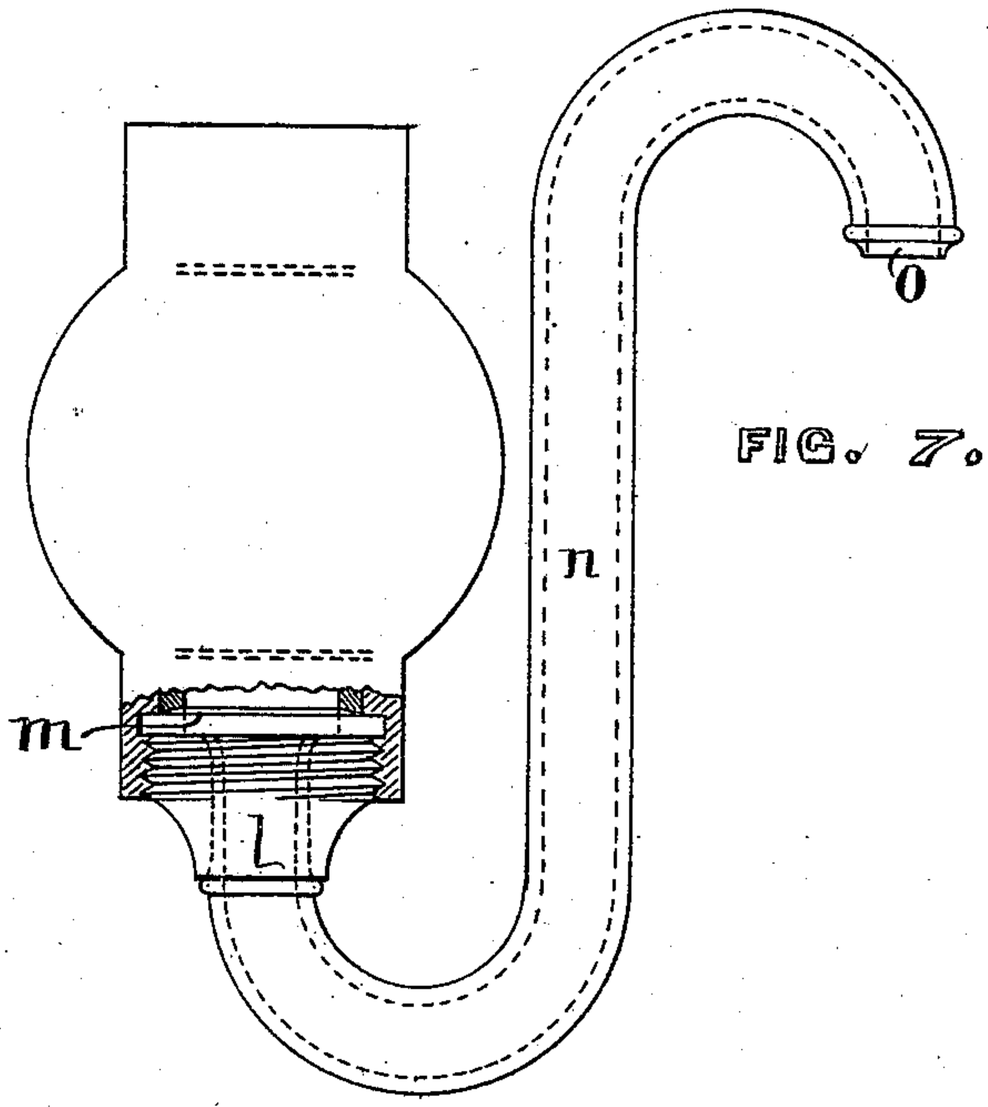

FIG. 7.

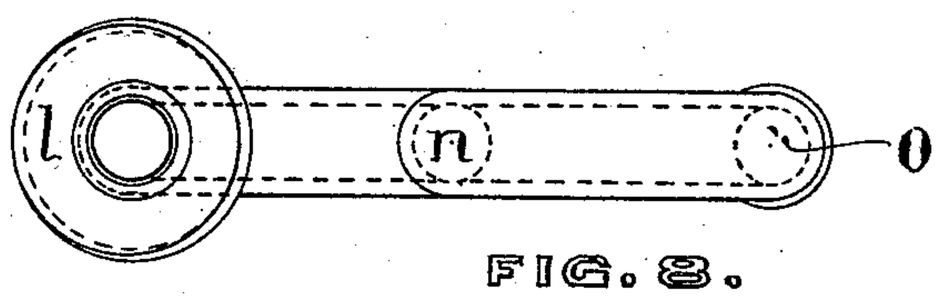

FIG. 8.

WITNESSES.

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(No Model.) 3 Sheets—Sheet 3.

A. J. GIBERSON.

FILTER.

No. 343,519. Patented June 8, 1886.

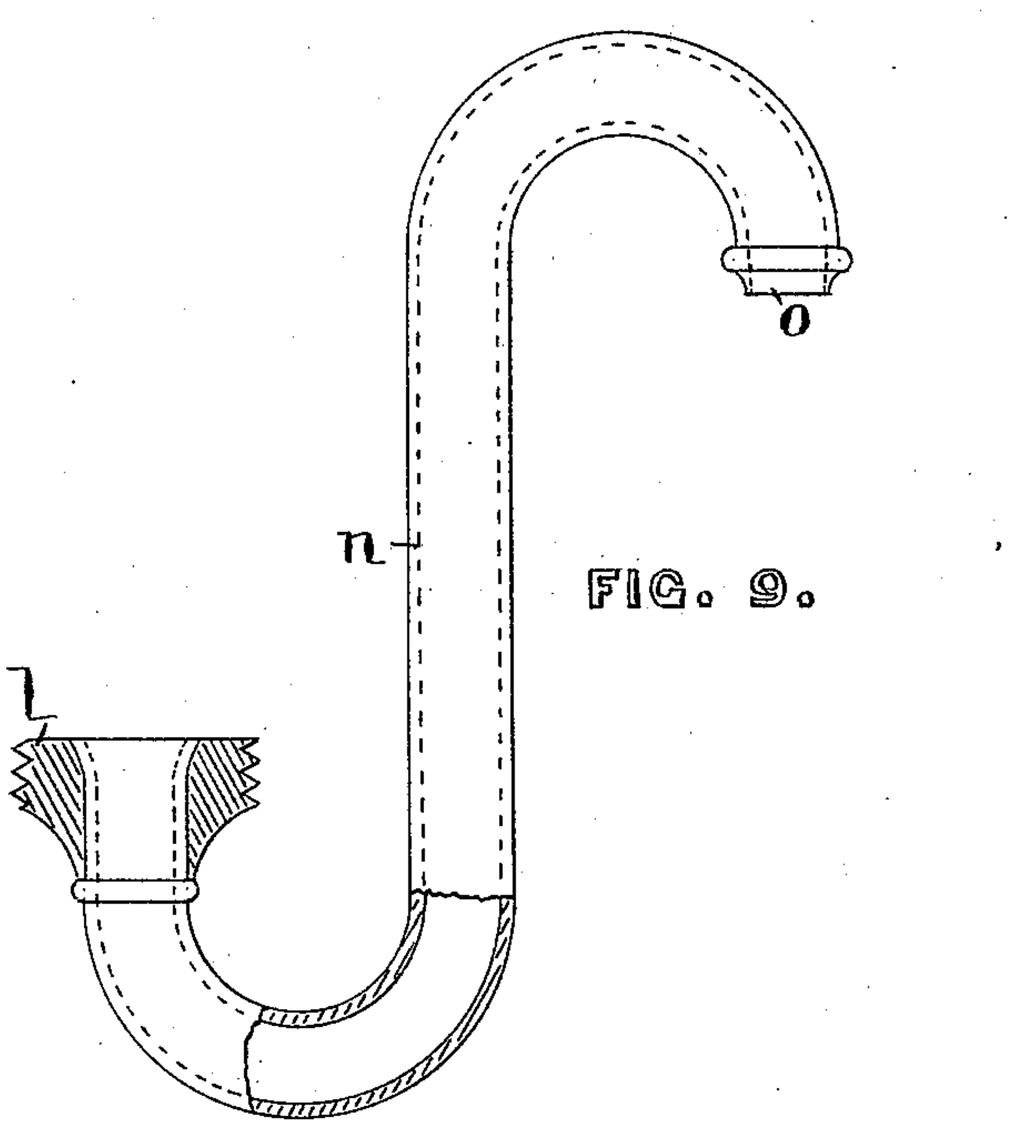

FIG. 9.

WITNESSES.
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INVENTOR.
Alfred J. Giberson
per D. N. B. Coffin his Atty

UNITED STATES PATENT OFFICE.

ALFRED J. GIBERSON, OF BOSTON, MASSACHUSETTS.

FILTER.

SPECIFICATION forming part of Letters Patent No. 343,519, dated June 8, 1886.

Application filed June 27, 1885. Serial No. 170,029. (No model.)

To all whom it may concern:

Be it known that I, ALFRED J. GIBERSON, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Filters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

My invention relates to the construction of the filter, the means employed to keep the filtering chamber and medium flooded, the means for distributing the flow as it passes to the filtering medium, the relation and combination of parts, substantially as hereinafter more specifically set forth and illustrated.

Figure 1 is a perspective view showing the distributing device attached to the removable ring bearing the strainer. Fig. 2 is a similar view of the same parts in an inverted position. Fig. 3 is a sectional view of the same. Fig. 4 is a smaller view showing a plan of the strainer, &c. Fig. 5 is a similar view of the parts inverted. Fig. 6 is a central vertical section of the filter-case, exposing in elevation the parts shown in previous figures and illustrating their position and relations. Fig. 7 is a sectional elevation of the filter case or body, exposing to view the connection and relations of the swivel stand-pipe or reservoir and delivery and its arrangement. Fig. 8 is a plan of the latter device, Fig. 9 is a sectional view of parts *l* and *n*.

Like letters refer to the same or corresponding parts in all the figures.

Referring to the drawings, observe the filter-case has the usual screw-socket in the ends for attachment to a faucet-nipple or other supply. In and below this socket, at each end, is another socket or rabbet fitted to receive ring *a*. Ring *a* is a support for the strainer, which is shown by cross-lines. It has provision for fastening into the above-mentioned socket, in the pin *i* and inclined groove *d* in the respective parts. A notch or upright groove at the end of the inclined groove allows the pin to enter, and a partial rotation of one part relatively to the other makes them fast together, and the reverse movement unfastens them. The outer end of ring *a* has a beveled shape, which allows it to come in contact with a leather, rubber, or other elastic cushion for the faucet-bib, and avoids any danger of objectionable contact with the faucet-bib or other connected supply-pipe. To this ring *a* is also attached or suspended a distributing plate or disk, *c*, of any convenient and desirable shape. This distributer *c* has arms or open-work rim, by which it is attached to the ring *a*, so that whenever the ring and strainer is removed the distributer comes away with it, and when replaced the distributer is thereby replaced, by which means the distributer is never in the way to obstruct in the removing or replacing of the filtering medium or material placed between the two strainers in the body or case of the filter.

The connection between ring *a* and the distributer *c* may be made in various ways; but I prefer at present to turn a rabbet in the end of the ring, and then in a lathe, by the spinning process, after placing the distributer in the rabbet, to turn down upon its arms, rim, or outer edge the thin rim of the ring left in making the rabbet, as see Fig. 3. The distributer being stamped out or otherwise made with separate arms, or with the outer end of the arms joined to a rim or continuous ring part to be thus secured in the rabbet, this distributer causes the entering flow to be distributed between the arms or parts connecting it to the ring to all parts of the upper portion of the filtering material, whence it evenly percolates through the entire body.

The filter shown is of the class adapted to be unscrewed from the supply, reversed, and the other end screwed on, thus reversing the direction of flow relatively to the filtering material, and thus washing out the accumulated impurities.

To prevent, during intervals of rest, the exposure of impurities in the filter to the decomposing influences of the air, I provide for keeping the filtering chamber and material flooded constantly. To do this, I construct the filter with a lower part, *l*, formed with a screw, to screw into the bib-socket against a cushion, *m*, of leather, rubber, or other elastic material.

Into this part *l* is fitted, so as to swivel or turn on a vertical axis or center, the reservoir

n, the outer and upper part of which is provided with a delivery-orifice, *o*, the delivery-orifice being above the upper bound of the filtering material or chamber. When the filter has been screwed onto the supply-nipple, the reservoir and delivery *n o* is turned or swiveled in any desired direction most convenient to receive the outflow. When the filter is unscrewed from the supply, to reverse it, the part *l* is also unscrewed, and after the filter is screwed on and washed out, part *l* is screwed in again and turned in the desired direction. Thus two useful functions are performed, flooding the filter constantly for one, and directing the discharge in any direction at pleasure, and I may add a third, delivering the outflow at a height convenient for high receiving-vessels.

The filter breaks the force of high-pressure supply and gives a smooth stream without spatter at a high point of delivery. The parts are made of the usual materials.

I claim—

1. A filter made reversible by means of screw *h* at each end, and having the strainer and distributer attached to each other and removable together, substantially as described.

2. The removable strainer and distributer-supporting ring, constructed with the outer beveled edge, *f*, substantially as described.

3. The removable filter-strainer ring *a*, as constructed with beveled edge *f*, groove *d*, and attached distributer *c*, substantially as shown.

4. The removable filter-strainer ring *a*, as constructed with the attached distributer *c* and groove *d*, in combination with pin *i* and the case *g*, substantially as described.

5. The removable filter, as constructed—viz., with case *g*, screws *h*, pin *i*, removable ring *a*, having groove *d*, strainer, and attached distributer *c*, substantially as described.

6. The reversible filter-case *g*, in combination with the removable part *l*, reservoir *n*, made to swivel, two strainers, and intermediate filtering material, substantially as described.

7. A filter, as constructed, having case *g*, strainers *b*, and distributers *c*, removable together, removable part *l*, swivel reservoir *n*, and delivery *o*, substantially as described.

ALFRED J. GIBERSON.

Witnesses:

JOSEPH CUMMINGS,

DAVID N. B. COFFIN.