

(No Model.)

J. T. A. LEWIS & C. A. WOLFF.

FILTER.

No. 294,244.

Patented Feb. 26, 1884.

Fig. 1.

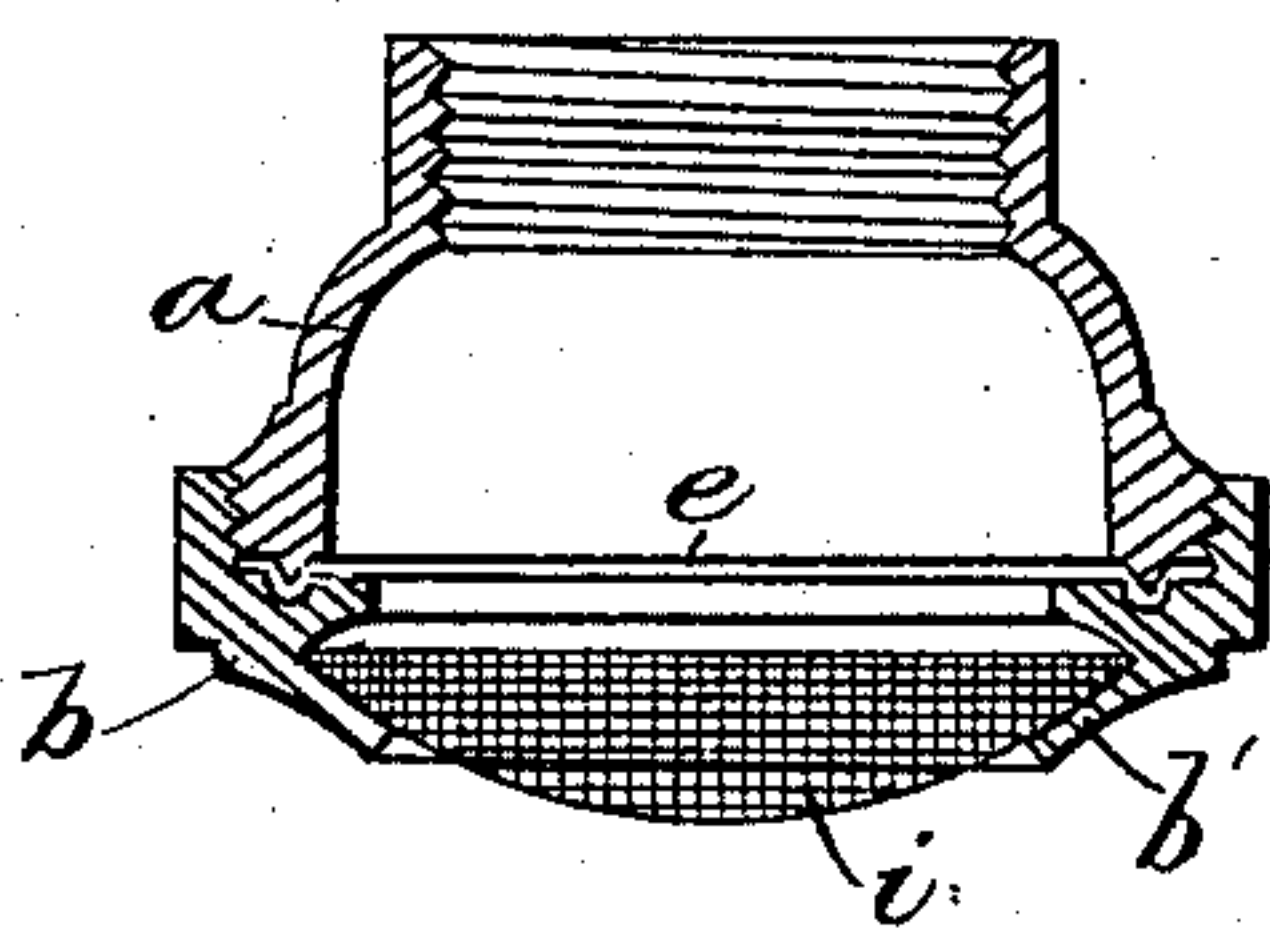


Fig. 2.

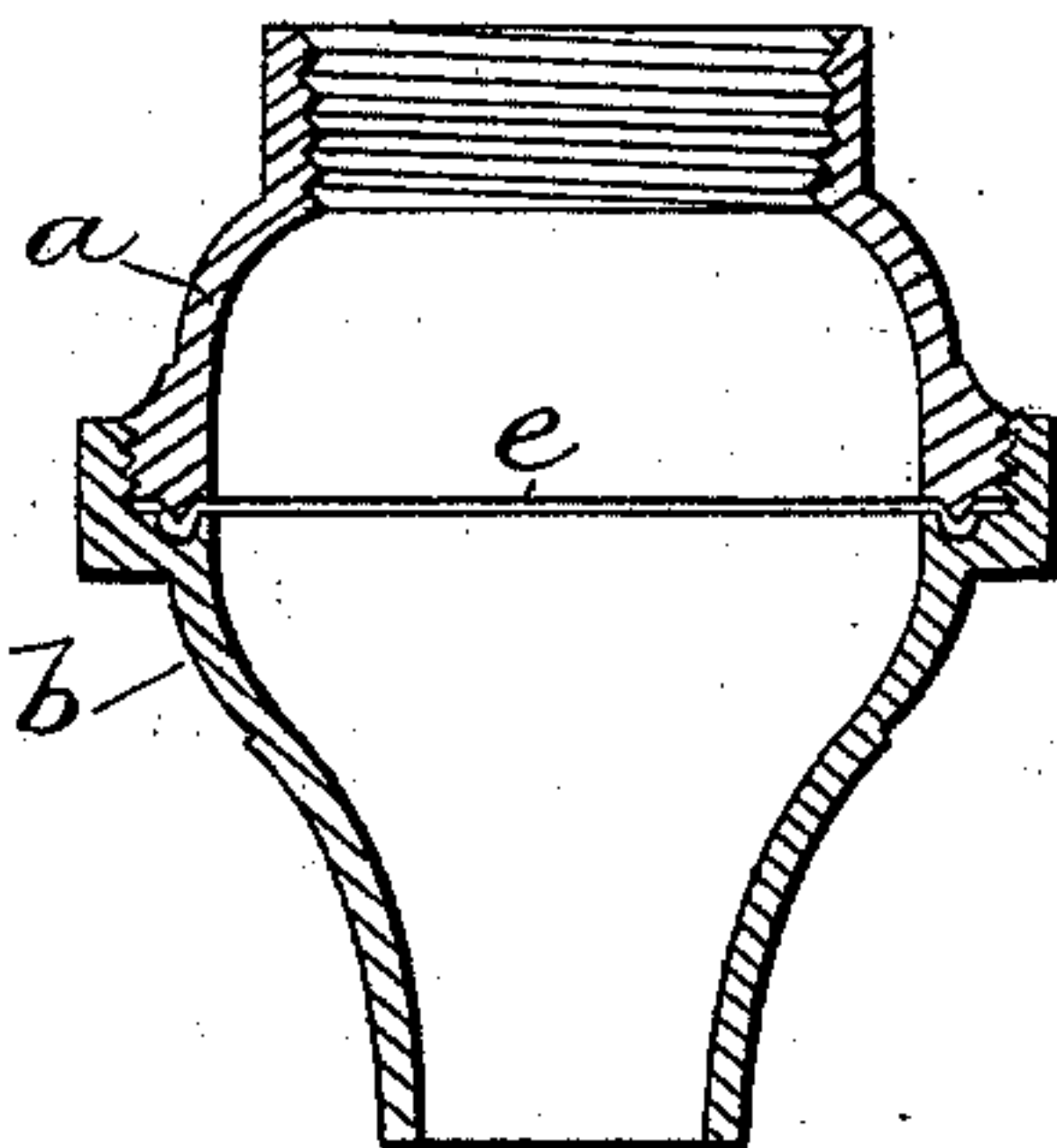
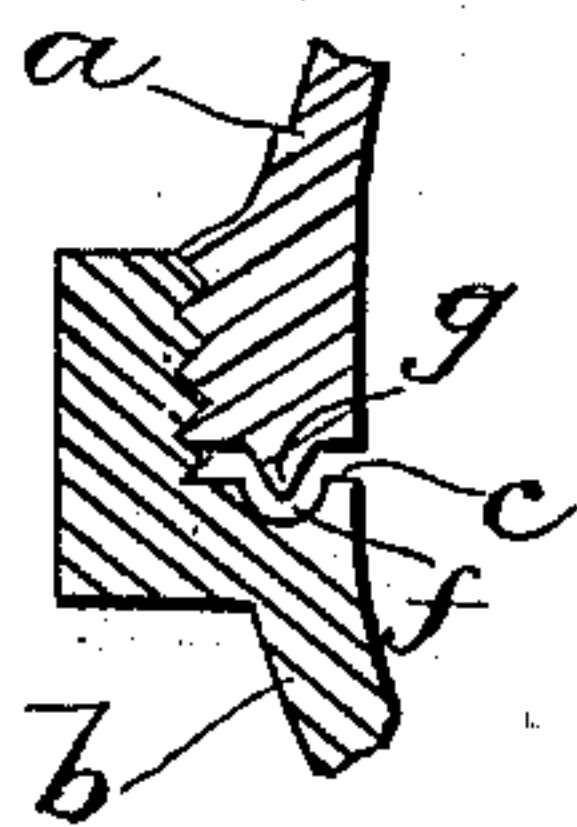


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES T. A. LEWIS AND CHARLES A. WOLFF, OF BOSTON, MASSACHUSETTS.

FILTER.

SPECIFICATION forming part of Letters Patent No. 294,244, dated February 26, 1884.

Application filed May 14, 1883. (No model.)

To all whom it may concern:

Be it known that we, JAMES T. A. LEWIS and CHARLES A. WOLFF, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Filters, of which the following is a specification.

This invention has for its object to provide a cheap and serviceable filter adapted to be attached to an ordinary faucet.

The invention consists in a filter composed of two separate members, forming a water way or passage, and their proximate surfaces being provided, respectively, with a bead and groove adapted to hold a disk of cloth or other suitable filtering material, as we will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figures 1 and 2 represent sectional views of two forms of filter embodying our invention. Fig. 3 represents an enlarged section of a portion of the filter.

The same letters of reference indicate the same parts in all the figures.

Our improved filter is composed of two metallic parts or members, *a b*, separably connected by means of internal and external screw-threads formed on said parts, as shown, and forming a passage for water. The part *a* has an internally-threaded neck adapted to be connected to a faucet or water-pipe. The part *b* has an annular surface or seat, *c*, adapted to support a disk, *e*, of cloth or other suitable filtering material, and provided with an annular groove, *f*. The lower end of the part *a* clamps the filtering-disk *e* against the seat *c* when the two parts are connected, and is provided with an annular bead, *g*, coinciding with the groove *f* and projecting into the same, as shown clearly in Fig. 3. It will be seen that said bead and groove enable the parts *a b* to hold or clamp the edges of the filtering-disk much more firmly than would be the case if the proximate surfaces of the said parts were plain or flat.

We have found by experience that a disk of flannel held in the manner described cannot be detached at its edges by any water-pressure to which it can be subjected, and that the edges of the disk thus clamped constitute a packing which prevents leakage of water at

the joint between the parts *b a*. The bead and groove are concentric with the screw-threaded surfaces, whereby the parts *a* and *b* are connected; hence the rotation of one part in screwing it onto the other to insure the clamping-pressure on the filtering-disk does not displace said disk nor disturb its relation to the parts *a b*. We prefer in some cases to provide the part *b* below the disk *e* with an inwardly-projecting flange, *b'*, to support a strain-er, *i*, of wire-gauze, as shown in Fig. 1. We do not limit ourselves to this construction, however, as the part *b* may terminate in a nozzle, as shown in Fig. 2.

It will be seen that by the described construction the filtering-disk can be very easily applied and removed, so that the filter can be kept in good condition at a very slight expense.

We are aware that a filter composed of two parts screwed together and adapted to clamp a filtering-disk between their proximate surfaces is not new, and we do not therefore claim such construction, excepting when said surfaces are formed with the bead and groove.

We claim—

1. The improved filter composed of the part *b*, having the annular seat *c*, adapted to support a filtering-disk, and provided with an annular groove, *f*, and the part *a*, having an annular end provided with an annular bead, *g*, adapted to project into said groove and co-operate with the latter in holding the edges of the filtering-disk, said parts *a* and *b* being connected by screw-threads formed thereon, as described, whereby said parts may be adjusted to cause the bead and groove to either bind or release the edges of the filtering-disk, as set forth.

2. In a filter, the combination of the threaded part *b*, having the annular seat *c*, provided with the annular groove *f*, the part *a*, threaded to engage with the threaded surface of the part *b*, and having an annular end provided with the annular bead *g*, adapt to project into said groove, and the filtering-disk having its edges interposed between said bead and groove, and co-operating with said bead and groove in forming a water-tight joint between the parts *a* and *b*, as set forth.

3. The improved filter composed of the parts
a b, separably connected, as described, and
adapted to clamp a filter-disk between their
proximate surfaces, the part *b* having a flange,
5 *b'*, and a strainer, *i*, supported by said flange,
as set forth.

In testimony whereof we have signed our
names to this specification, in the presence of

two subscribing witnesses, this 8th day of May,
1883.

JAMES T. A. LEWIS.
CHARLES A. WOLFF.

Witnesses:

C. F. BROWN,
A. L. WHITE.