

E. C. HOUGHTON.  
REVERSIBLE FILTER.

No. 171,020.

Patented Dec. 14, 1875.

Fig. 2.

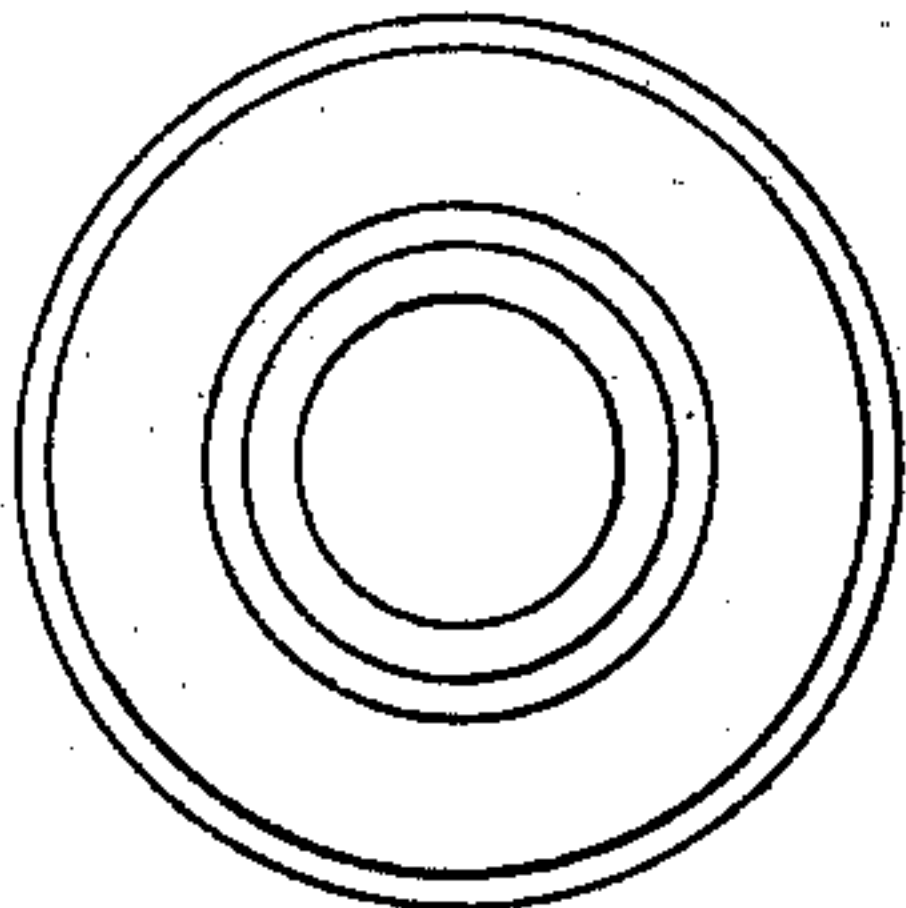


Fig. 1.

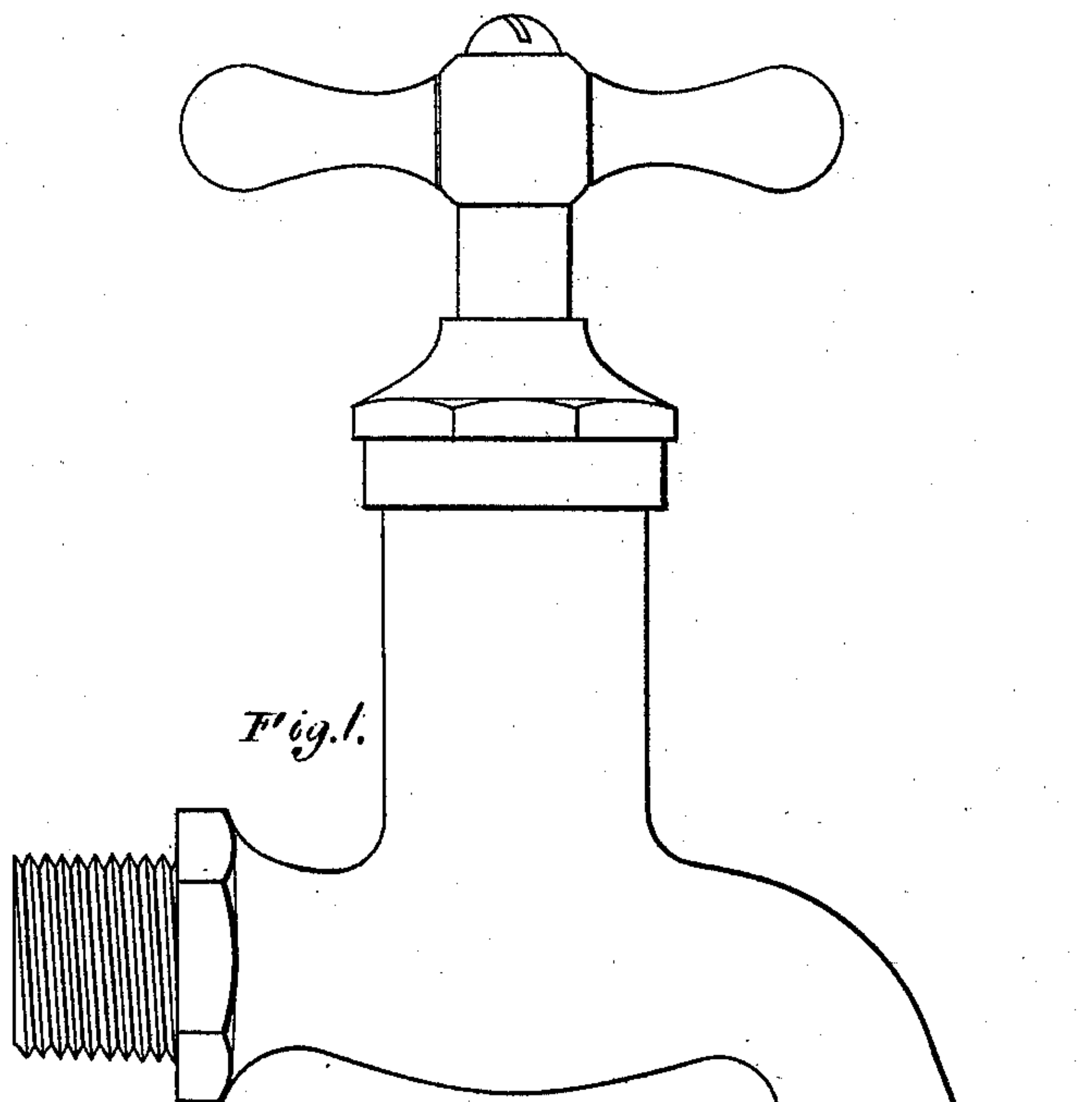


Fig. 3.

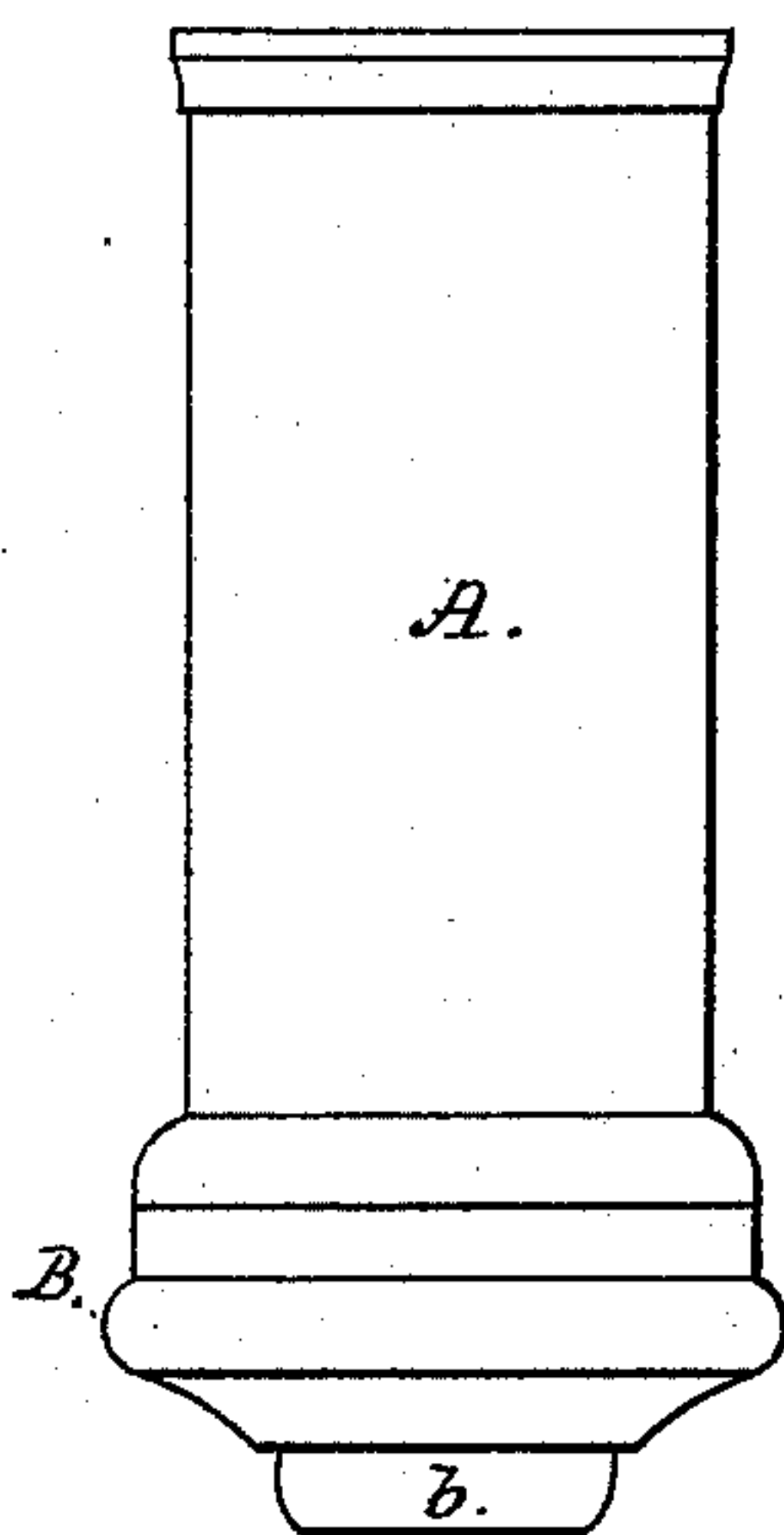


Fig. 4.

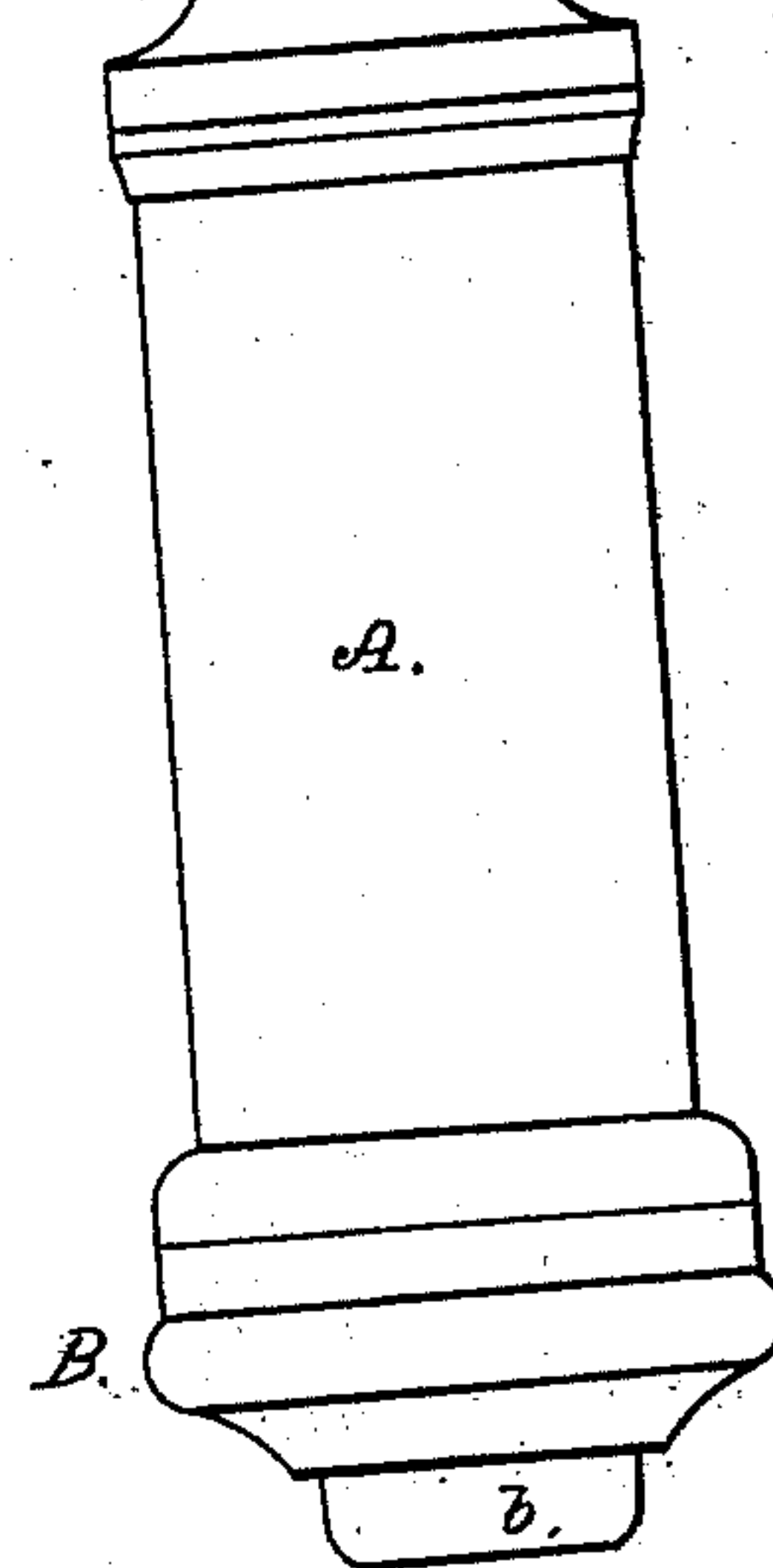
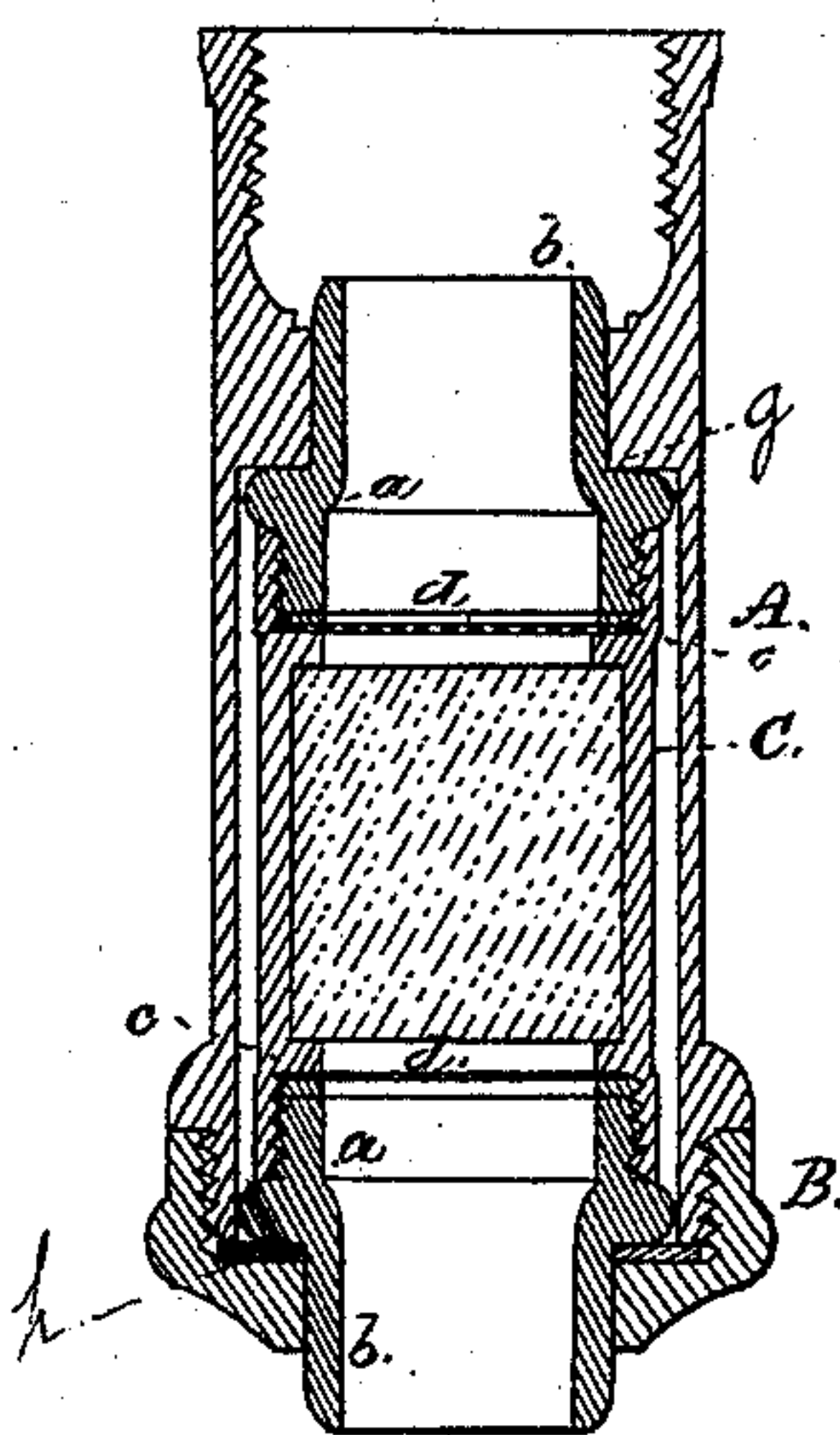
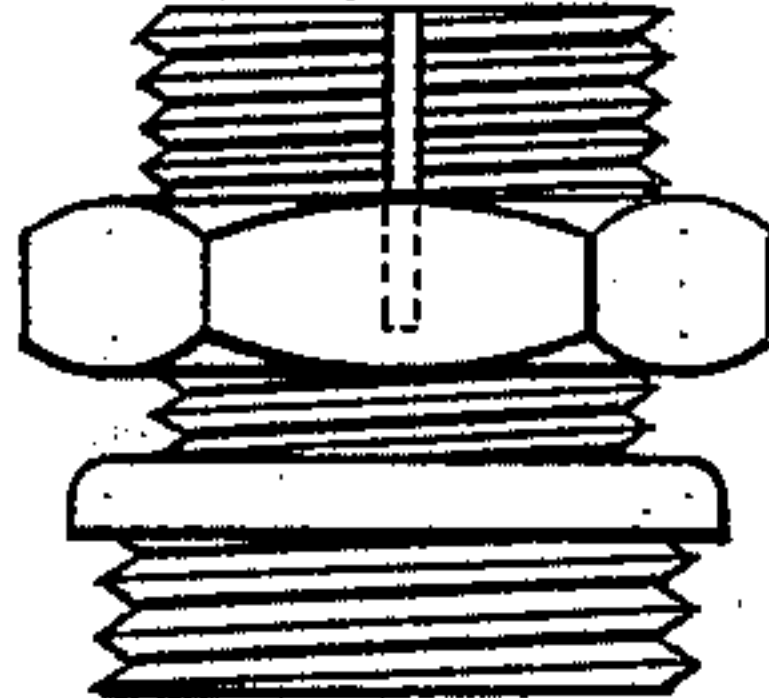


Fig. 5.



Witnesses.

Geo Gray

H. b. Hale

Edward C. Houghton.

by his attorney

A. P. Hale

# UNITED STATES PATENT OFFICE

EDWARD C. HOUGHTON, OF CAMBRIDGEPORT, ASSIGNOR TO CALEB C. WALWORTH, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN REVERSIBLE FILTERS.

Specification forming part of Letters Patent No. 171,020, dated December 14, 1875; application filed June 10, 1875.

*To all whom it may concern:*

Be it known that I, EDWARD C. HOUGHTON, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Reversible Filters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

In the said drawing, Figure 1 is a side elevation of one of my improved filters applied to a faucet. Fig. 2 is a view of the lower end of the filter; Fig. 3, a side elevation of the filter, and Fig. 4 a central and longitudinal section of the same.

My invention, although especially designed for application to faucets having what are termed "hose-pipe bibs," or those which have a screw cut on their education ends to receive a hose-pipe coupling, can also be readily applied to faucets having plain bibs or nozzles. In this latter case a connector, or device such as shown in Fig. 5, is to be screwed into the upper end of the filter-body, while its other furcated end is to be placed over the end of the bib, when, by screwing up the set-nut, the filter may be firmly secured to the bib.

The object of my invention is to provide a simple, cheap, and effective device for filtering water, &c., one which is not only self-cleaning, but which can be readily applied to faucets of the ordinary construction, and, when so applied, can have its filtering case or chamber removed from the body of the filter, reversed, and replaced therein with great facility; and my invention consists in the peculiar construction, combination, and arrangement of the several parts, as hereinafter fully set forth and claimed.

In the drawing, A denotes the body of the filter, which is preferably of a hollow cylindrical form, and has a female screw cut in its upper end, to enable the same to be readily screwed upon the bib or nozzle of a faucet. B is a cap screwing onto the lower end of nozzle A, such cap having a circular hole made axially through it. Within the body A is placed the filtering case or chamber C. This

case consists of a hollow barrel or cylinder, having two removable heads, *a a*, which screw into the ends of the barrel, and have hollow projecting necks *b b* extending therefrom. Within the chamber C, and near each end thereof, is an annular shoulder, *c*, upon which a wire-gauze or perforated diaphragm, *d*, is placed. The heads *a a*, screwing down upon the same, serve to retain the diaphragms in place. Within this chamber, and between the diaphragms *d d*, a sponge or other suitable filtering medium or material is disposed.

From the drawings it will be seen that the two ends of the filtering-case are of precisely the same form, so that either end may be used downward, such neck or end extending through the cap B, and forming the discharging-mouth of the filter. When in place in the body portion of the filter, the upper head impinges against a shoulder, *g*, formed in the interior of the body, while the lower head rests upon a packing, *h*, disposed on the under face of the screw-cap B, when, by screwing up the said cap, a perfectly tight joint or connection is secured.

In case the filtering case or chamber should become clogged or filled with impurities, we have simply to unscrew the cap B and reverse the case C, and again screw on the cap B, when the flowage of the water will remove the obstruction, and thus render the filter self-cleaning.

I do not claim, broadly, a reversible filter, irrespective of its construction, as I am aware that such is not new.

What I claim as my invention, and as an improved article of manufacture, is—

The improved reversible filter, as described, the same consisting of the body A, having a removable cap, B, the reversible case C, provided with removable heads *a a*, having necks *b b*, the diaphragms *d d*, and a chamber to receive the filtering material, the whole being constructed, combined, and arranged in manner and so as to operate substantially as set forth.

In testimony that I claim the foregoing as my own invention, I affix my signature in presence of two witnesses.

EDWARD C. HOUGHTON.

Witnesses:

F. P. HALE,

F. C. HALE.