

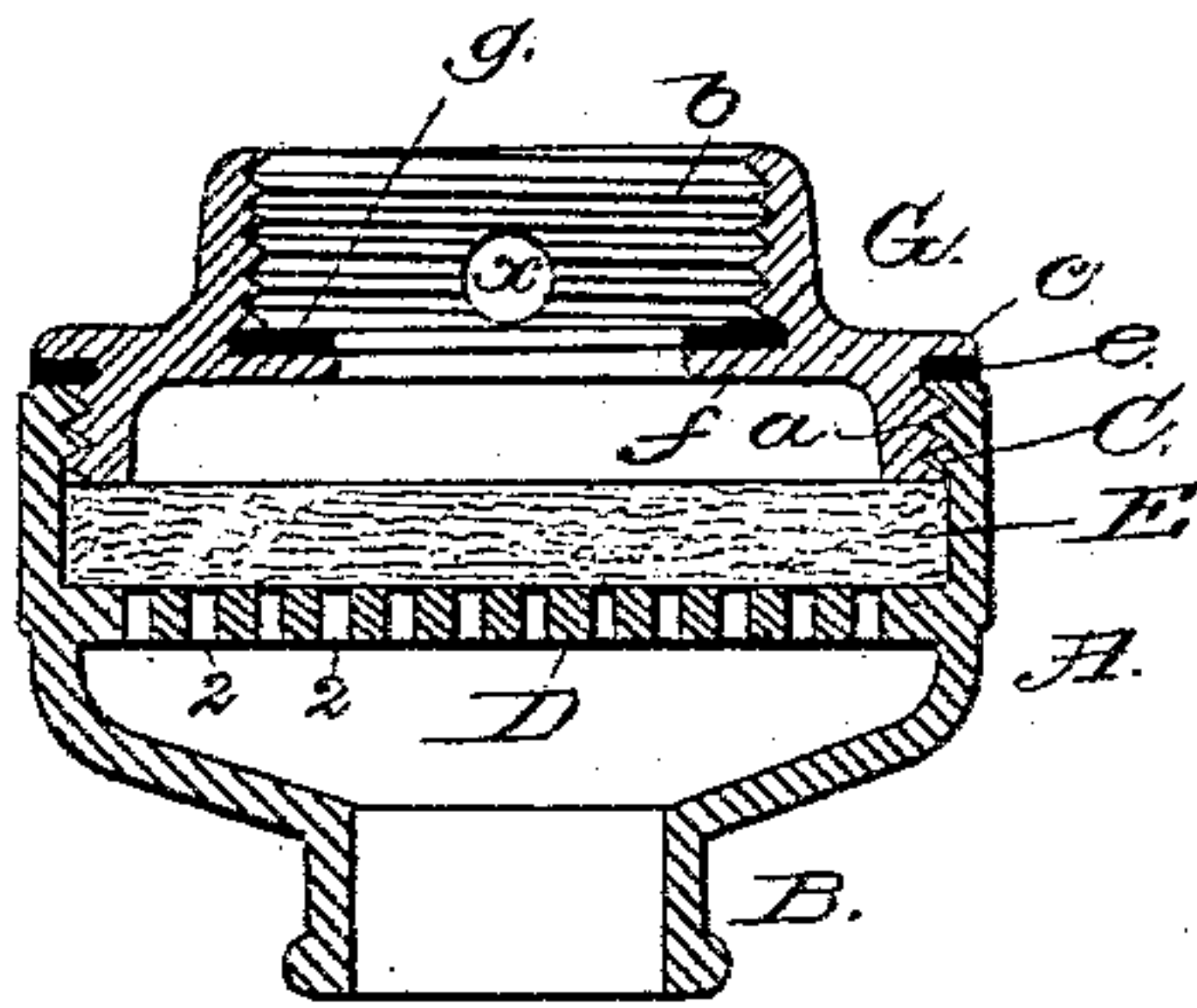
(No Model.)

B. HOLLAND, Jr.

FILTER.

No. 300,367.

Patented June 17, 1884.



Witnesses.  
John F. C. Trunkert  
B. J. Noyes.

Inventor,  
Benjamin Holland Jr.  
by Crosby & Gregory Attys.

# UNITED STATES PATENT OFFICE.

BENJAMIN HOLLAND, JR., OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF  
ONE-HALF TO THOMAS S. NOWELL, OF BOSTON, MASSACHUSETTS.

## FILTER.

SPECIFICATION forming part of Letters Patent No. 300,367, dated June 17, 1884.

Application filed July 16, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN HOLLAND, Jr., of Providence, county of Providence, State of Rhode Island, have invented an Improvement in Filters, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

The object of this invention is the production of a simple, serviceable, and efficacious filter, adapted to be readily applied to a faucet or pipe from which water issues which it is desired to strain or purify.

My improved filter consists, essentially, of a metal shell having an internal foraminous shelf cast therewith, so as to form chambers above and below the said shelf, a cover or cap screw-threaded to engage a screw-thread on the shell to connect the two, and a disk of felt or textile filtering substance placed on the shelf and held in place by the said cap or cover screwed down upon it, all as hereinafter particularly described and claimed.

The drawing represents in vertical section a filter embodying my invention.

In the said drawing, A represents a cast-metal shell, having an outlet, B, and provided at its upper end with a screw-thread, C. The shell A has a foraminous shelf, D, cast with and forming an integral part of the same. To form this shelf by casting, the mold will contain cores of suitable shape to enable the production of chambers above and below the shelf. The shelf D, being cast with part of the shell A, greatly stiffens the same, and makes a more solid, compact, and firm filter than were the shelf composed of wire-gauze or other reticulated material supported upon a shoulder or seat made within the shelf, and, being made integral with the shell, the cost of the filter is thereby reduced, and all liability of losing the shelf or of bending the same injuriously or accidentally into one or the other of the chambers of the shell is avoided. The filtering substance employed is a piece of felt cloth, E, of a shape externally to just fit the interior of the shell A, and rest against the top of the shelf covering its holes, which are formed by drilling the shelf through from the large

end of the shell A. A thick piece of felt such as that herein employed is most efficacious as a filtering substance, and acts to thoroughly strain and remove foreign particles from the water or other liquid passing through it. The sediment and foreign particles arrested and collected in the chamber about the shelf and at the upper side of the felt may be readily washed out and the felt cleansed by occasionally reversing the felt. The upper end of the shell A is closed by a cap or cover, G, screw-threaded at *a* to engage the screw-thread C of the shell, and also threaded at *b* to engage suitable screw-threads of the bib, faucet, or pipe with which the filter is to be connected. This cap has a flange, *c*, to co-operate with a packing, *e*, interposed between it and the end of the shell A, and a second flange, *f*, to receive upon it a packing, *g*, to abut against the end of the bib, faucet, or pipe. The screw-threaded flange of the cap or cover is extended into the shell A far enough to act upon and hold the felt or filtering material E down closely upon the shelf.

Instead of felt, I might employ other thick textile fabric. The cap or cover G, circular externally, has a hole, *x*, to receive the prong of a suitable spanner, by which to turn the filter upon the bib, faucet, or pipe.

I claim—

The combination and arrangement, substantially as shown and described, in a filter, of the shell A, having the internal foraminous shelf D, cast therewith, and forming chambers above and below the shelf, the attaching cap or cover G, screw-threaded to engage an internal screw-thread in the shell to connect the two, and the disk of felt or textile filtering substance E, supported by the said shelf, and held in place by the said cap or cover screwed down upon it, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BENJAMIN HOLLAND, JR.

Witnesses:

W. H. SIGSTON,  
G. W. GREGORY.