

No. 736,107.

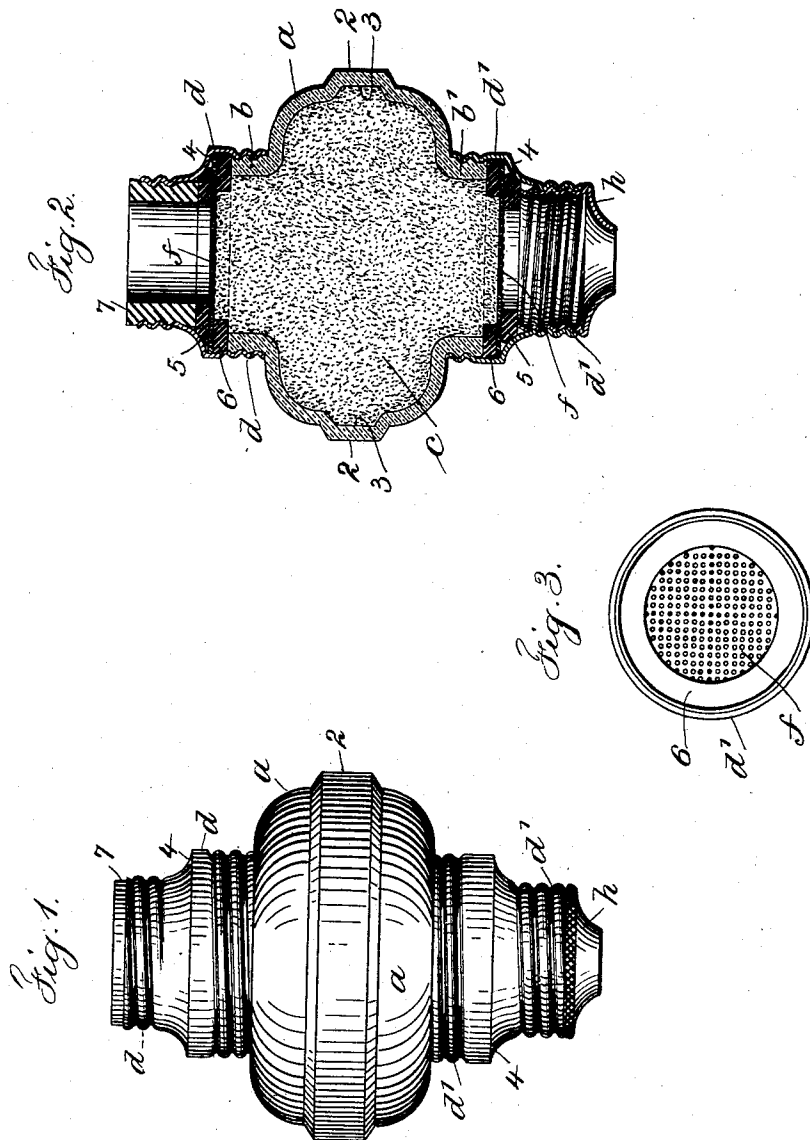
PATENTED AUG. 11, 1903.

G. W. JOHNSTON.

FILTER.

APPLICATION FILED OCT. 1, 1902.

NO MODEL.



Witnesses

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## UNITED STATES PATENT OFFICE.

GEORGE W. JOHNSTON, OF BROOKLYN, NEW YORK.

## FILTER.

SPECIFICATION forming part of Letters Patent No. 736,107, dated August 11, 1903.

Application filed October 1, 1902. Serial No. 125,463. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. JOHNSTON, a citizen of the United States, residing at the borough of Brooklyn, county of Kings, city and State of New York, have invented an Improvement in Filters, of which the following is a specification.

My invention relates to filters, and particularly to that class of filters which are adapted to be attached to faucets from which water used for drinking purposes is drawn.

The object of my invention is to provide a filter which will be simple, of cheap construction, easily secured to and removed from the faucet, which may be readily cleaned, and in which the filter-bed is visible.

In the drawings, Figure 1 is an elevation of my improved filter. Fig. 2 is a central vertical section of the same, and Fig. 3 is a plan view of one of the metallic sleeves which is adapted to screw-onto the body of the filter.

*a* represents the body portion of the filter, which is preferably made of glass and in the form of an oblate spheroid, the flattened sides of which are extended to form the tubular cylindrical necks or ends *b b'*, in the exterior of which screw-threads are impressed. Circumferentially of the body portion *a* is formed a flange 2, there being a corresponding interior recess 3. The body portion *a* is adapted to contain a filter-bed *c*, which may be composed of sand, carbon particles, or a mixture of the same, or of any suitable filtering material.

I employ two sleeves *d d'*, preferably made of sheet metal and in which screw-threads are pressed, so that the said sleeves may be screwed onto the necks *b b'* of the body portion *a*. Both the sleeves *d d'* have major and minor portions of different diameters, in the ends of which screw-threads are also pressed, there being a shoulder 4 at the intersection of said parts. Within both the said sleeves I employ a pair of washers 5 6, which may be made of rubber or other suitable material, and between the said washers I place a sheet of perforated metal *f*, the parts being so arranged that when the sleeves *d d'* are screwed onto the necks of the body portion the perforated metal plate *f* will be held firmly between the said washers, which contact effectively with the ends of the necks of the body

portion and the shoulders 4 of the said sleeves, thus forming a tight joint between the perforated plate *f* and the washers, so that water admitted to the filter cannot pass through the same without going through the perforated plates.

In the reduced end of one of the sleeves I prefer to employ a reducing bushing or nozzle *h*, whose orifice may be of sufficiently-reduced diameter to cause the water passing through the filter to issue in an even continuous stream.

In attaching the filter to a faucet of ordinary construction I prefer to employ a bushing or coupling 7, which may conveniently be made of rubber or other suitable material and having screw-threads to engage the minor portion of one of the sleeves. Several couplings may be supplied whose openings are of different diameters, thus causing the filter to be readily fitted to any size faucet, the couplings being of such sizes as to cause the friction between the same and the faucet to be sufficient to hold the filter in place.

I do not wish to confine myself to the precise construction shown and described, as it is evident that the construction may be varied materially without departing from the spirit of the invention.

I claim as my invention—

1. As an article of manufacture, a filter comprising a glass body portion having reduced, cylindrical, tubular ends having threads pressed thereon, a sheet-metal sleeve for each tubular end comprising a major portion, a minor portion and an intermediate shoulder, said major and minor portions having threads pressed therein, the major portions of the sleeves being screwed onto the reduced portions of the body, a pair of rubber washers disposed between the end of each reduced portion of the body and the shoulder of the sleeve engaged therewith, a perforated plate held between each pair of washers, a reducing-bushing formed of sheet metal and having tapered end portions, a rubber bushing having exterior threads formed thereon, said bushings being screwed into the minor portions of the sleeves and each being adapted for engagement with either of said minor portions, and a filter-bed in the body between the perforated plates.

2. As a new article of manufacture, a filter  
comprising a glass body portion having re-  
duced cylindrical tubular ends upon the ex-  
terior of which screw-threads are impressed,  
5 a filter-bed in said body portion, metal sleeves  
having parts of varying diameters in which  
screw-threads are pressed, the said sleeves  
being adapted to screw onto the reduced ends  
of said body portion, a pair of washers in  
10 both said sleeves, a perforated plate between  
both pairs of washers so arranged that when  
the sleeves are screwed down onto the ends  
of the body portion the joint between the

washers and the perforated plates is water-  
tight, a nozzle secured in the reduced end of 15  
one of said sleeves, and means secured to the  
reduced end of the other sleeve for attach-  
ing the filter to a faucet, substantially as set  
forth.

Signed by me this 4th day of September, 20  
1902.

GEORGE W. JOHNSTON.

Witnesses:

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B. M. ALLEN.