

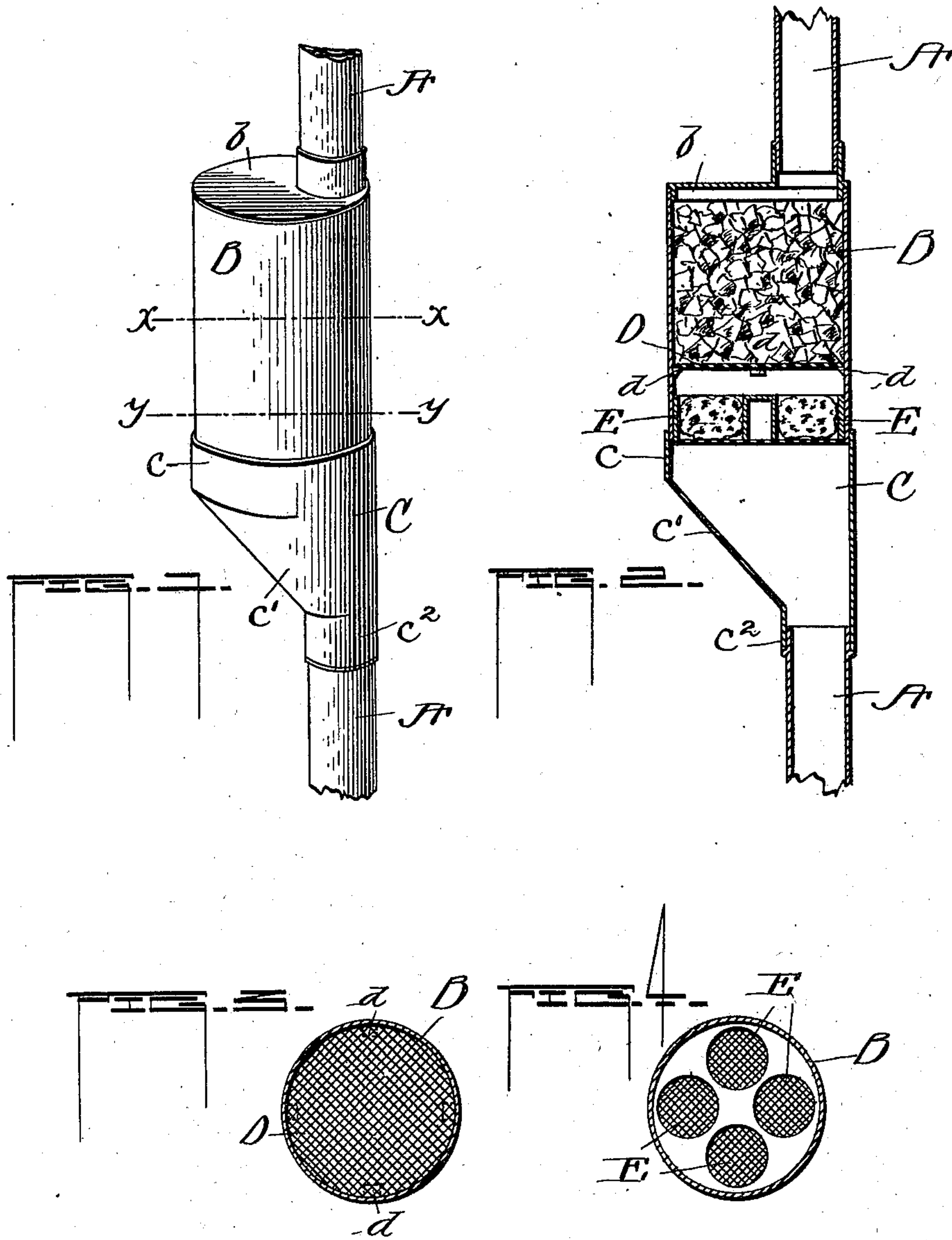
No. 723,783.

PATENTED MAR. 24, 1903.

W. H. OTIS.
DOWN SPOUT FILTER.

APPLICATION FILED APR. 29, 1901.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. OTIS, OF PEORIA, ILLINOIS, ASSIGNOR TO THOMAS J. KENNEL,
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DOWN-SPOUT FILTER.

SPECIFICATION forming part of Letters Patent No. 723,783, dated March 24, 1903.

Application filed April 29, 1901. Serial No. 57,998. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. OTIS, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Down-Spout Filters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to down-spout filters, and has for its object the provision of a filtering-body interposed in the rain-water pipe which is well adapted for the purpose designed.

More particularly, my invention relates to an enlarged cylindrical chamber suitably attached to a building-pipe and connecting with a chamber depending therefrom having a conical-shaped extension making the complete connection with the building-pipe, of a series of filtering-pockets in the lower end of the cylindrical chamber, a diaphragm dividing said chamber and provided with small perforations therein, the object of which is to provide a compartment within said chamber above the filtering-pockets for suitable filtering material, and of certain other details of construction hereinafter more particularly described, and claimed in the appended claim.

That my invention may be more fully understood reference is had to the accompanying drawings, in which—

Figure 1 is a perspective view of the entire device. Fig. 2 is a vertical section. Fig. 3 is a cross-section on the line X X of Fig. 1. Fig. 4 is a cross-section on the line Y Y, of Fig. 1.

In the drawings like letters of reference indicate the several corresponding parts of the figures.

A refers generally to the down-spout or building-pipe, from which it is purposed to take out a section and interpose the sections B and C of my filtering-body.

B is an enlarged cylindrical chamber of a desired depth and diameter, provided with the cap or cover b, having the small section of

pipe extension arranged to be attached to the down-spout A.

C is a chamber having the cylindrical upper portion c, arranged to be attached to and depend from the chamber B, and is provided with the conical lower portion c' and the smaller cylindrical section c², arranged to be attached to the down-spout A.

D is a diaphragm dividing the chamber B into distinct compartments and is provided with very small perforations, the diaphragm being supported on the lug extensions d, attached to the inner wall of the chamber, as shown. The upper compartment formed by the diaphragm I fill with charcoal or like filtering substance, through which the water from the down-spout is required to pass, and through the perforated diaphragm, which acts as a strainer, and into the lower compartment formed by the diaphragm. The bottom of the chamber B is provided with small perforations, like the diaphragm D, and acts as a strainer, and the compartment between this and the diaphragm is divided into a series of filtering-pockets E, as shown, of suitable depth and diameter, in which are placed sponges E, which when saturated by the water passing through the diaphragm D expand over the edges of the pockets and contact with each other, which gives a continuous filtering-surface to the water and insures it all passing through a second filtering process before passing off into the chamber or reservoir C. As a filtering agent I find that by first passing the water through charcoal and a strainer and then through a strainer I can accommodate all the water that is required to pass into the filter and filter the same as fast as it will enter the filter and relieve it of all extraneous substances and without the same backing up.

The construction is such that it may be cleaned with ease, the parts being detached very easily and as easily replaced. The lid or cover being removed, the charcoal can be taken out, the diaphragm removed, and the sponges taken out in a very short space of time, or the whole filtering apparatus may be disconnected and separated and cleaned with very little trouble.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

5 The combination with a down-spout, of a filter comprising a chamber having a perforated bottom, a perforated diaphragm supported above the bottom of the chamber so as to leave a space therebetween, a filtering material resting on the diaphragm and filling
10 the upper portion of the chamber, a ring having a series of pockets supported upon the bottom of the chamber and partially filling

the space above the bottom of the said chamber, and sponges arranged in the pockets and adapted to expand into the space between the ring and the diaphragm, substantially as described. 15

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. OTIS.

Witnesses:

CHAS. W. LA PORTE,
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