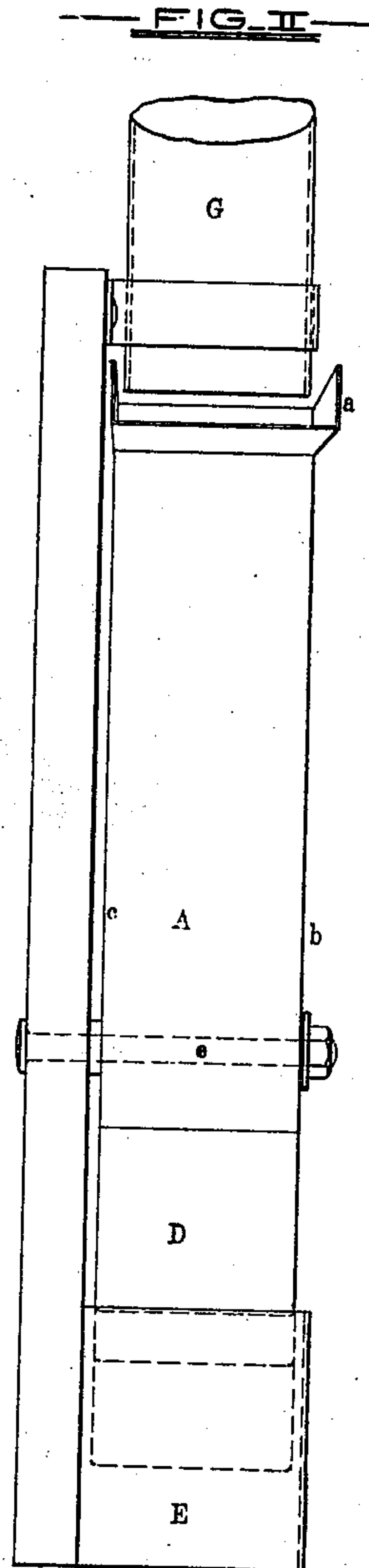
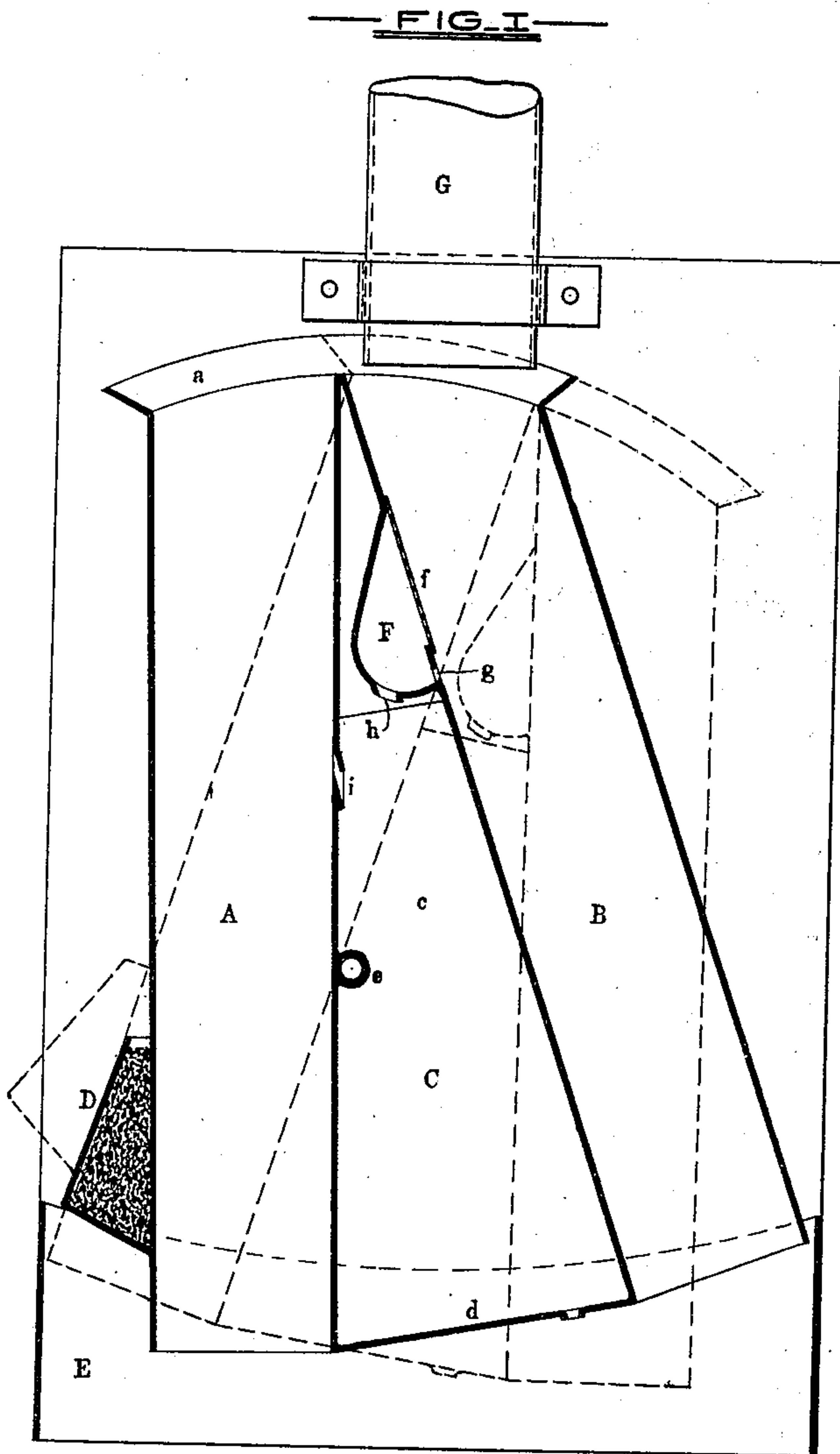


W. B. WILSON.  
CISTERN-FILTER, &c.

No. 177,049.

Patented May 2, 1876.



WITNESSES

Wm. W. Johnson

H. W. Wharton

INVENTOR

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by G. H. M. Howard  
his Atty.

# UNITED STATES PATENT OFFICE.

WILLIAM B. WILSON, OF LOUISVILLE, KENTUCKY.

## IMPROVEMENT IN CISTERN-FILTERS, &c.

Specification forming part of Letters Patent No. **177,049**, dated May 2, 1876; application filed March 17, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM B. WILSON, of Louisville, in the county of Jefferson, State of Kentucky, have invented certain new and useful Improvements in Cistern-Filters and Water-Separators, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to an apparatus adapted to receive water from the roof of a building, and conduct it, after a certain portion thereof has been utilized in cleansing the said roof, to a cistern or other receptacle, in a pure and wholesome condition, and free from soot, coal-dust, &c., which usually accompany rain-water to cisterns.

In the accompanying drawing, forming a part of this specification, Figure 1 is a vertical section of the invention, and Fig. 2 a side view of the same.

A and B are pipes, connected at their upper ends, where they are surrounded by a flange, *a*. The said pipes diverge as they extend downwardly from the flange *a*, and form, together with the front and back plates *b* and *c* and the bottom plate *d*, the receiver C. D is a receptacle for ballast, or a balance-chamber, situate on the outside of the pipe A, for purposes hereinafter described. E is a box inclosing the lower ends of the pipes A and B, and is a fixture, the other parts of the apparatus being susceptible of a vibratory movement upon a bolt, *e*, extending through the receiver C to a stationary object at the back of the same. F is a cup formed in the inner side of the pipe B', with which it is in communication by means of a piece of gauze, *f*. A small aperture, *g*, also connects the cup F with the pipe B, the office of which will be hereinafter described. Parts of the apparatus not yet alluded to will be described, and their uses fully set forth in the description of the operation of the invention which follows. The vibratory portion of the apparatus being in the position shown by the full lines in the drawing, by reason of the balance-chamber seeking its lowest position, the pipe B is

brought directly under the down-spout, which is represented by G. On a brisk shower or rain occurring, the water from the roof containing impurities passes down the pipe B and over the gauze *f* to the ground, or to a waste-pipe. A portion of the water introduced into the pipe B, however, passes through the gauze *f* into the cup F, and thence by means of an aperture, *h*, to the receiver. The receiver is by this means increased in weight, and gradually overcomes the tendency to remain in the position which it occupies and gradually falls, carrying the upper end of the pipe A directly underneath the down-spout G. By this time the roof is supposed to be cleansed, and the water from the down-spout is transferred by means of the pipe A to the cistern. This position of the moving parts of the apparatus is maintained until the rain ceases, an opening, *i*, in the side of the pipe A admitting water to the receiver to keep up the requisite quantity therein, and to overcome the leakage from an aperture in the bottom thereof, which serves to relieve the receiver after the rain has stopped. After the emptying of the receiver, a reverse movement of the parts takes place, and they assume their original positions. The small aperture *g*, connecting the lower part of the cup F with the pipe B, is designed to relieve the cup of dew or water from showers too light to produce the results described.

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

The pipes A and B, connected at their upper ends and diverging downwardly and separated by the receiver C, cup F, provided with apertures *h* and *g*, gauze *f*, and balance-chamber D, all hanging upon or pivoted to the bolt *e*, in combination with the stationary down-spout G, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

WILLIAM B. WILSON.

Witnesses:

W. S. WILSON,  
HORACE BASHAW.