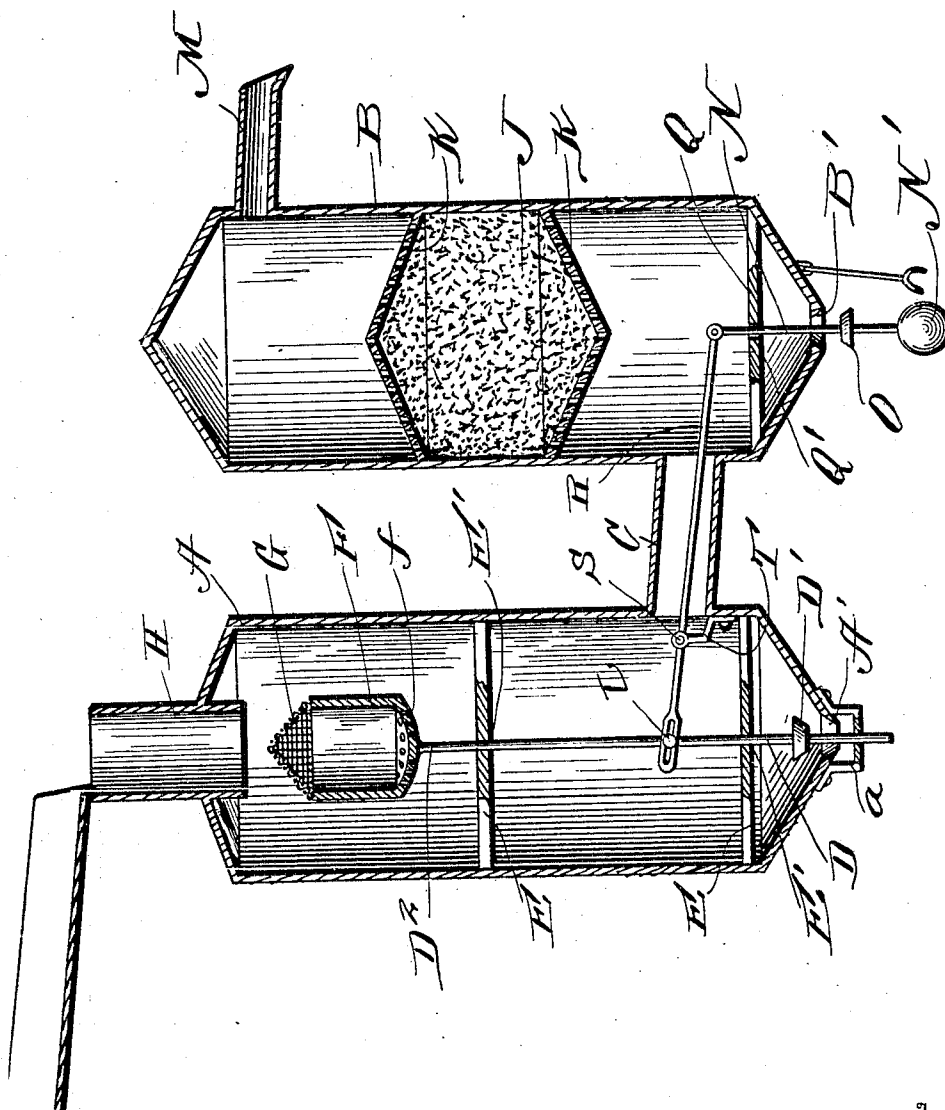


No. 849,674.

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L. M. GALLIHER.
FILTER FOR EAVES TROUGHS.
APPLICATION FILED AUG. 7, 1906.



Witnesses

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FILTER FOR EAVES-TROUGHS.

No. 849,674.

Specification of Letters Patent.

Patented April 9, 1907.

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To all whom it may concern:

Be it known that I, LAWRENCE M. GALLIHER, a citizen of the United States, residing at Plaquemine, Iberville parish, and State of Louisiana, have invented certain new and useful Improvements in Filters for Eaves-Troughs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon, which forms a part of this specification.

This invention relates to new and useful improvements in filters especially adapted for eaves-troughs, and comprises, essentially, two receptacles which are connected by a communicating pipe, one of the receptacles having a perforated bucket which is connected with a valve in the exit end of the receptacle in which it is contained, while the other receptacle is provided with a weighted valve regulating its exit-aperture and pivotal rod and lever connections between the two valves.

My invention consists in various other details of construction and combination and arrangement of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawing, in which I have shown a vertical sectional view through my improved filter for eaves-troughs.

Reference now being had to the details of the drawing by letter, A and B designate tanks or receptacles which are connected together by a communicating pipe C adjacent to their lower ends, said communicating pipe being preferably disposed at an inclination. The lower end of the tank A has an exit-opening A', and a designates a strap projecting from the lower tapering end of the tank A, and D is a rod carrying a valve D' near its lower end, adapted to seat over the aperture A'. Said rod D passes through the aperture A' and also through a perforation in the strap a. Cross-rods E extend diametrically across from the inner wall of the tank A, and each of said rods has an eye E', through which the rod D is guided. To the upper end of the rod D is fastened a bucket F, having fine perforations f in the bottom thereof, and the top of the bucket is provided with a network G and is preferably

conical-shaped. Said bucket is positioned directly underneath the contact-neck H, forming the opening into which the water is conducted in any suitable manner to the tank A.

The tank B has conical-shaped filter-plates K, spaced apart, and the lower end of the tank B has an exit-opening B', for the purpose of draining the tank, through which a rod N, carrying a weight N', passes.

O designates a valve which is fixed to the rod N at a slight distance above the weight N', said valve O being adapted to seat about the margin of the opening B' and close the same.

Q designates a rod extending across the tank B, provided with an eye Q', through which the rod N is guided.

The upper end of the rod N is pivotally connected to the lever R, which extends through the pipe C, which connects between the two tanks, and said lever is fulcrumed in the eye S, mounted upon the upper end of the bracket-arm T, and its other end is connected to an eye L, which in turn is connected to the rod D and the rod D', which is fastened to the bucket F.

Leading from the upper portion of the tank B is a pipe M, through which the filtered water may be drawn. Any suitable filtering material J may be interposed between the two perforated plates K K.

The operation of my apparatus will be readily understood and is as follows: As water enters the opening H it naturally will fall upon the screen-top of the bucket F, and when the latter is filled the weight of the bucket and its contents will cause the valve D' to seat over the exit-opening A' and allowing the water to collect in the lower part of the tank A until it rises above the opening into the pipe C, thus allowing the water to run into the filtering-tank B. As the valve D' seats by the lowering of the bucket F, it will be noted that the lever R will tilt upon its fulcrum and the valve O will be drawn up and seat over the opening B' in the tank B, thus causing the water to be retained within the filtering-tank. As the water accumulates it will rise up through the filtering-plates and material and may be drawn from the exit-pipe M. When the water ceases to pass into the tank A and drain from the bucket F through the perforations f, the weight N' at the lower end of the rod N overcoming the weight of the empty bucket F

will cause the lever R to tilt and the bucket F will rise, unseating the valve D' and allowing any water that may remain in the lower part of the tank A to escape through the opening A'. As the bucket F rises the valve O under the influence of the weight N' will unseat and allow any water in the lower end of the filtering-tank B to escape through the lower end of the opening B'.

From the foregoing it will be noted that the operation of my filtering apparatus is automatic in its action, the tank A being closed when a heavy rain occurs and also the tank B and any remaining water in either tank escaping as the valves are opened.

What I claim is—

1. A filtering apparatus for eaves-troughs, &c., comprising two communicating tanks, a bucket-actuated valve adapted to regulate an exit-opening in one of said tanks, a valve regulating an exit in the other tank, lever and rod connections between said valves in the two tanks, as set forth.

2. A filtering apparatus for eaves-troughs, &c., comprising two communicating tanks, valves controlling exit-openings in the lower ends of the tanks, a bucket mounted in one of said tanks and connected to the valve in the lower end thereof; a tilting lever having connections with said valves and extending through the communicating passage-way between the two tanks, as set forth.

3. A filtering apparatus for eaves-troughs, &c., comprising two communicating tanks, valves controlling exit-openings in the lower ends of the tanks, a bucket mounted in one

of said tanks and connected to the valve in the lower end thereof; a tilting lever pivotally mounted in one of the tanks and extending through the communicating passage-way between the two, a rod connected to the end of said lever, a valve provided to said rod and adapted to close an exit-aperture in the bottom of one of the tanks and a weight secured to said rod, connections between said lever and the valve in the tank containing said bucket, as set forth.

4. A filtering apparatus for eaves-troughs, &c., comprising two tanks having a pipe communicating between the same, a bucket mounted in one of said tanks, a valve controlling an opening in the bottom of the tank containing said bucket, rod connections between said valve and bucket, a bracket-arm mounted within one of the tanks, a lever fulcrumed over said bracket-arm and extending through the pipe communicating with the tank, one end of said lever connected to said rods and the bucket containing the tank, a weighted rod secured to one end of said lever, a valve fixed to said weighted rod outside the other tank, said weighted member designed to overbalance the bucket and connections thereto, when said bucket is empty, as set forth.

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

LAWRENCE M. GALLIHER.

Witnesses:

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F. C. LEROY.