J. M. CURTICE.
Water Filter.

No. 202,000. Patented April 2, 1878.

Fig. 1.

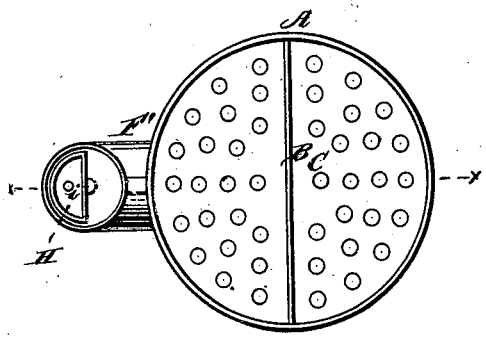
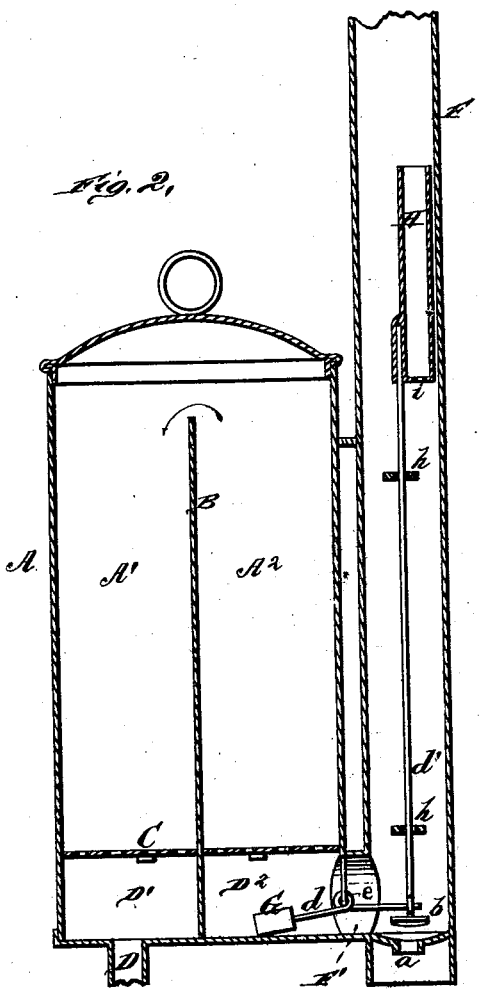


Fig. 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JESSE M. CURTICE, OF MOUNT STERLING, KENTUCKY.

IMPROVEMENT IN WATER-FILTERS.

Specification forming part of Letters Patent No. **202,000**, dated April 2, 1878; application filed February 16, 1878.

To all whom it may concern:

Be it known that I, JESSE M. CURTICE, of Mount Sterling, in the county of Montgomery and State of Kentucky, have invented a new and valuable Improvement in Water-Filters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my water-filter, and Fig. 2 is a vertical section of the same.

The nature of my invention consists in the construction and arrangement of a water-filter, to be interposed between the roof and the mouth of the cistern, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the filter-case, made of cylindrical or other suitable form, provided with a central partition, B, which divides the case in two compartments, A^1 and A^2, the said partition B extending from the bottom upward to near the top. Each compartment is provided with a false perforated bottom, C, elevated a suitable distance above the main bottom. Both compartments are to be filled above the perforated bottoms with gravel, charcoal, or other suitable filtering material. It will be noticed that below the perforated bottoms there are thus left open or unfilled chambers, which are marked, respectively, D^1 and D^2.

The chamber D^1 is, in the bottom, provided with an outlet, D, which is to project down into the cistern, the filter sitting over the cistern; or the filter may be set in any other suitable position, and the outlet D connected by a pipe with the cistern.

F is the pipe conducting the water from the roof, and, by a branch, F', into the chamber D^2 of the filter. In the lower end of the pipe F is an outlet, *a*, above which is a valve, *b*, as shown. This valve is attached to two rods, *d* and *d'*. The rod *d* passes through the branch F' into the chamber D^2, where it is suspended or pivoted at *e*, and provided with a weight, G. The rod *d'* passes up through the pipe F and through suitable guide-bars *h h* fastened therein; and at the upper end said rod is provided with or attached to a cup, H, which has a drain-hole, *i*, in its bottom.

When the water begins to flow down from the roof through the pipe F it fills the cup H and makes the same heavier than the weight G, and, by its weight, forces the valve *b* over the outlet *a*, thereby stopping the water from flowing out at this point, and compels it to run through the filter by entering the chamber D^2, up through the perforated bottom C, through the filtering material in the compartment A^2, over the partition B, down through the filtering material in the compartment A^1 into the chamber D^1, and from thence into the cistern.

When it ceases raining and the water stops flowing down through the pipe F, the cup H drains through the hole *i*, and the weight G raises the valve, and allows the water that would otherwise remain in one-half of the filter to pass out at *a*.

It will readily be seen that all filth and trash remain in the chamber D^2 while the water is running, and do not pass up through the filtering material, and such filth and trash are washed out after the rain ceases by the water passing back and out at *a*, as stated. This also prevents the filter from freezing and bursting.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a filter, of a conducting-pipe, having the cup H, the valve *b*, rods *d d'*, and weight G, all constructed and operated in the manner substantially as described, and for the purpose set forth.

2. In combination with a filter, the inlet-pipe F, with branch F' and outlet *a*, the valve *b*, rod *d*, with weight G, and the rod *d'*, with cap H, having drain-hole *i*, all constructed substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JESSE M. CURTICE.

Witnesses:

B. F. DORSEY,

J. R. BOULWARE.