C. R. MERRILL.

Apparatus for Moistening the Air of an Apartment

No. 198.308. Patented Dec. 18, 1877.

Fig. 1.

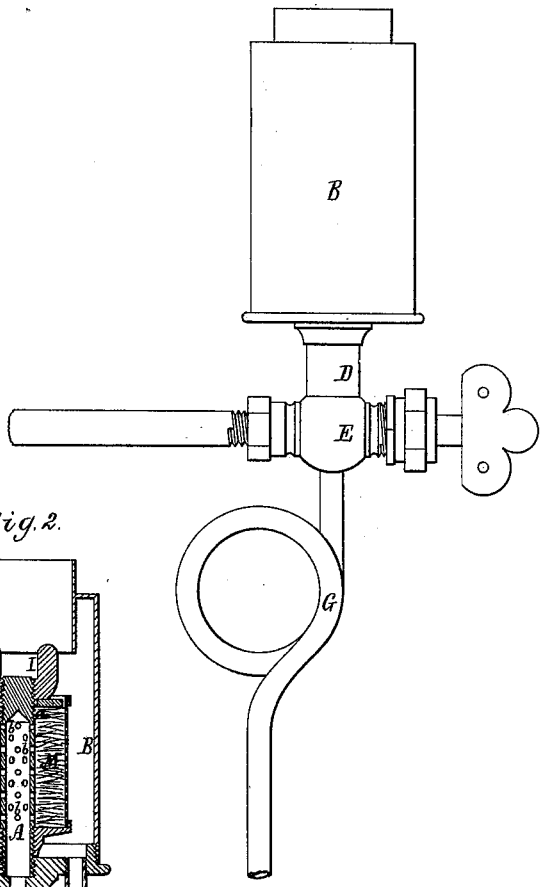


Fig. 2.

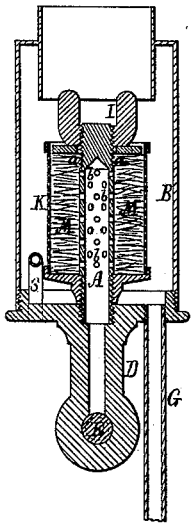
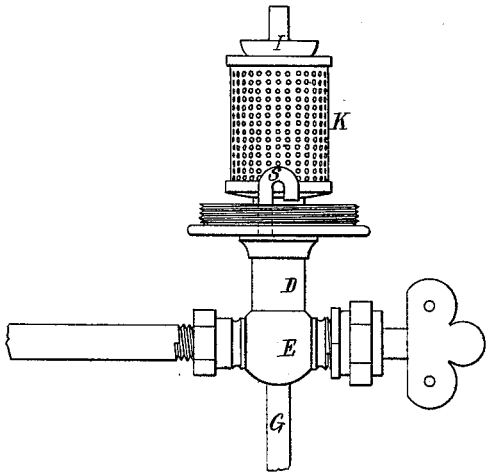


Fig. 3.



Witnesses.

S. N. Pipes

L. A. Miller

Inventor

Chester R. Merrill

by his attorney.

R. K. Eddy

UNITED STATES PATENT OFFICE.

CHESTER R. MERRILL, OF BOSTON, MASS., ASSIGNOR TO HIMSELF AND BENJAMIN S. CALEF, OF SAME PLACE.

IMPROVEMENT IN APPARATUS FOR MOISTENING THE AIR OF AN APARTMENT.

Specification forming part of Letters Patent No. **198,308**, dated December 18, 1877; application filed November 27, 1877.

To all whom it may concern:

Be it known that I, CHESTER R. MERRILL, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Apparatus for Moistening the Air of an Apartment; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and Fig. 2 a vertical and transverse section, of it. Fig. 3 is a view of it as it appears after removal of the outer casing from its base.

It is designed to be fixed to a radiator, such as is generally used for heating an apartment by steam let into such radiator.

On March 6, 1877, Letters Patent No. 188,063 were granted to the undersigned and Benjamin S. Calef, on an invention made by the undersigned for moistening air. My present invention relates thereto; and consists in a certain improvement or devices by which asbestus, or a like substance, may be used around the foraminous disseminator, instead of a jacket of cloth, which, in practice, has been found to be objectionable.

In carrying out my present invention, I combine with the perforated disseminator a screw and nut, and a foraminous case or drum, the latter being arranged concentrically with and to surround the disseminator. The screw is formed on the disseminator, and the nut, which is an inverted frustum, is screwed upon the screw, all being as represented in the drawings, in which A is the foraminous disseminator, cylindrical in shape, and arranged concentrically within a case, B, open at its upper end. The disseminator is hollow, like a tube, is closed at top, and has a screw, *a*, cut in its outer surface. Besides, the disseminator has numerous fine holes or perforations, *b*, made through it laterally. On the said screw a nut, I, is screwed, such nut being tapering, as shown.

Surrounding the disseminator is the foraminous drum K, which is closed at bottom and open at top, the sides being perforated with numerous fine holes. It is to hold a mass, M, of asbestus, which, after having been inserted in it, may be compacted and held in place by means of the screw and nut, the nut being used to compress it.

From the bottom of the case B a pipe, D, provided with a stop-cock, E, is extended, such pipe opening at top into the disseminator. The pipe D is to connect with a steam radiator or generator, and is to supply the disseminator with steam therefrom, which, after entering the disseminator, will be discharged through it, the asbestus, and the foraminous drum, and thence into and out of the case B. The drum and its packing are to answer the purpose of the cloth jacket—viz., to prevent noise being made by the escaping steam. Furthermore, the case B is provided with a means of getting rid of the condensed steam, or the water that gathered in and discharged from the asbestus would be likely, in time, to more or less fill up the case B. Such means consists in a pipe, G, arranged as shown. Besides, there is arranged in the case, and fixed by its longer leg to the bottom of the case, a short siphon, S, such leg opening through the said bottom. The shorter leg of the siphon opens above such bottom at, or about at, the altitude of the lower surface of the bottom of the drum. This siphon serves to supply air to the drum, in order to prevent water from being drawn up the waste-tube and discharged from the outer case.

In some cases I use with the screw and nut a metallic washer arranged on the screw, and to rest on the top of the asbestus, thus enabling the nut to be revolved easier than if in direct contact with the asbestus. On closing the stop-cock the steam will be estopped from flowing into and out of the disseminator.

I do not herein claim an air-moistener constructed as set forth in the Patent No. 188,063, hereinbefore referred to, and consisting of a foraminous disseminator, a cloth jacket, an inclosing open case, and an induct thereto; but

What I claim as of my present invention is as follows—that is to say:

1. The foraminous drum K and the packing or mass of asbestus with the case B, provided with the induct D.

2. The foraminous drum K, in combination

with the disseminator A and the case B, provided with the induct D.

3. The foraminous drum K and mass, M, of asbestus, combined and arranged with the case B and the foraminous disseminator A, substantially as set forth.

4. The screw *a* and nut I, in combination with the foraminous disseminator and drum, arranged as set forth.

5. The screw *a* and nut I, in combination with the mass, M, of asbestus, and the foraminous disseminator and drum, all being arranged as represented.

6. The siphon S, combined with the case B, the disseminator and its enveloping-jacket, and arranged in such case as set forth.

CHESTER R. MERRILL.

Witnesses:

R. H. EDDY,

JOHN R. SNOW.