(No Model.)

A. W. SCHULENBURG.

DEVICE FOR MOISTENING THE AIR FOR HOT AIR FURNACES AND STEAM HEATING.

No. 373,858. Patented Nov. 29, 1887.

FIG. 1.

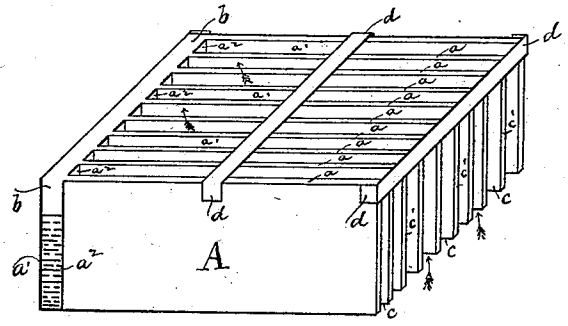


FIG. 2.

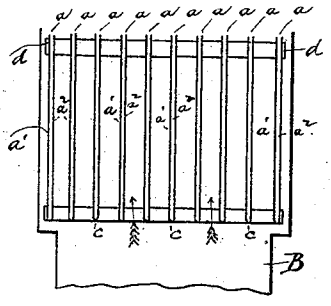


FIG. 3.

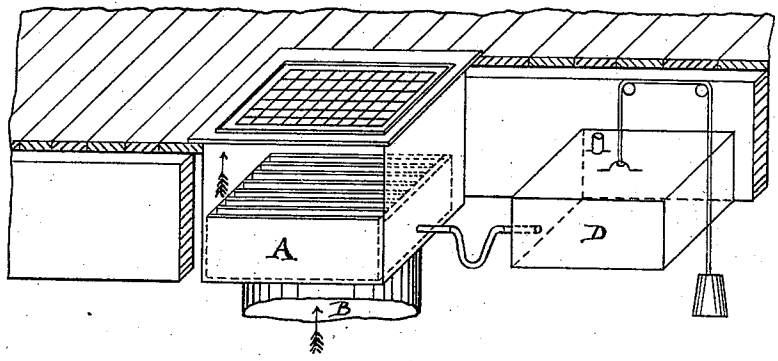


FIG. 4.

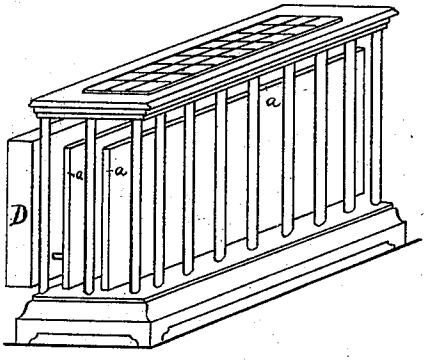
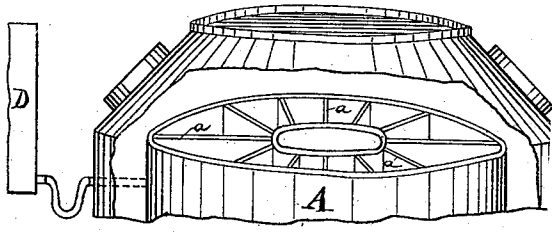


FIG. 5.



-ATTEST-

Henry H. Combs
Charles Herthel

-INVENTOR-

August W. Schulenburg
per Herthel & Co
atty's

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

AUGUST W. SCHULENBURG, OF ST. LOUIS, MISSOURI.

DEVICE FOR MOISTENING THE AIR FOR HOT-AIR FURNACES AND STEAM-HEATING.

SPECIFICATION forming part of Letters Patent No. 373,858, dated November 29, 1887.

Application filed September 7, 1886. Serial No. 212,964. (No model.)

To all whom it may concern:

Be it known that I, AUGUST W. SCHULENBURG, a citizen of the United States, residing at St. Louis and State of Missouri, have invented a new and useful Improved Device for Moistening the Air for Hot-Air Furnaces and Steam-Heating, of which the following is a specification.

It is well known that where hot-air furnaces or steam-heating is used for heating buildings the air throughout the rooms and halls is of a parched and dry nature, rendering it unpleasant and often unbearable to the inmates. The usual way to overcome this and render the air moist is the placing of a water-pan containing water in the chamber of the hot-air furnace or steam-heating apparatus, but always of such small evaporating-surface that it practically admits of little benefit.

The object of my invention is therefore, by means of the device hereinafter explained, which has extended evaporating-surfaces and admits of the free passage of the hot air, whereby the particles of dry parched air are thoroughly moistened, to diffuse an equable pleasant air throughout the rooms and halls of the building.

Of the drawings, Figure 1 is a perspective view of my device, showing the series of channels *a a a a* and sectional view of lateral channel *b*. Fig. 2 is a sectional view, also showing section of inclosing hot-air pipe B. Fig. 3 is a perspective view as applied to register of room or hall, also showing auxiliary water-tank D for the automatic supply of water. Fig. 4 is a perspective view as applied to coil of steam pipes or radiator and auxiliary tank D. Fig. 5 is a perspective view as applied and placed inside of a furnace-chamber and auxiliary tank D.

Similar letters refer to similar parts throughout the views.

As shown and illustrated in the drawings, A is my device or air-moistener, which I construct as a series of channels or receptacles, *a a a a*, open at the top, having lateral feed-channel *b*, also open at the top, as shown in Figs. 1 and 2. Said channels *a a a a*, I make, say, one-eighth of an inch or more in width. Lateral feed-channel *b*, I make, say, one inch or more wide. These channels I form of tin or other material, of suitable number, depth, and size, each of said channels having sides a' a^2, closed at the bottom *c* and one side, c', and merge or unite them to the lateral feed-channel *b* at the side a^2, as shown in Figs. 1 and 2. In order to permit of the escape of the hot air, I space each of said channels *a a a a* one inch or more apart in their whole length, beginning at the intersection of said lateral feed-channel *b*. The escape of the hot air is indicated by the arrows in said spaces. The vessel so constructed I fasten together by bands *d* at the top, bottom, and sides.

It will be readily seen that the construction of my device is such that when applied for its purpose the sides a' a^2 of each of the series of channels *a a a a*, in combination, give large evaporating-surfaces to the particles of dry air issuing from the hot-air furnace or steam-heating apparatus, rendering the air moist and pleasant in its passage through the spaces of the series of said channels.

I apply my device or air-moistener as described to register in the second story of any building by taking up the same and replacing after having seated the vessel in the hot-air flue; in other situations, as shown in the drawings—Figs. 3, 4, and 5, for example—to register of first story or radiator of a steam-heating apparatus, or when applied to interior of the furnace-chamber. For the better continuous and automatic supply of the water, I construct and place adjoining my said device auxiliary water-tank D, which I connect to same by a flexible rubber hose, said auxiliary tank being so arranged by a suitable adjustment of weights as to automatically feed water to the air-moistener and keep the same at its proper level.

In practice box A and tank D are made of equal capacity, and the latter is filled only slightly above opening of the supply-tube, and if the weight attached to said box should suddenly raise the same in case the water evaporated too rapidly there would be no overflow in box A.

I am aware of the Patents No. 31,152, of January 22, 1861, No. 99,864, of February 15, 1870, and No. 152,744, of July 7, 1874, their

construction, and operation of their various parts, and therefore do not claim the same.

What I claim is—

An air-moistening device for furnaces, consisting of a channeled box inclosing the outer end of a hot-air pipe beneath a floor-grate, a flexible supply-pipe connecting said box with a supply-tank adjustably held in a horizontal position in close proximity to said box, substantially as and for the purpose set forth.

In testimony of said invention I have hereunto set my hand.

AUGUST W. SCHULENBURG.

Witnesses:

JOHN W. HERTHEL,

AUGUST F. ZELL.