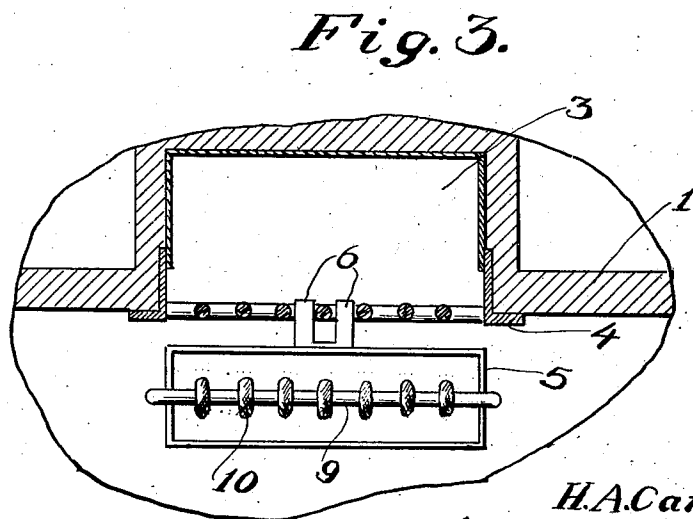
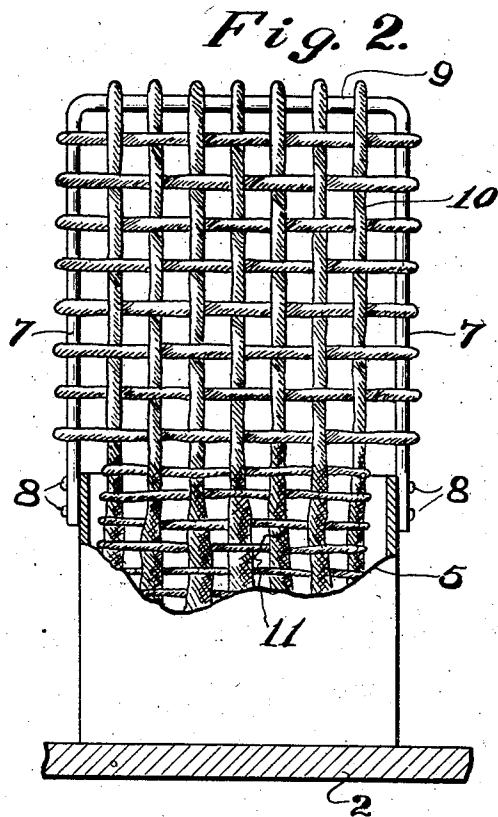
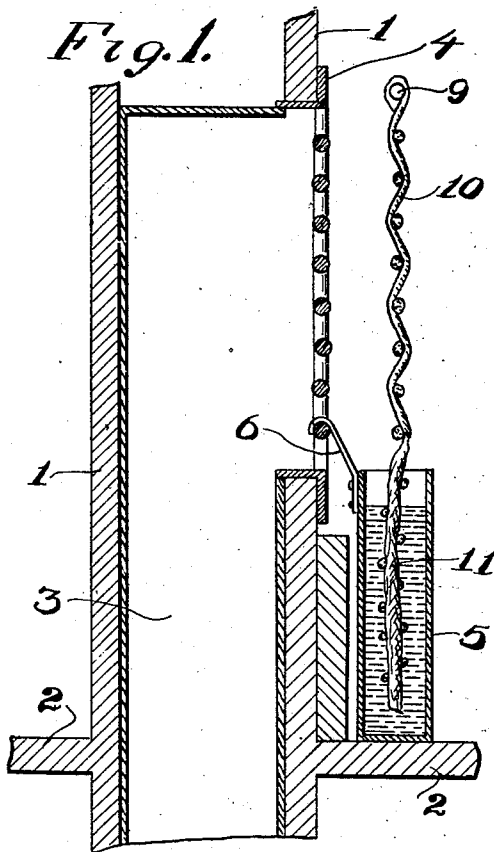


H. A. CARPENTER.
CAPILLARY HUMIDIFIER.
APPLICATION FILED MAR. 10, 1915.

1,250,280.

Patented Dec. 18, 1917.



Witnesses
C. A. Perham.

[Signature]

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By *[Signature]*

Attorney

UNITED STATES PATENT OFFICE.

HARRY A. CARPENTER, OF ROCHESTER, NEW YORK.

CAPILLARY HUMIDIFIER.

1,250,280.

Specification of Letters Patent.

Patented Dec. 18, 1917.

Application filed March 10, 1915. Serial No. 13,428.

To all whom it may concern:

Be it known that I, HARRY A. CARPENTER, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Capillary Humidifiers; 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.

This invention relates to capillary humidifiers, and the principal object of the invention is to provide a simple device to be connected to a hot air register or adjacent to a radiator for humidifying the air in the room or in a building.

Another object of the invention is to provide a humidifier of simple construction which can be either built in with the heating system or which can be applied to register after the heating system has been installed, said humidifier operating on the capillary plan of absorbing water from a tank by means of an open-work fabric and placing said fabric at the outlet of the hot air, so that the air in the room will become humidified and the device will also collect the dirt or dust coming through the hot air register.

The foregoing and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which

Figure 1 is a vertical sectional view through a hot air flue and showing the capillary humidifier connected to the hot air register,

Fig. 2 is a front elevation and partial section of the same, and

Fig. 3 is a top plan view.

Referring to the drawing, the numeral 1 designates the wall and 2 the floor of a room or building, while 3 is the hot air flue and 4 is the usual register, which may be of the usual or any suitable type. The humidifier comprises a water tank 5 of suitable capacity which may rest upon the floor 2 and may be connected by means of a hook 6. Connected to the opposite sides of the water tank is a supporting frame, preferably made of wire and consisting of the vertical members 7 riveted or secured to the tank 5 as at 8, said vertical members being connected at the top by a cross bar 9.

Suspended on the cross bar 9 is a capillary element 10 which consists of an open fabric of cotton or any suitable material, said capillary element being suspended from the rod 9 immediately in front of the register 4, and at the lower end said capillary element 10 is provided with a wick or extension 11, which might be of the same material as the capillary element 10, and of finer mesh, or merely pendulous strings or fibrous cords, but in the preferred form, which is the subject matter of this invention, the immersed ends of the vertical strands of the capillary element are enlarged as clearly shown in Figs. 1 and 3 of the drawing, to increase the capillary action thereof so as to supply the necessary liquid to the upper portion of the capillary element which is positioned in front of the radiator or register.

The strands of which the capillary element is formed, are interwoven to form a coarse open fabric which will not impede air circulation therethrough and consequently will not interfere with the usual heat distributing action of the radiator or register. The tank 5 is adapted to be filled with water, and the capillary element may be made of asbestos or some non-combustible material. However, if the capillary element 10 is made of a combustible material, the water in the tank 5 may contain any suitable chemical salts or other compounds to prevent the element 10 from taking fire. It will be obvious that where the capillary humidifier is to be used and installed at the time the heating system is built in, various changes in the structure may be resorted to which would fairly fall within the spirit and scope of the invention as defined in the claim.

What is claimed is:—

A capillary humidifier comprising a liquid retaining tank, means carried by said tank for attaching it to a radiator, an inverted U-shaped rod having its ends secured to the ends of the tank, a capillary element supported by said inverted U-shaped rod and comprising vertically and horizontally extending strands interwoven to form a coarse open fabric, the vertical strands having their upper ends folded over the bight portion of the inverted U-shaped member, the lower immersed ends of said

vertical strands being enlarged to increase their capillary action, relatively fine cords interwoven with the enlarged immersed ends of said vertical strands for forming a fabric of finer mesh than the mesh of the unimmersed portion of the capillary element.

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

HARRY A. CARPENTER.

Witnesses:

MARGUERITE T. EUSTACE,
THEODORE H. JAMESON.