

G. F. J. COLBURN.
EVAPORATOR.

No. 170,990.

Patented Dec. 14, 1875.

Fig. 1.

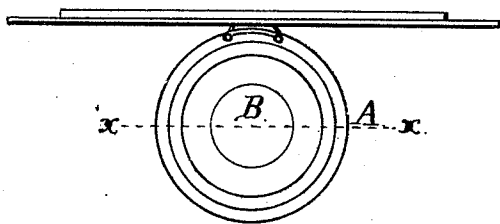


Fig. 2.

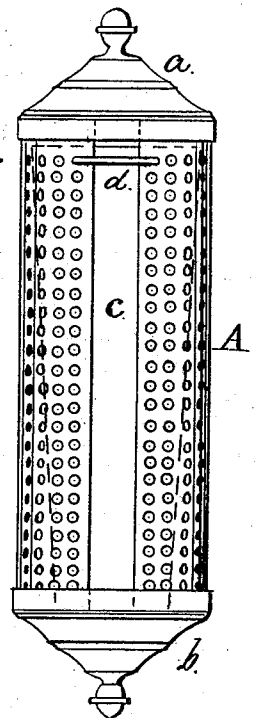
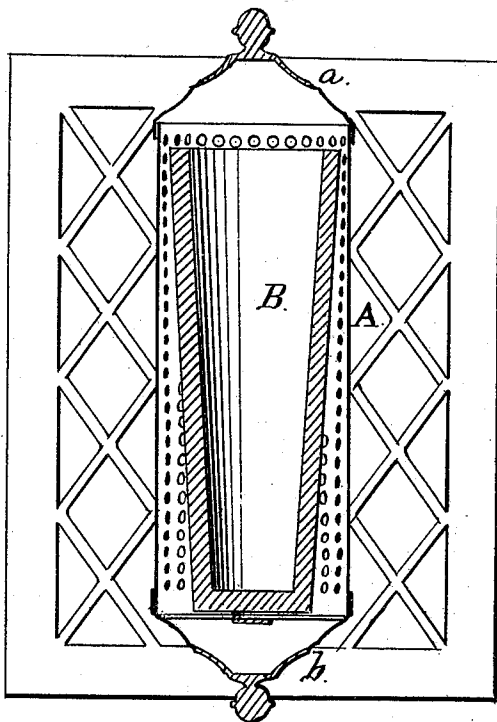


Fig. 3.



Witnesses :
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UNITED STATES PATENT OFFICE.

GEORGE F. J. COLBURN, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN EVAPORATORS.

Specification forming part of Letters Patent No. **170,990**, dated December 14, 1875; application filed November 24, 1875.

To all whom it may concern:

Be it known that I, GEORGE F. J. COLBURN, of Washington city, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Evaporators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a top view of my improved hot-air register, showing the cover of the porous-vessel receptacle removed; Fig. 2, a back view of case or receptacle detached from the register; and Fig. 3, a longitudinal vertical section, as indicated by the line *xx* of Fig. 1.

Like letters in all the figures of the drawings indicate like parts.

This invention consists of a hot-air-register face having a perforated cylindrical case attached thereto, or the face cast or swelled out to form a receptacle to hold a porous evaporating-vessel containing water, for the purpose of moistening the dry heated air as it passes through the register into the room, as fully described in my patent of January 22, 1861, reissued April 2, 1861, and extended January 22, 1875.

A is the perforated cylindrical case, made of sheet or cast metal, and painted, so as to give a nice finish to the exterior thereof, and having ornamental ends *a b*, constructed alike of sheet-brass or any other suitable material. The end *b* is riveted over the bottom of the case, and forms a cup to receive any drippings of water from the porous vessel, and the end *a* is fitted neatly over the top of the case, forming the cap or cover, to be readily removed and replaced in filling the vessel with water. The back of the case, which fastens against the face of the register, is left with a longitudinal opening or slot, *c*, of sufficient width to allow the heated air to pass in around the porous vessel. The edges of the opening are bent around a wire running the length of the case, to stiffen and strengthen them, and are secured to retain the form of the case by a piece of wire, *d*, at the top, and by a piece

of sheet metal at the bottom, both of which are placed across the opening, and soldered to the edges thereof.

The case as thus constructed can be wired firmly to the face of any ordinary register.

B is the porous vessel, which is placed in the case, and rests upon two cross-plates of sheet metal attached at the bottom thereof. The vessel is tapered sufficiently from top to bottom to allow the hot air to pass freely around between it and the walls of the case, and, intermingling with the water as it percolates through the sides of the vessel, causes the water to evaporate and pass off through the perforations of the case into the room, thus producing an agreeable atmosphere therein. The cup *a* will catch and hold whatever drippings of water that may come from the vessel, whether in filling it or from its percolating too freely through the sides of it, in consequence of there being little or no heat on.

The face of the register may be cast or swelled out to form a receptacle to hold the porous vessel, which, in some respects, would be preferable to the attached case, because it would furnish a firm foot-rest for persons to put their feet upon when drying them.

As an equivalent for the attached case or swelled-face register, a receiver or holder, consisting of a properly constructed stand or other support containing the porous vessel, may be placed in front of the register.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The combination of a porous evaporator with a perforated exterior holding case or receptacle, substantially as and for the purpose set forth.

2. The perforated cylindrical case having inclosed ornamental ends *a b* and longitudinal opening or slot *c*, attached to the face of a hot-air register, for holding a porous vessel, substantially as set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

G. F. J. COLBURN.

Witnesses:

W. BURRIS,
JAMES GREENWOOD, Jr.