W. H. TOWERS.

Hot-Air-Register Attachment.

No. 10,240. Patented Nov. 15, 1853.

Fig. 2.

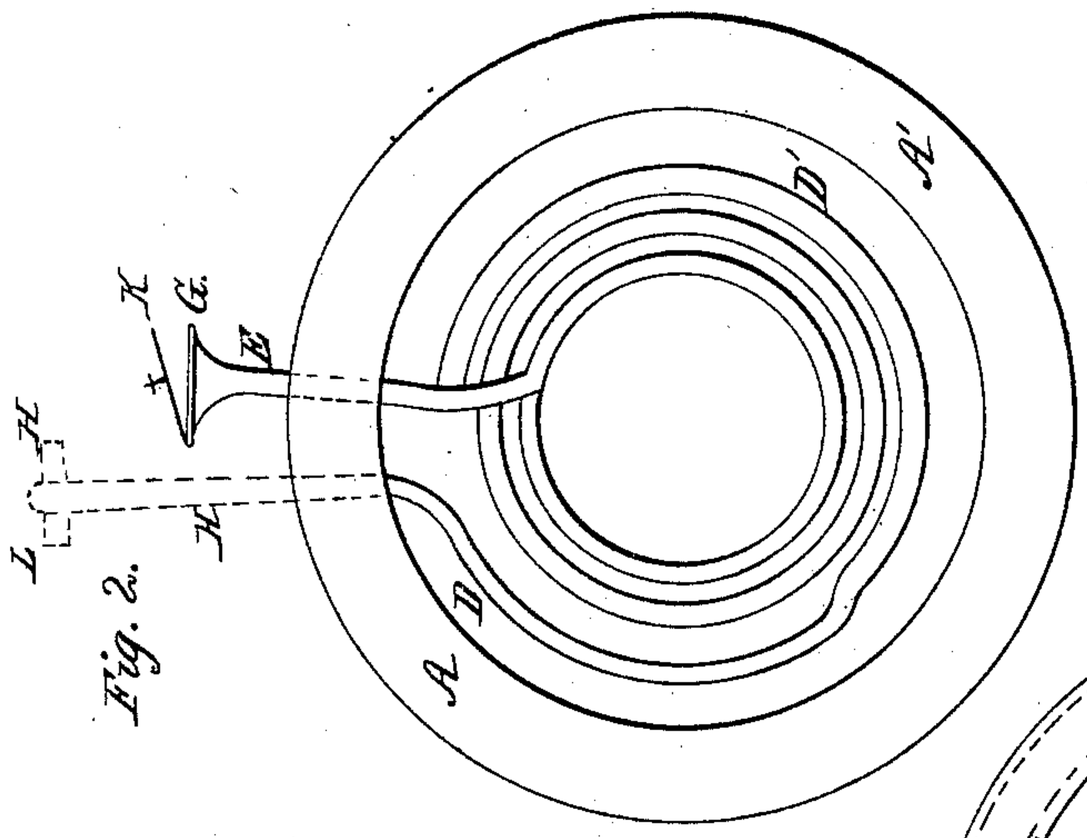


Fig. 3

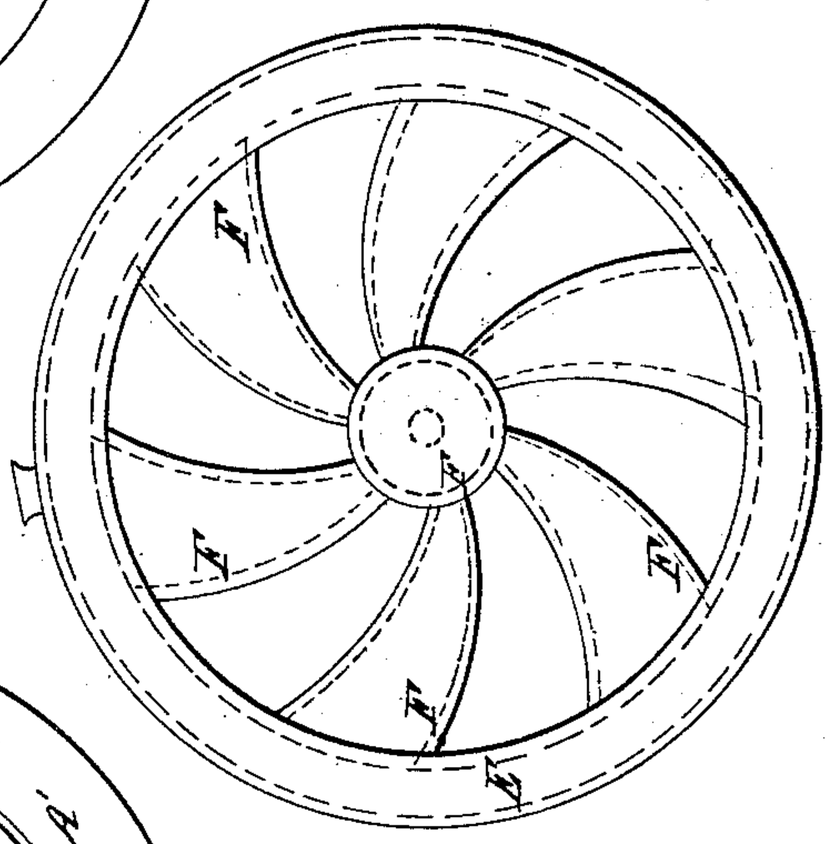
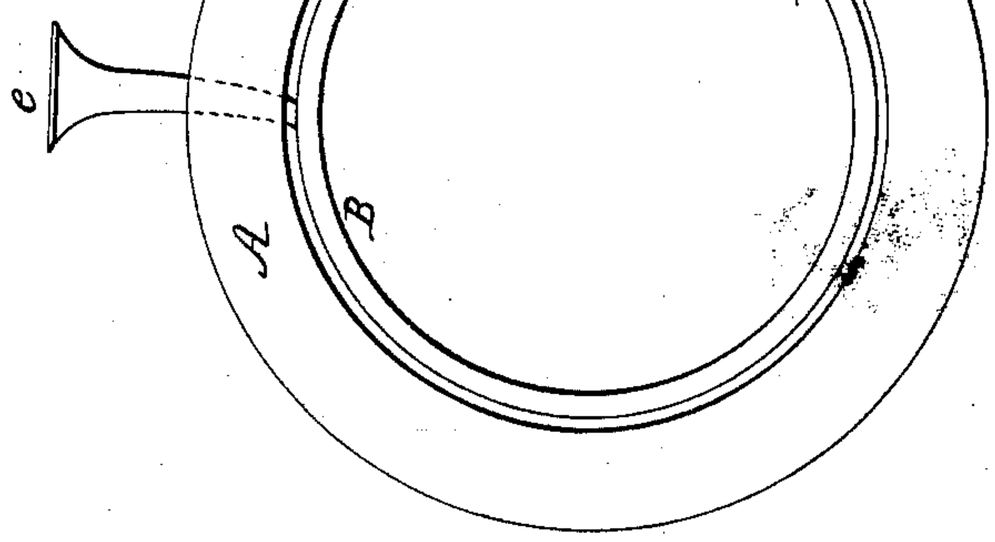


Fig. 1.



UNITED STATES PATENT OFFICE.

WILLIAM H. TOWERS, OF PHILADELPHIA, PENNSYLVANIA.

HOT-AIR REGISTER.

Specification of Letters Patent No. 10,240, dated November 15, 1853.

To all whom it may concern:

Be it known that I, WILLIAM H. TOWERS, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and Improved Attachment to Registers of Hot-Air Furnaces; and I do declare that the following is a full and exact description of the same, reference being had to the accompanying drawings.

The nature of my invention consists in placing, on or about the register of hot air furnaces, a convenient contrivance to contain water to be evaporated in the apartment, into which the register conducts the heated air, by which means, the moisture of the air of each apartment, may be regulated to suit the occupants; which is particularly desirable in large buildings in cities, which are heated by one furnace, and yet supply numerous apartments, let for various branches of handiwork, in which case it would not do to supply the vapor from below, as the condensation would materially injure many light fabrics, manufactured in such buildings,—hence has arisen the practice of supplying simply the hot dry air, which seriously inconveniences, other branches of workmanship by too quickly drying, &c. Having witnessed the inconvenience, I have adopted this mode of remedying them, by putting the cure in the hand of each tenant, and find it answers a most excellent end, as each is enabled, as will be seen from my specification and drawings, to regulate his supply of vapor to suit his case.

Figure 1—A, A′, represents the ordinary cast iron jamb plate, affixed to the wall surrounding the opening for the egress of the heated air. Within this opening, when round, I place two metallic cylinders, one being within and concentric with the other so as to form a space or water tank between the inner periphery of the outer cylinder, and the outer periphery of the inner one, said space or water tank being closed at its ends to make it water tight. These cylinders are shown in their proper position at B, B′, and may be of any convenient diameter and length, the diameter of the outer one being about two inches (more or less) greater than the diameter of the inner concentric cylinder, so as to leave a water space between them of one inch. From the upper part of this drum, water case or tank, proceeds a pipe, connecting and leading into the apartment to be supplied by the heater. At the top (C) of this tube, is an ornamental funnel mouth, through which the space or tank is to be supplied with water, and also serving as the communicating medium for the evaporation to reach the room. It may be provided with a valve for regulating the quantity of moisture or vapor, admitted into the room, and another pipe or tube, and valve to allow the moisture or vapor, to escape into the flue when it is not desired in the room, similar to those attached to the coil, hereafter described.

Fig. 2—A, A′, shows the cast iron jambs, marking the size of the circular opening. D, D′, represents a coil of pipe, of any proper size or length placed within the opening (around which the heat must pass) to receive the water to be evaporated. One end of the pipe is brought through the casement at (E) and has upon it an ornamental opening for the receiving of the water and the discharging the vapor, as shown by (G). Upon this opening is placed a valve, with any convenient fastening (K) for the purpose of shutting off the vapor, when the register may be closed. H, H, in dotted lines, represent an outlet pipe, passing into the inside of the register, which has upon it a lip valve of sufficient weight to cause all of the vapor to enter the room when valve K is opened. When closed, the valve L, frees the steam or vapor into the hot air induction pipe.

Fig. 3 shows the exterior set of arms, made to conform to the patterns now in use, for registers of furnaces. These I construct so as to form in them a receptacle for water. I cast the center periphery and arms hollow, by placing a core throughout, as represented by the dotted lines F^s, the front being rounding or oval. These arms have openings and valves similar to those of Figs. 1 and 2, and for like purpose, and are so constructed as to be attached to the ordinary register, without further alteration than the substitution of them for the corresponding plate in the register.

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

The placing within the jambs of each register the means of moistening the heated air, as above described.

WILLIAM H. TOWERS.

Witnesses:

JNO. WIGHTMAN,

STEPHEN H. SIMMONS.