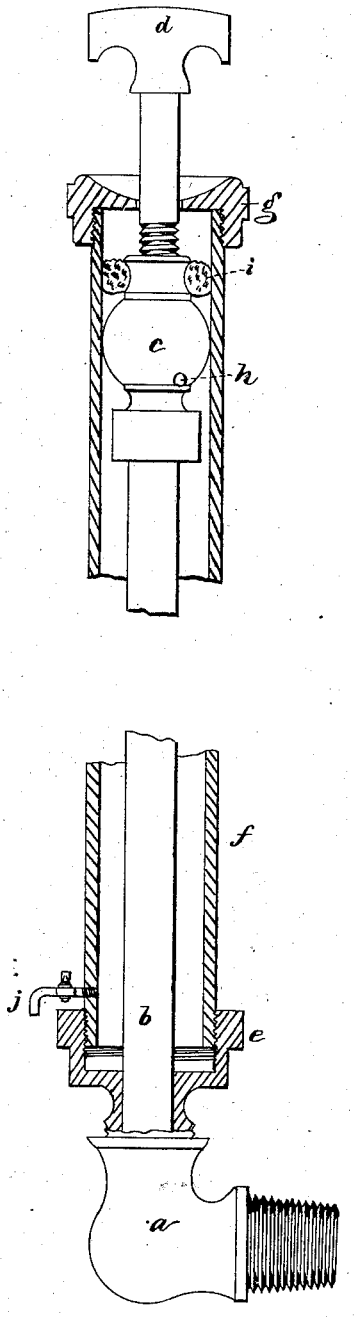
J. W. FAXON.

Valve for Steam-Radiators.

No. 164,985. Patented June 29, 1875.



Witnesses.

L. H. Catlin

Wm Pratt.

Inventor.

James Warren Faxon

per Crosby Gregory attys

UNITED STATES PATENT OFFICE.

JAMES W. FAXON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN VALVES FOR STEAM-RADIATORS.

Specification forming part of Letters Patent No. **164,985**, dated June 29, 1875; application filed April 24, 1875.

To all whom it may concern:

Be it known that I, J. WARREN FAXON, of Boston, Suffolk county, Massachusetts, have invented Improvements in Valves for Steam-Radiators, of which the following is a specification:

This invention relates to an improvement in valves for steam-radiators; and consists in a valve constructed substantially as hereinafter described, and which may be left open without danger of water of condensation getting on the floor, and whereby the cold air is allowed to escape, thereby at once giving the steam free circulation through the pipes and radiators, and steam is admitted into the apartment to moisten the atmosphere, and the water of condensation is caught in the annular tube or cup.

Radiators now in use are provided with a small pipe, having at top a valve, and when it is desired to heat the radiator or coil of pipes by incoming steam, it is customary to turn this valve to allow the cold air in the pipes or radiators to escape, and when this is done the water then condensed in the radiator is forced or thrown out and soils the carpet or floor. Should the valve be left open, it is apt to cause trouble, for the water formed in the radiator by the steam, which is always condensing more or less, will be forced out with the steam and will run down on the outside of the pipe and soil the carpet or floor.

It is well known that much complaint is made of the dry atmosphere in rooms heated by steam-radiators, and such atmosphere is very unhealthy, and it is also well known that it takes a considerable time in the morning, when starting up to warm apartments, for the cold air to get out of the pipes or radiators and for the latter to get hot.

By my invention I allow, when desired, a regulated quantity of steam to escape into the room or apartment being warmed, to moisten the atmosphere, and by means of the surrounding cup, it is impossible for the carpet or floor to become soiled. By being able to allow the steam to escape constantly, or during the night, there is but little, if any, delay in warming a building, because, as before stated, the valve can be left open over night without danger of the water being thrown out, and thereby the steam is given opportunity to circulate freely through the pipes and radiators, the cold air escaping through the open valve, and raising the heat quickly, which would not be the case if the valves were closed, for then the cold air being confined in the radiators has to be heated gradually.

In the drawing, *a* is a screw-threaded union to be screwed into the radiator and provided with an upright or inclined pipe, *b*, having at top a valve, *c*, with a stem, *d*, and, as so far described, the parts are substantially those found in other radiators. At *e* is placed a threaded foot-piece, which surrounds *b* and receives a tube, *f*, provided at top with a screw-threaded end to receive a cap, *g*, having a hole and a concave face. The valve *c* has an opening, *h*, leading into its interior, and by means of stem *d* may be stopped or uncovered to allow the passage of air or steam into the tube, which serves as a cup to catch and retain the water of condensation. The stem *d* does not fit the cap *g* closely, but space is left about the stem for the escape of the cold air, as described, and for the passage of steam into the rooms or apartments to moisten the atmosphere, and the quantity of steam so admitted is regulated by the stem *d*. A piece of packing, *i*, preferably of sponge, is placed about the top of the valve to deaden the noise, to cause the steam to pass out with less force, and to take from the steam some of its moisture. The lower portion of the tube is adapted to catch the water of condensation, and may be provided, if desired, with a faucet to draw off the water, as shown at *j*.

By this arrangement of valve and cup the radiator may be kept very warm, because the steam may be kept in constant movement through it, the moisture in the steam moistens the air, rendering it more healthful, and it may be used in a room with the most delicate carpet or finished floor, without any water whatever escaping onto the floor. The packing may be omitted, if desired.

It is not considered necessary, however, to employ such faucet, because the heat of the cup absorbs the water which may be forced into it.

Having described this invention, I claim—

The combination, with the interior steam-pipe and valve, of the outer tube, cap, and standard, constructed and applied with relation to each other and to the pipe and valve, as described, to allow the cold air to pass out and steam to escape into the apartment, and to catch and retain the water of condensation.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES WARREN FAXON.

Witnesses:
G. W. GREGORY,
J. B. CROSBY.