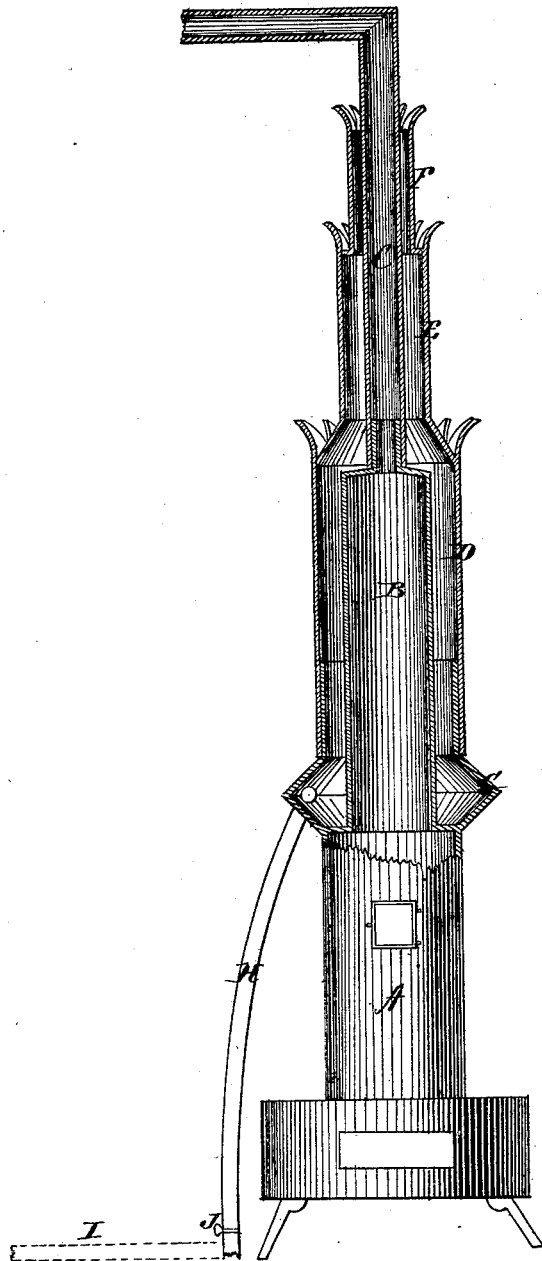


W. L. PHILLIPS.
Heating Apparatus.

No. 113,694.

Patented Apr. 11, 1871.



Witnesses.

L. L. Everts.
J. C. Hutchinson

Inventor.

Wm L. Phillips
per Alexander Mason

Attys.

United States Patent Office.

WILLIAM L. PHILLIPS, OF NORMAL, ILLINOIS

Letters Patent No. 113,694, dated April 11, 1871.

IMPROVEMENT IN STOVE-PIPE DRUMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, WILLIAM L. PHILLIPS, of Normal, in the county of McLean and in the State of Illinois, have invented certain new and useful Improvements in Heating Apparatus; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of the upper part of a stove-drum, smoke-pipe, &c., so as to cause the colder air that lies near the floor to be more readily conducted to the upper part of the room, and the warmer air, that naturally is at the top, to descend and take the place of the cold, for the purpose of equalizing temperature and economy of fuel, said invention being called by me "an equalizing attachment."

My design is to retain the radiating power of the lower part of the stove; also to use the same arrangement to supply the room with a moderate amount of air from out of doors, if desirable.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a view of a stove and drum with my equalizing attachment combined therewith.

A represents the fire-pot of any common heating apparatus;

B is a common drum; and

C the smoke-pipe, arranged above the fire-pot A.

D E F are outside casings or jackets, connected together and surrounding the drum and pipe of common stoves.

G is an enlargement at the lower end of the jacket D, where the same is attached to the stove.

H is a pipe or pipes conducting air from at or near the floor to the enlargement G of the casing D, said pipe being provided with a damper, J, to control the admission of air into the pipe.

I represents a pipe that may be used to conduct cold air from the outside of the building to the pipe H.

I inclose the drum, smoke-pipe, and extreme top of fire-top with an extra drum, casing, or jacket, D, about three inches from the common drum or pipe, and made to fit snugly at its lower edge, the lower end being, however, enlarged at G, so as to permit a free distribution about the base of drum of the air entering through the pipe H.

The upper casings or jackets E F are smaller than the lower casing D, so as to insure draught; and for appearance sake, and, for the same reasons, are carried well up toward the ceiling of the room.

When fire is made in the stove the air in the space between the drum and pipe and the outer jackets becomes heated and rises, flowing out at the top, and by a well-known natural law the vacuum is supplied by the air from at or near the floor, or by means of the pipe I from the outside of the building.

The more frequently we cause the air of a room to change its relative position—that is, that from the bottom to be warmed and ascend and the upper strata to descend and take its place—the more equally and economically will an apartment be warmed; and this is done with my improvement without losing the advantages of radiation.

I do not claim the taking of air from the bottom of a room and heating, as done by a ventilating-stove; but

What I do claim as new, and desire to secure by Letters Patent, is—

The combination, with the drum B and smoke-pipe C, of the outside drums or jackets D E F and enlargement G, all constructed as described, and arranged above the fire-pot A of the stove, and provided with the cold-air pipe H, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of December, 1870.

WILLIAM L. PHILLIPS.

Witnesses:

A. F. DICKINSON,
EDWIN C. HEWETT.