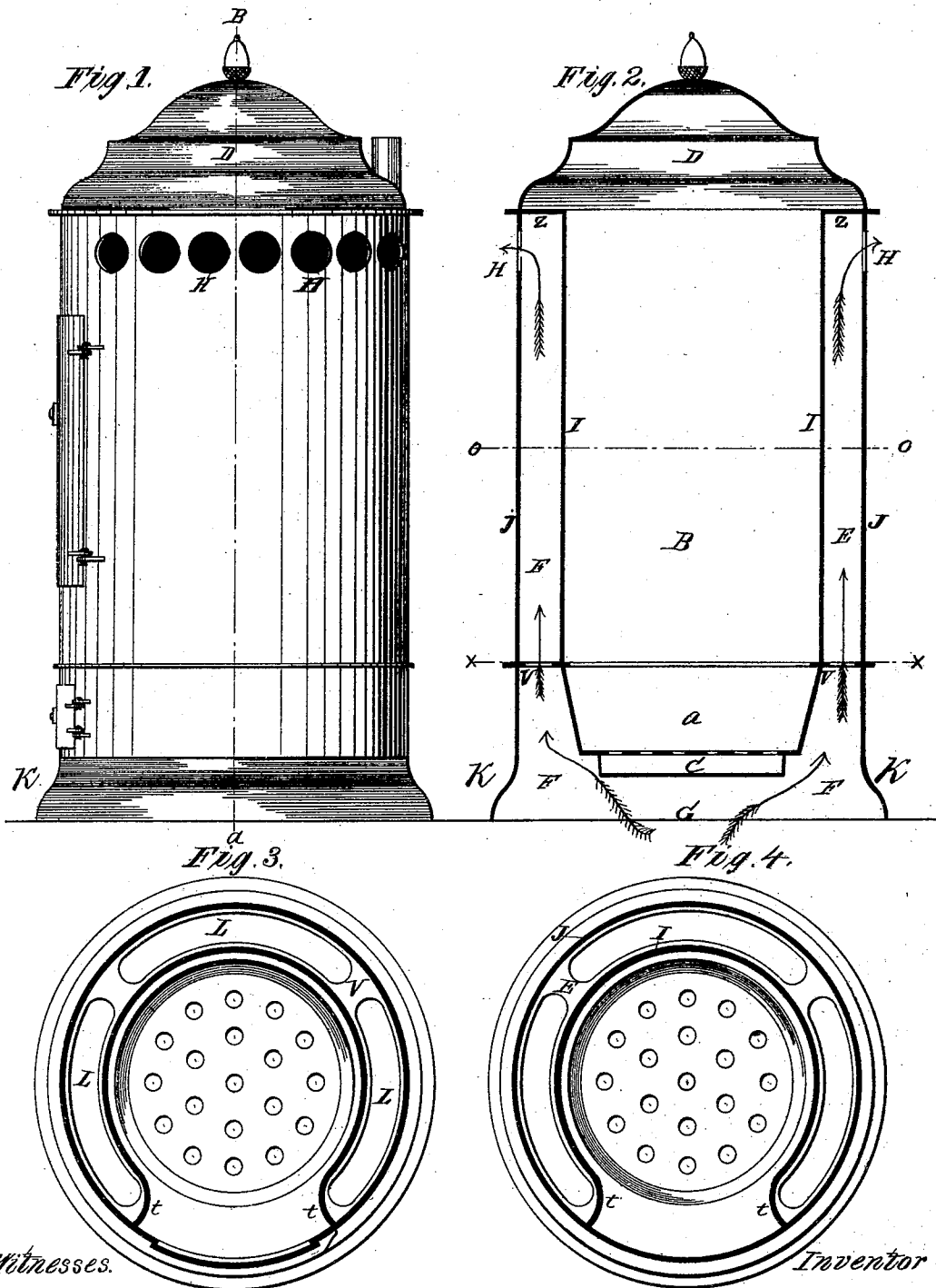


A. T. LANPHERE.
HEATING-STOVE.

No. 179,032.

Patented June 20, 1876.



Witnesses.

H. L. Lanphere
C. B. Rogers

Inventor

Alvin T. Lanphere.

UNITED STATES PATENT OFFICE.

ALVIN T. LANPHERE, OF COLDWATER, MICHIGAN.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. 179,032, dated June 20, 1876; application filed February 21, 1876.

To all whom it may concern:

Be it known that I, ALVIN T. LANPHERE, of the city of Coldwater, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Heating-Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof that 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 and figures of reference marked thereon, which form a part of this specification.

The same letters and figures of reference are used to indicate the corresponding parts.

After describing the invention its nature and extent will be shown in the claims.

The object of my invention is to provide a cheap and economical heating-stove for use in dwelling-houses principally; but it can be used to advantage in halls, school-houses, churches, &c. It is designed mainly for those sections of country where wood is used as fuel, although it can be arranged for coal when desired. A further and principal object of my invention is to provide in a cheap but efficient manner for the introduction of a fresh warmed air into the living-rooms of dwellings in place of air heated over and over and vitiated by repeated use in respiration, as in the use of the common stove.

This invention has relation, mainly, to wood-burning heating-stoves provided with exterior jackets or incasements for heating the external air which is introduced under the base; and it consists in the construction and novel arrangement of the base-wall open below the fire-pot, which has a slotted flange, whereby it is supported on the base-wall, the fire-chamber wall, and the perforated exterior air-chamber wall or jacket, connected at their upper ends by an annular top and in front by bending the wall of the fire-chamber outward on each side of the door, and the top of the stove forming a dome over the annular plate and fire-chamber, and carrying the smoke-pipe, as hereinafter shown and described.

Figure 1 is a plan view. Fig. 2 is a vertical section through the line A B. Fig. 3 is a transverse sectional view through the line *x x*, and Fig. 4 is a similar view through the line *o o*.

A is the fire-box. B is the fire-chamber. C is the ash-pit. D is the cast-iron ornamented top of the stove. E E is an annular hot-air chamber surrounding the fire-chamber, and between the case or wall I of the combustion-chamber and of the outer casing J. This chamber is closed at top by an annular plate, *z*, and in front by the bent edges *t* of the inner wall I, which are joined to the exterior case on each side of the door. F F is a cold-air chamber, surrounding ash-pit C and fire-box A. G is the opening in the floor under the stove for the admission of the fresh air. H H are openings in the outer casing J for the escape of the warmed air into the room. I is the case or wall of the combustion-chamber, formed of heavy sheet-iron. J is the outer casing of sheet-iron forming the exterior of the stove. K K is the cast-iron ornamented base, into the upper side of which the lower section of outer casing J sets for support of stove. L L is opening through flange V of fire-pot for air to pass into the annular chamber.

The operation of my stove or heater I will now describe. It is placed in position directly over an opening in the floor to which fresh air is brought in a cold-air box from outside; or by making an opening of sufficient size in outer wall and allowing fresh air to flow directly to said opening in the absence of a box the same result will be substantially accomplished. Fuel is then burned in the fire-box. Immediately the case or wall J becomes heated, which, by its radiation, causes a current of heated air, already warmed by its passage over the ash-pit and fire-box, to pass from the cold-air chamber F F upward in the annular hot-air chamber between the case or wall of the fire-chamber and the outer casing, and out at the openings H H into the room to be warmed. As the fire increases the radiation from the cast-iron top of the stove and the outer casing is added for heating purposes to the rapidly-passing currents of fresh-warmed air, thus forming a powerful heater and combining the more important feature of introducing a constant supply of fresh warm air at an expense which will place it within the reach of all. To ventilate the room sections of perforated case are set in communication with the open space between the partitions in wood, and in-

to openings in the hollow walls in brick buildings. When thus arranged the operation of my stove is all that could be desired.

The advantages which I claim for my stove or heater over all other stoves is that, owing to its simplicity of construction, it can be manufactured and sold at a price but little in advance of that charged for the common stove, while possessing nearly all the advantages in a sanitary point of view offered by the more expensive furnaces and air-warmers with which the country abounds, and the price of which places them beyond the reach of the farmer, the artisan, and those in the common walks of life. My stove possesses all the advantages of the common stove as to size, inexpensiveness, and adaptability for use in parlors, sitting-rooms, &c., while in the improvement claimed it approximates in usefulness to those heating arrangements requiring more space, greatly increased outlay, and possessing in most cases complications which, to a greater or less degree, unfit them for popular use.

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

1. The heating-stove herein described, consisting of the base-wall K, open below, the fire-pot having the slotted flange V supported on said base-wall, the cylindrical outer wall J, having the perforations H, the fire-wall I, connected to said outer wall at top by the annular plate z, at bottom by the flange V, and in front by its bent edges t, and the dome top D spanning the fire-chamber and the annular top plate z, as specified.

2. The combination, with the slotted fire-pot flange V, the cylinder J, and the dome top D, of the partial cylinder I within said cylinder, its bent vertical edges t connecting therewith on each side of the door, and the annular plate z connecting the cylinder and partial cylinder at top below said dome, as specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 18th day of February, A. D. 1876.

ALVIN T. LANPHERE. [L. S.]

Witnesses:

D. THOMPSON,
CHAS. UPSON.