J. B. REINHARD.

Warm-Air Furnace.

No. 164,101. Patented June 8, 1875.

Fig. 1.

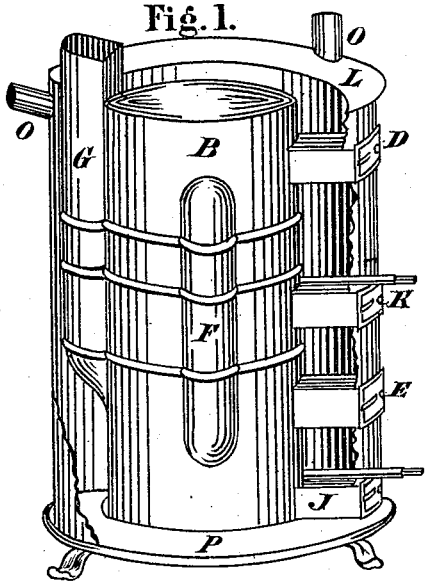


Fig. 2.

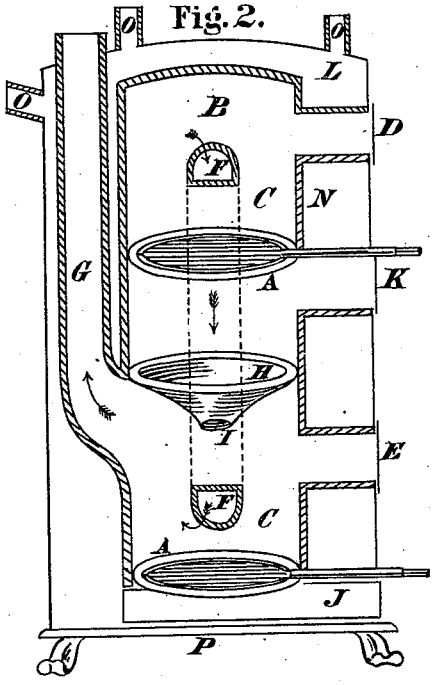
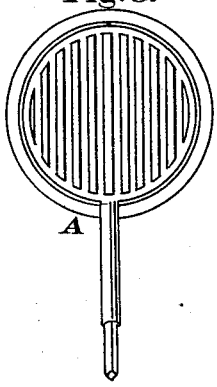


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN BERNARD REINHARD, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN WARM-AIR FURNACES.

Specification forming part of Letters Patent No. **164,101**, dated June 8, 1875; application filed March 26, 1875.

To all whom it may concern:

Be it known that I, JOHN B. REINHARD, of the city of Louisville, in the county of Jefferson and State of Kentucky, have invented a certain new and useful Improvement in Hot-Air Furnaces, for heating churches, schools, and for other similar purposes; 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 make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view, with a part of the casing left out in order to show the arrangement of the interior cylinder and smoke-flues therein. Fig. 2 is a sectional view of the furnace, showing the grates and partition-plate in perspective. Fig. 3 is a flat view of the grate and ring in which it works.

Similar letters of reference indicate corresponding parts of the drawing.

This my invention relates to hot-air furnaces in which two fires are used, one above the other, the object of which is to consume the gas, smoke, and refuse cinders that may fall from the upper grate into the lower one, and thereby economize in fuel, and prevent annoyance.

This invention or device will be more fully illustrated in detail in Figs. 1, 2, and 3 of the drawings, in which P is the furnace, all of which is made of metal, and in form as shown in the drawings. L is the outside casing, and O O are the hot-air openings, which may be either taken out of the top or at the sides, or both, if necessary, and may be of any required size or shape. B is the interior cylinder or fire-chamber, which is made in sections for convenience in setting up. F F are the descending flues at the sides, through which the smoke descends to the lower furnace or fire-grate, where it is thoroughly consumed and converted into heat, and thereby assists in heating the air in the casing, instead of becoming a loss. E and D are the feed-openings, all of which are closed with doors, as shown in the drawing. J and K are the draft-openings, which are also closed with doors in like manner, but which may be perforated with holes, if necessary. A A are the fire-grates, which are hung in a ring resting on lugs in the cylinder, and so arranged as to revolve therein for convenience in cleaning. H is the partition-plate, which is made somewhat in the shape of a funnel, with a small opening in the center, which is intended to be closed with a self-acting cover at I, operated by the weight of material that may fall upon it. C C are the fire-chambers.

Having thus fully described the nature and object of this my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the grates A A, partition-plate H, descending flues F F, and discharge-flue G, arranged, constructed, and operated substantially as and for the purpose herein-before set forth.

JOHN B. REINHARD.

Witnesses:
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