J. S. PERRY.

Hot-Air Furnace.

No. 91,560. Patented June 22, 1869.

Fig. 1

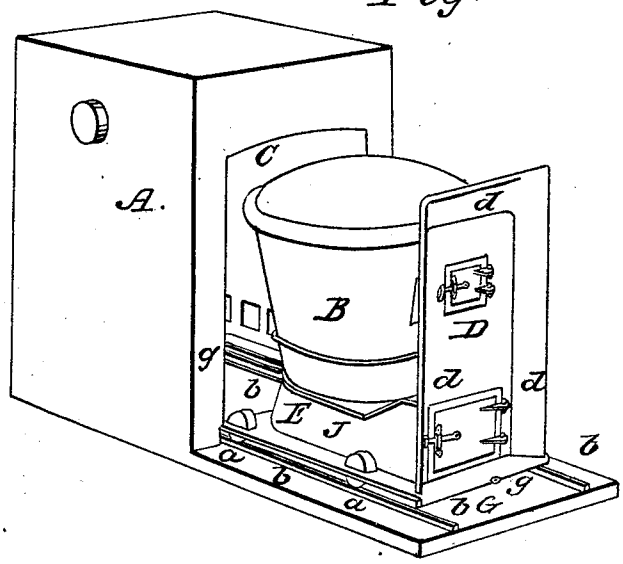
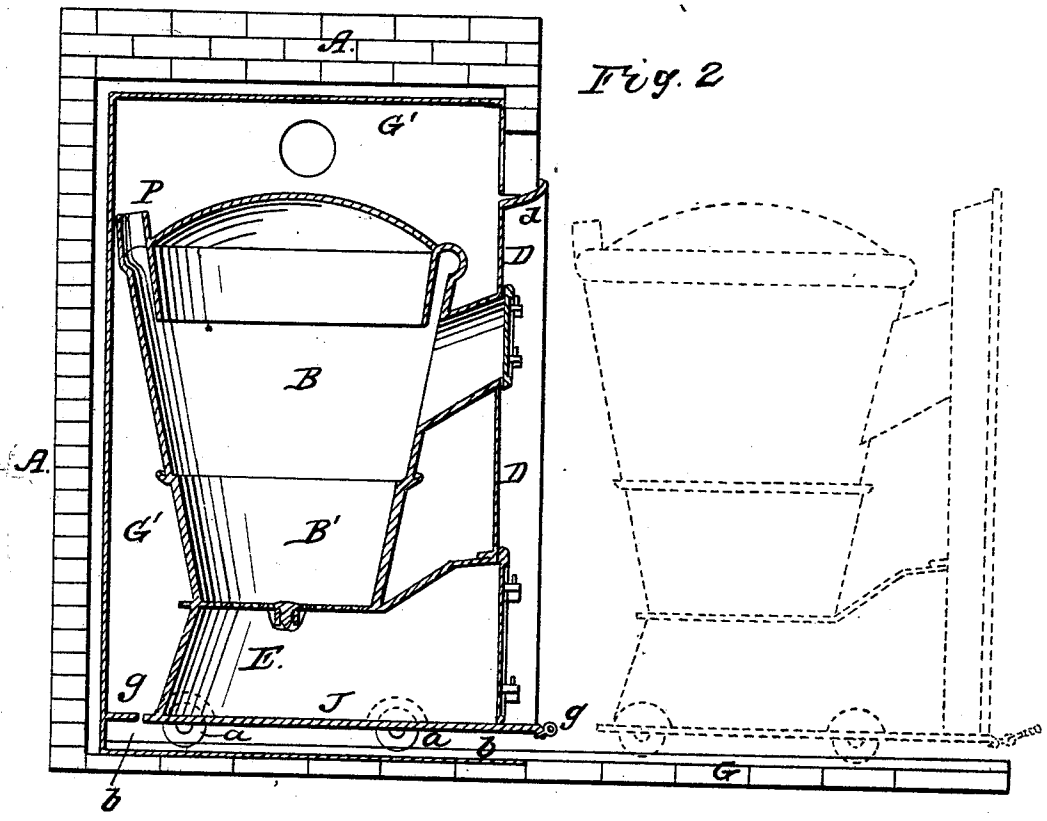


Fig. 2



WITNESSES

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JOHN S. PERRY, OF ALBANY, NEW YORK.

Letters Patent No. 91,560, *dated June* 22, 1869.

HOT-AIR FURNACE.

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, JOHN S. PERRY, of the city and county of Albany, and State of New York, have invented a new and useful Improvement in Hot-Air Furnaces; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view, showing the furnace mounted on rollers, and drawn out of its air-chamber, or casing.

Figure 2 is a vertical section, taken longitudinally through the furnace and its casing, showing, by the aid of red lines, the furnace in two positions.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates especially to that class of hot-air furnaces which is designed for warming the upper apartments of buildings, and which has the walls constituting the hot-air chamber, or casing composed of brick-work.

In the construction of this class of furnaces, it has been the practice hitherto to arrange the furnace or heater permanently upon a foundation, and then build around it the casing of masonry, so that the whole becomes, when finished, a permanent structure, and can only be repaired by the expense and loss of time required to take down the brick wall.

The nature of my invention consists in combining with a permanent structure of masonry, constituting the outer wall, or casing of a hot-air chamber and furnace-receptacle, a portable furnace, which is mounted upon wheels, or rollers, resting upon or in suitable guides, and otherwise so constructed, that when in place it will form a tight joint around its front plate or wall, and when desired to remove it from its casing, this can be done by simply rolling it out upon its track, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In carrying out my invention, any of the well-known forms of furnaces may be employed, and, therefore, I shall not confine myself to the precise form shown in the drawings.

The furnace shown in figs. 1 and 2 is mounted upon a horizontal hearth-plate, J, which is supported upon a rail-track, *b b*, by means of four or more flanged or plain-faced wheels, or rollers *a a*.

Upon this hearth-plate J is constructed an ash-pit, E, and above this ash-pit is a fire-pot, B′, from which rises an upwardly-flaring combustion-chamber, B.

This combustion-chamber terminates upwardly, in a dome, and also a pipe, P, which latter leads off to an escape-pipe, in any suitable manner.

The ash-pit entrance, and also the entrance to the fire-pot, are made through a front wall, D, which rises perpendicularly from the hearth-plate J, and is constructed with bevelled flanges *d d* upon its edges, which are adapted to fit snugly against corresponding bevelled surfaces, surrounding the opening leading into a casing, A.

The casing A may be built up in the usual well-known manner of brick-work, with this exception, to wit, it is not built around the furnace, so as to retain permanently within it the furnace, as hitherto.

G represents the foundation of the furnace, which is properly graded and adapted for receiving and holding in place the rails *b b*, which should be of sufficient length to allow the furnace to be drawn out of its casing A far enough to obtain convenient access to the interior of this casing, as represented in fig. 1 in black lines, and in fig. 2 in red lines.

The rails *b b* not only serve as supports for allowing the furnace to be easily moved out of and into its casing, but they will also serve as guides for keeping the furnace and its appendages in proper relation with respect to the opening in the said casing.

The casing is constructed, lined, and finished before the furnace is moved to its place, reference being had in its construction to the shape and size of the furnace and the front wall D thereof, so that when the casing is finished and the furnace adjusted within it, the bevelled flange *d* of said wall will fit snugly in contact with the surface which is presented around the opening in the casing.

It will be seen from the above description, that by my invention access can be readily had to the interior of the casing A, by drawing or rolling out of it its furnace, thus obviating the labor, expense, and unpleasantness attending the taking down of the brick-work composing such casing, as is necessary in all brick-set furnaces hitherto constructed.

If desirable, the front wall D may be provided with an eye, *g*, by which to attach a hook, for readily drawing the furnace out of its chamber, or which may be used to attach the hook of a block and tackle, for very large furnaces, where more than ordinary power is required to remove them.

If desirable, the joint surrounding the flange *d* may be sealed with cement, after the furnace is adjusted to its place within its chamber. This will prevent the entrance or escape of air.

While I prefer to adopt, in most instances, brick-work for the walls surrounding and enclosing the furnace, it is obvious that non-conducting walls may be made in any of the well-known ways.

I do not claim a fire-place heater mounted on guides, and arranged as shown in the Letters Patent of J. M. Thatcher, December 22, 1868.

Having described my invention,

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

So constructing a furnace-casing, or wall, and the furnace to be fitted thereto, and mounting the latter upon wheels, or rollers, that an air-tight hot-air chamber will be secured, and the furnace made capable of being readily removed, without requiring to be taken apart itself, or its casing, or wall to be disturbed, substantially as described.

JOHN S. PERRY.

Witnesses:
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