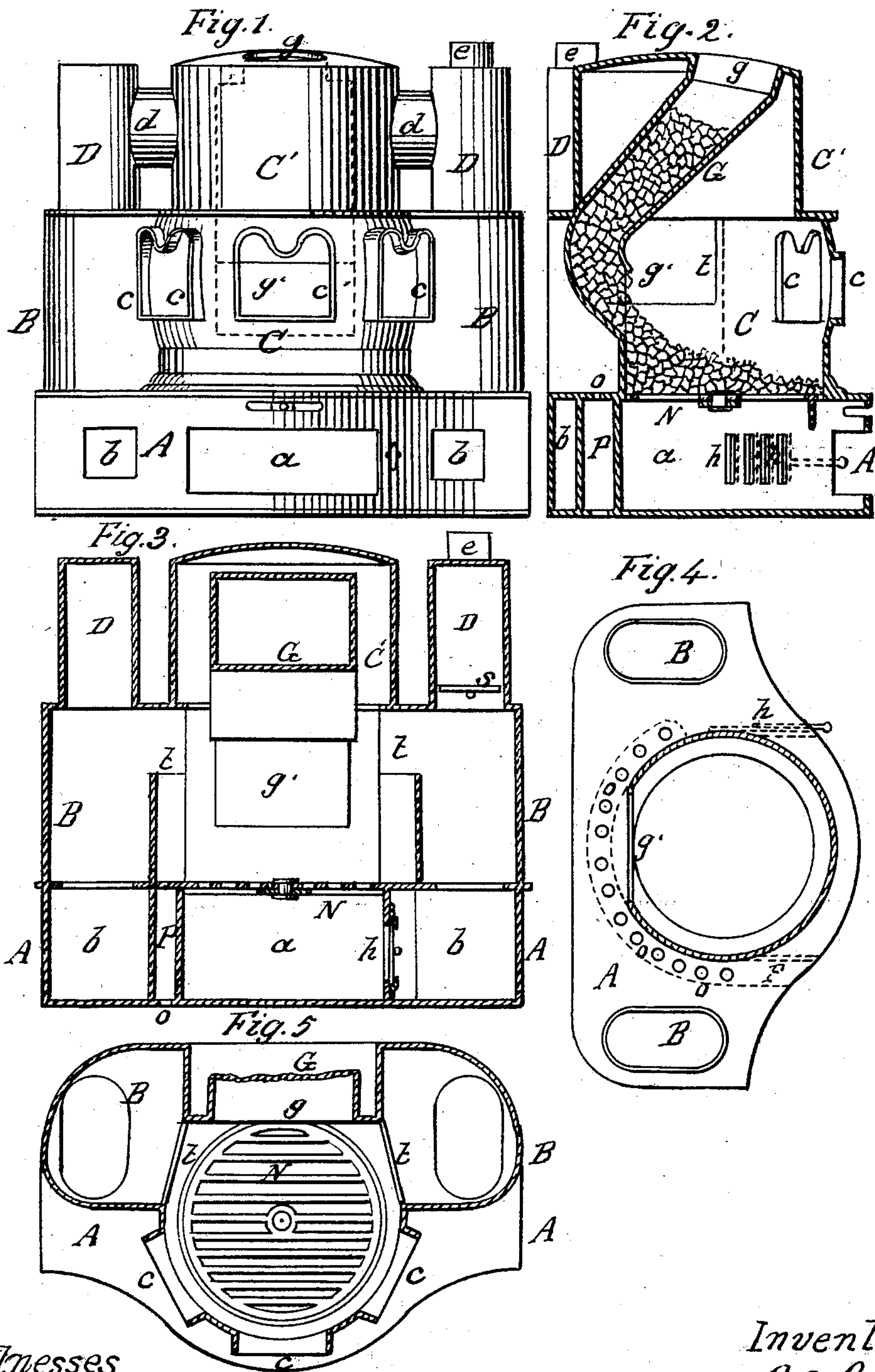


B. C. BIBB.  
Fireplace Stove.

No. 94,700.

Patented Sept. 14, 1869.



Witnesses  
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Julius Kirsch

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by  
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# United States Patent Office.

BENTLEY C. BIBB, OF BALTIMORE, MARYLAND.

Letters Patent No. 94,700, dated September 14, 1869.

## BASE-BURNING FIRE-PLACE HEATER.

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, BENTLEY C. BIBB, of the city and county of Baltimore, in the State of Maryland, have invented an Improvement in Fire-Place Heaters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of the front of my improved heater.

Figure 2 is a vertical section, taken through the centre of the heater from front to rear thereof.

Figure 3 is a vertical section through the centre of the heater, taken at right angles to the sectional view, fig. 2.

Figure 4 is a horizontal section through a heater, having an air-jacket in its base-section and flue-columns rising from said base-section.

Figure 5 is a horizontal section, taken through the heater, of figs. 1, 2, and 3.

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

This invention relates to certain novel improvements on that class of fuel-magazine heaters which is used in fire-places.

The nature of my invention consists—

First, in so constructing and arranging the fuel-magazine of a fire-place heater that the fuel will be supplied to the fire-chamber through the back wall enclosing the same, thereby obtaining a very large amount of fire-surface, as will be hereinafter explained.

Second, in so arranging a fuel-magazine that it will reverberate the heat rising in the fire-chamber toward the front part of the heater, from the point of discharge of the fuel to the point where the fuel is supplied to said magazine, as will be hereinafter explained.

Third, in the arrangement of an air-jacket, partly around the wall enclosing the sides and back of the ash-pit, and in perforating the top and bottom plates of the base-section, so that air will enter said jacket at its lower end, become heated therein, and escape into the room through the top plate of the base-section, as will be hereinafter explained.

Fourth, in applying a valve or register to the wall which encloses the sides and back of the ash-pit, for the purpose of allowing fine dust to escape into the main flue, when the grate is shaken, as will be hereinafter explained.

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

In the accompanying drawings—

A represents the base-section of the heater, *a* the ash-pit, and *b* a flue partly surrounding the same.

P is a vertical air-passageway, which is formed in the section A, and which partly surrounds the ash-pit *a*, and

*o o* are perforations through the top and bottom plates of this section A, for the purpose of allowing currents of air to enter the passage P at its base, and escape at its top. The air thus allowed to pass through P will become heated, and assist in warming the room.

Through one side of the wall which partly encloses the ash-pit *a*, openings are made, leading into the flue-space *b*, on that side of the heater nearest the direct draught-damper *s*, and to these openings a sliding-valve, *h*, is applied, as shown in figs. 2 and 3.

By opening valve *h*, when the grate is shaken, the dust will all escape into the flue-space *b*, and from thence pass into the chimney.

On top of the section A is the fire-chamber C, which is enclosed by a wall having windows or doors, *c*, or both windows and doors, applied to it for illuminating and other purposes, and on opposite sides of the said chamber C are box-flues, B B, which communicate with vertical pipes, D D, at their upper ends, and with the flue-spaces *b*, in section A, at their lower ends.

These box-flues B B also communicate, at their upper ends, with the fire-chamber C, through the passages *t t*.

The short pipes *d d* form communications between the vertical pipes D D and the top section C' of the heater, which section communicates, at its lower end, with the fire-chamber C, as shown in fig. 3.

Instead of having box-flues, B B, as shown in figs. 1, 2, 3, and 5, columns, like those shown in fig. 4, may be used, in which case there may be a greater number of air-vents, *o*, made through the top plate of the section A, for the escape of air from passage P, than could be made through said plate when the box-flues are employed.

The fuel-magazine G has its feed-opening *g*, for receiving coal, made through the top plate of section C', in front of the vertical centre of this plate, and the discharge-opening *g'*, of this magazine G, is made through the back of the wall surrounding the fire-chamber C, a little above the plane of the grate N, as shown in figs. 2, 3, 4, and 5.

The magazine inclines from the feed-opening *g* to the back of the fire-chamber C, at which latter point it inclines forward, so as to discharge the fuel into the fire-chamber, through the back part of its wall, thereby leaving a free space above the incandescent fuel occupying the entire horizontal area of said chamber.

I am aware that stoves have been made before my invention, having their fuel-magazines inclined, so as to expose a larger amount of fire-surface in front of them than is the case where vertical magazines are employed.

I do not, therefore, claim broadly an inclined magazine.

It will be seen, from the above description and ac-

companying drawings, that I have the discharge-opening *g'*, through the back of the fire-chamber wall, and, consequently, I do not have a body of dead coal lying upon the grate during the operation of the stove.

If desirable, the opening *g'* may be partly or wholly surrounded by an air-conduit, which should be perforated, for allowing jets of air to mix with the products of combustion rising from the fuel, and thereby increase combustion.

Having described my invention,

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

1. The double-inclined fuel-magazine *G*, applied to a fire-place heater, substantially as described.

2. The discharge-opening *g'*, entering the fire-chamber *C*, through the wall enclosing this chamber, in combination with an inclined fuel-magazine, substantially as described.

3. The dust-valve *h*, applied to the wall which encloses the ash-pit *a*, substantially as described.

4. The vertical passage *P*, formed as described, in combination with air-inlets and outlets *o*, substantially as described.

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Witnesses:

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