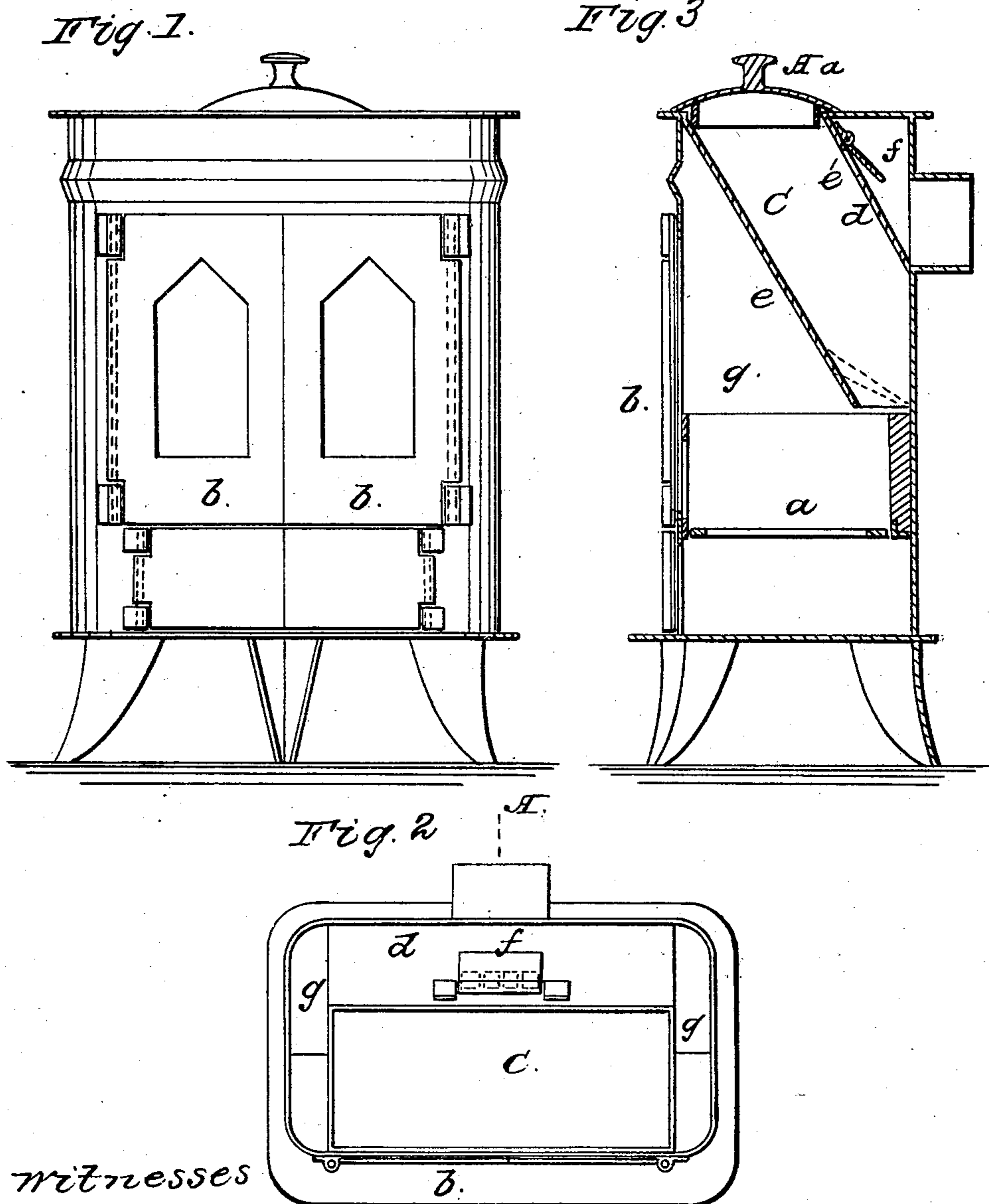


W. SANFORD.  
Magazine Stove.

No. 85,614.

Patented Jan. 5, 1869.



witnesses  
Sam L. Utter  
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Inventor  
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# United States Patent Office.

WATSON SANFORD, OF BROOKLYN, NEW YORK.

Letters Patent No. 85,614, dated January 5, 1869.

## IMPROVEMENT IN FIRE-PLACE HEATERS.

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, WATSON SANFORD, of the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Franklin Grates; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the figures and letters marked thereon.

Of these drawings—

Figure 1 is a front elevation;

Figure 2 is a plan view, with top removed; and

Figure 3 is a cross vertical section, taken at the line A a of fig. 2.

The principal object of my improvements is to provide a Franklin-grate stove with a chute for supplying the grate proper with coal as it is required by the consumption of that already contained in such grate; also, by providing said chute with a valve or port, for permitting the escape of gases which are generated in the burning of fuel, and that are apt, without such provision, to rise in the chute and escape into the room imperceptibly, or in a body, when the cover of the chute is removed for introducing an additional supply of fuel; also, by combining, with said chute, side flues or passages.

I will proceed to describe the construction of my improvements, by reference to the drawings, in which the same letters indicate corresponding parts in the several figures.

*a* is the Franklin grate, into which coal has been introduced heretofore through the opening in front of the grate, made close, if required, by the doors *b b*, such doors being solid, or furnished with mica lights.

*c* is a chute, leading from the forward part of the top of the Franklin, in an oblique direction, toward the back.

The back end *d* of this chute meets the back part of the stove at the lower part of the smoke-flue, or a little below it, and the front end *e*, running parallel, projects in front.

The lower ends of the three projecting sides of the chute terminate in the same horizontal plane, or they can be shaped or sloped upward, as seen by either of the red lines on fig. 3, in order to leave an opening best suited to the delivery of the size of coal required to be used, and its diffusion upon the grate proper.

In the back end of this chute, in a line with, or a short distance above the smoke-flue, I place a valve, *e*, consisting of an opening or port, with a cover, *f*, hinged above it, on the outside. These means enable the gases, that would otherwise rise and become fixed in the chute, or coal-reservoir, to pass freely off into the smoke-flue.

Upon each side of the chute are left spaces, *g g*, which form flues, for the passage, between and up and around the sides and back of the chute and inner stove-surface, of the products of combustion. This gives an increased supply of caloric to the apartment wherein the Franklin is situated, when, with the previous construction, it was less, on account of the products of combustion being there passed off directly at the back of the grate proper into the smoke-flue.

It will be perceived that the introduction of this chute also forms a reflector of heat. Franklin stoves have been heretofore deficient in this respect.

### Claims.

1. The combination, with the grate proper of a Franklin stove, of a chute, such chute containing a valve, substantially as described.
2. The combination, with such grate and chute, of side flues, substantially as described.
3. The combination, with such grate and chute, constructed with a valve, substantially as described, of side flues.

WATSON SANFORD.

Witnesses:

EDWARD LYON, Jr.,  
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