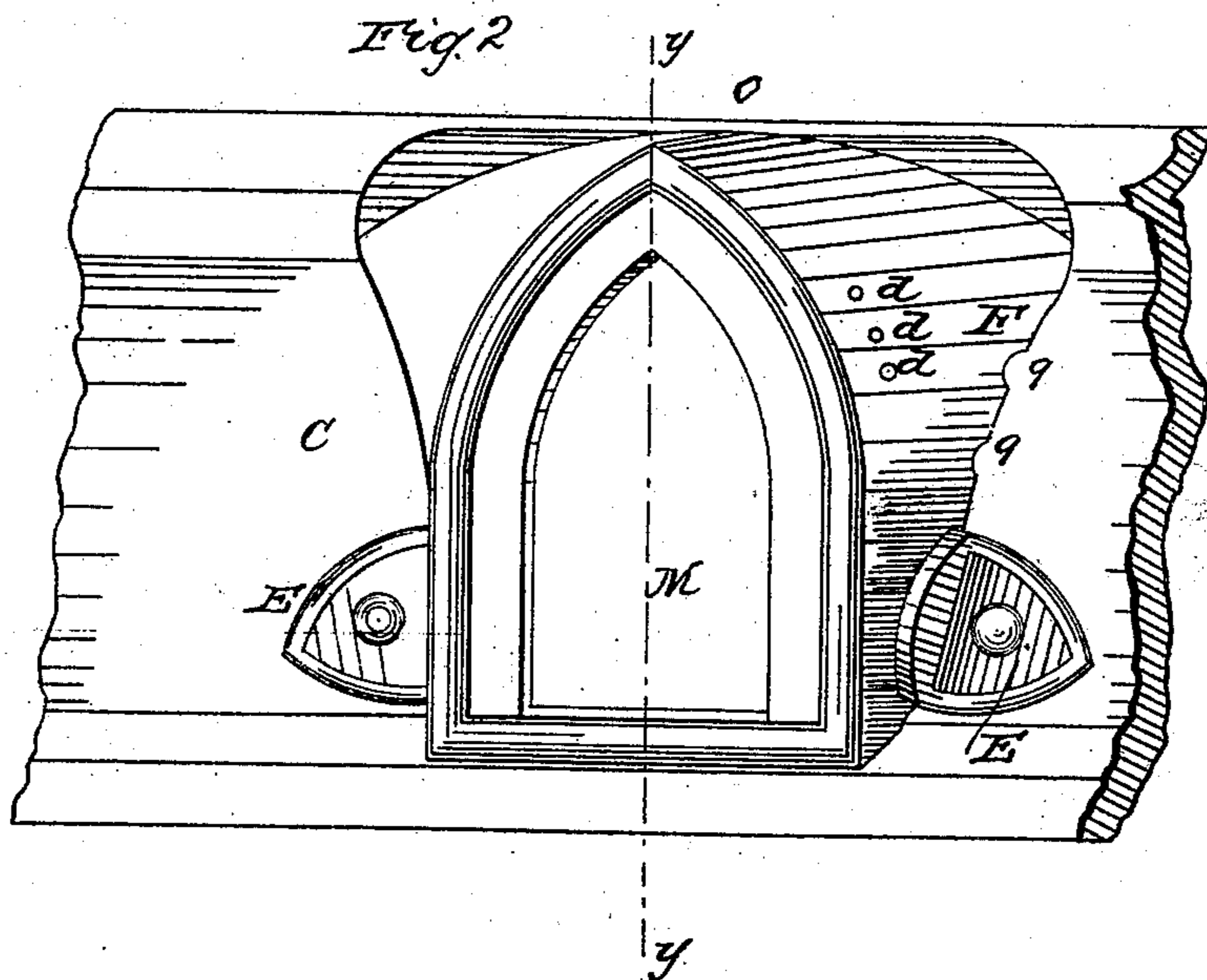
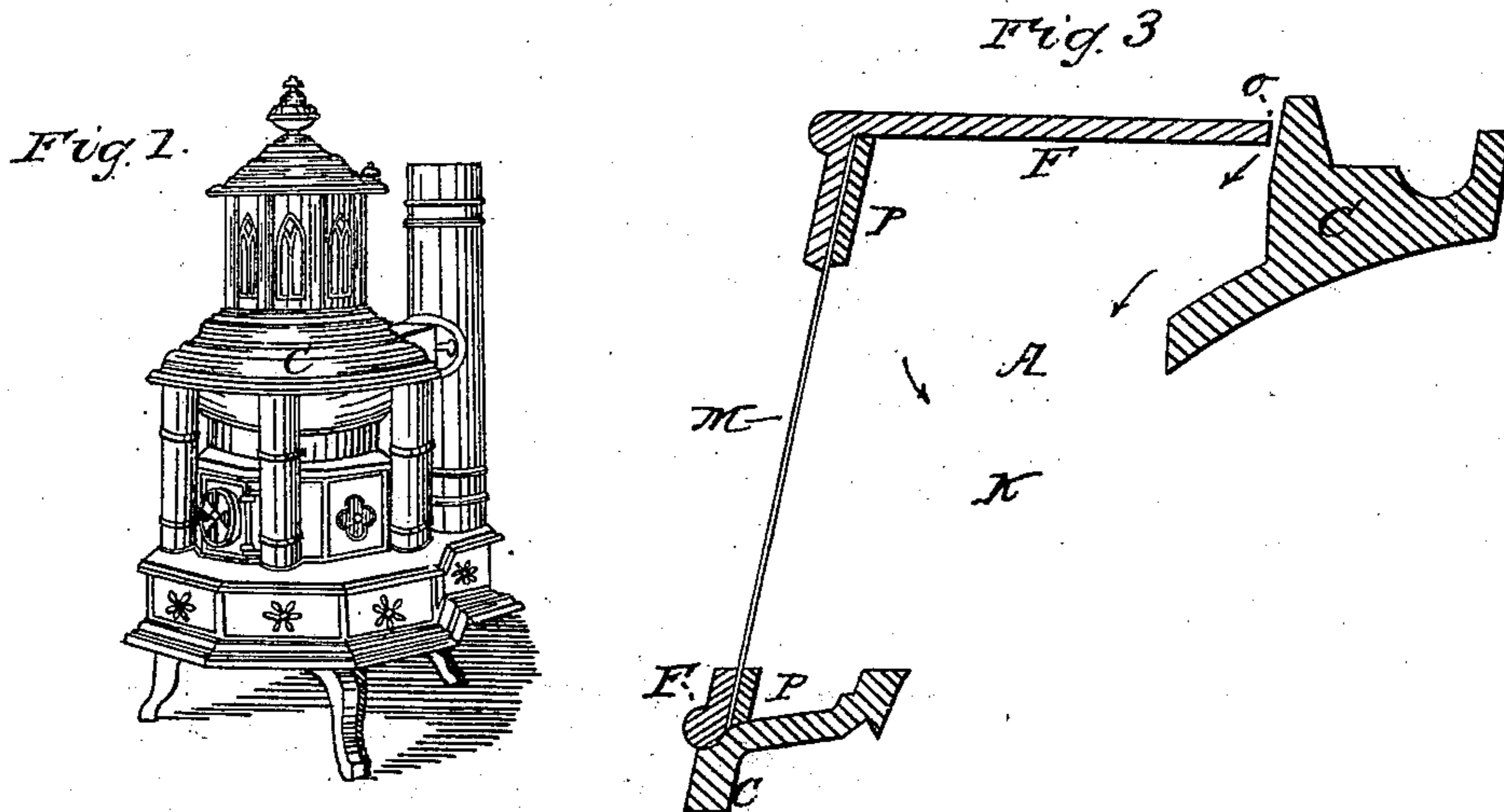


G. G. HUNT.  
Stove Illuminator.

No. 104,158.

Patented June 14, 1870.



Witnesses  
C. F. Hunt  
R. Cross.

Inventor  
G. G. Hunt

# UNITED STATES PATENT OFFICE.

GEORGE G. HUNT, OF BRISTOL, ILLINOIS.

## STOVE-ILLUMINATOR.

Specification forming part of Letters Patent No. 104,158, dated June 14, 1870.

*To all whom it may concern:*

Be it known that I, GEORGE G. HUNT, of the town of Bristol, in the county of Kendall and State of Illinois, have invented a new and Improved Mode of Illuminating Stoves; and I do hereby declare that the following is a full and exact description of the same.

The nature of my invention consists in making a peculiarly-constructed window-frame, in addition to which are apertures for a current of air into said frame, and also in having said frame of a considerably larger size than the openings in the stove which said frames are designed to cover, and also in having said frame or frames extend laterally at quite a distance from the walls of the combustion-chamber, thus holding or partially confining a quantity of air, which, entering the apertures in the combustion-chamber, prevents the smoke from the combustion-chamber escaping through said apertures into the window-frames, and thus smoking the mica.

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

In the accompanying diagrams, forming part of this specification, Figure 1 represents a perspective view of a stove. Upon the wall of the combustion-chamber C this invention may be used. Fig. 2 is a perspective view, on an enlarged scale, of a portion of the wall C, Fig. 1, with the window-frame and window attached. Fig. 3 is a vertical section of said portion and window-frame and window, taken in the dotted line *y y*, Fig. 2, and radial with the center of the stove.

Similar letters of reference in all the figures indicate like parts.

I make a stove of the form represented in Fig. 1, (or any other shape required,) and in the walls of the combustion-chamber or flame-chamber C I make one or more apertures, K, Fig. 3; and over each or all of said openings I place a frame, F, Fig. 2, having the outer wall thereof pierced, for the admission of mica, M, for windows, said pierced openings being in the same radial line with the apertures in chamber C.

The said window-frames inclose within and between them and chamber C a considerable space, A, Fig. 3, said space being supplied with air by openings, *g g*, Fig. 2, or apertures,

which may be made at any point, as at *d d d*, in the walls of said frames F, or perforations in the mica itself, or any equivalent therefor.

Upon the inner side of the mica there is placed a thin plate of metal, P P, Fig. 3, also pierced with openings, corresponding with the apertures in the said window-frames F, for the admission of the mica.

The said thin plate P P may be riveted to the window-frame, or fastened by other simple means, and serves to keep the mica M in proper position.

Upon the walls of the combustion-chamber C is a series of ears, E E, Fig. 2, which may be either fastened by rivets, as shown in the drawing, or by screws, or may be made of one piece, and forming a part of the combustion-chamber itself.

The outer extremities of the ears E E, or parts farthest from the surface of the combustion-chamber, are a little closer together than the corresponding parts at the surface of the combustion-chamber, thus forming what is known as a "dovetail" recess, into which the frame F, by being made of a corresponding shape, fits, thus being readily removed, if desired.

The operation of the above-described improvement is as follows:

When a fire is kindled in the stove, and the column of air becomes rarefied in the pipe, it rises rapidly in the pipe or chimney, thus creating a tendency toward a vacuum beneath, and forming what is commonly known as a "draft" in the stove. By this means a current of air enters the openings *g g*, or perforations *d d d*, Fig. 2, or their equivalents, to replace the supply in the space A, Fig. 3, a portion of which is constantly passing through the apertures K, indicated by the arrows in space A, Fig. 3, into the combustion-chamber of the stove. This constant current of air passing through the apertures K, in combination with the partially-confined air in the space A, effectually prevents the smoke from passing into said space A, and thus smoking the mica.

Having thus described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The described window-frames, inclosing

an air-space between and in said frames and the walls of a combustion-chamber, when applied to a stove for the purposes and in the manner set forth and described.

2. Fastening the said frames on the walls of the combustion-chamber of a stove by means of the dovetail, as described.

3. The combination of the frame F, the space

A, the combustion-chamber C, and apertures K, and mica M, when constructed in the manner described.

GEORGE G. HUNT.

Witnesses:

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