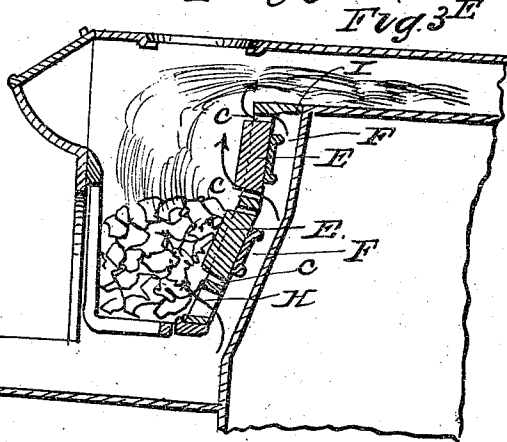
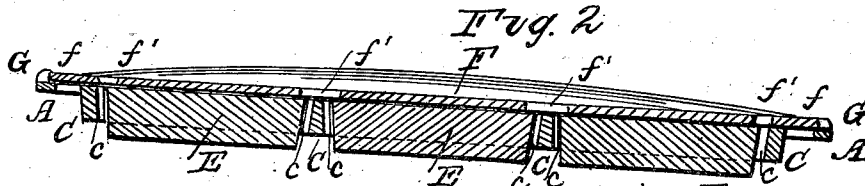
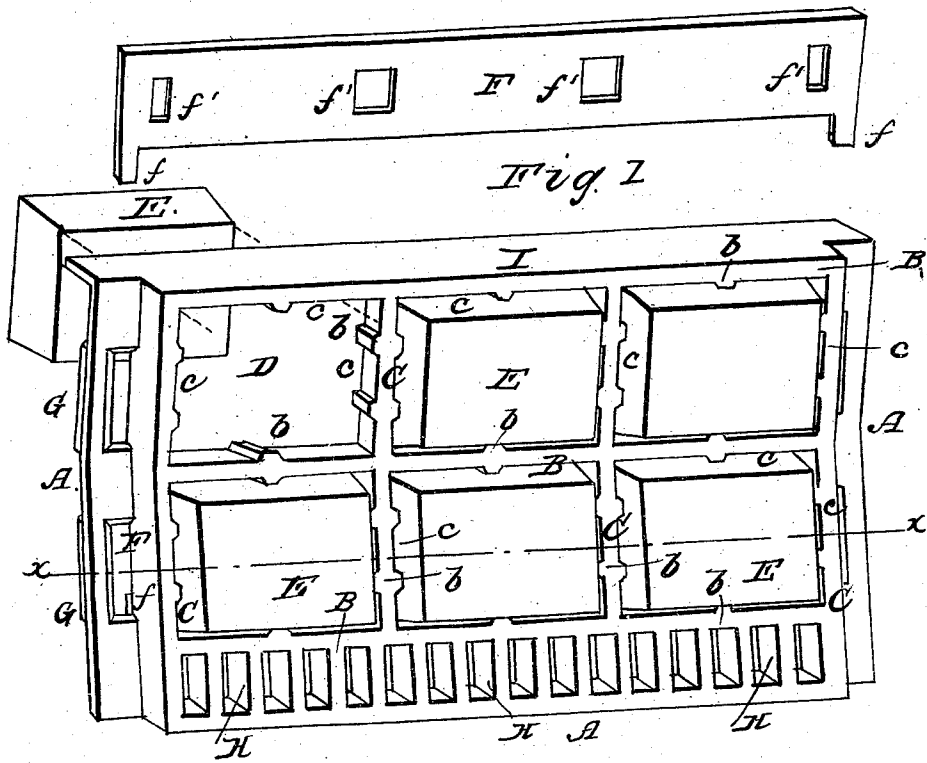


C. TRUESDALE.  
Fireplace Lining.

No. 91,689.

Patented June 22, 1869.



Witnesses

Geo. H. Layman  
Geo. Knight

Inventor

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By  
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# United States Patent Office.

CHARLES TRUESDALE, OF CINCINNATI, OHIO, ASSIGNOR, TO WILLIAM RESOR AND COMPANY, OF SAME PLACE; ASSIGNORS TO CHARLES TRUESDALE AND WILLIAM RESOR AND COMPANY.

Letters Patent No. 91,689, dated June 22, 1869.

## LINING FOR FIRE-PLACES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, CHARLES TRUESDALE, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Lining for Fire-Places, of which the following is a full, clear, and exact description, reference being had to the following drawings, making part of this specification.

My invention consists in forming the back or other lining-wall of a fire-place of a congeries of blocks or panels of soapstone or other refractory mineral, secured in a suitable metallic frame, of such construction as to afford air-inlets between said blocks and frame, which, while preserving the said frame from destructive heat, are also effective for combustion and prevention of smoke.

Figure 1 is a perspective view of a fire-plate lining embodying my invention, a binding-plate and one of the blocks being removed.

Figure 2 is a horizontal section of said lining at the line *x-x*.

Figure 3 is a section, showing my lining as applied to a cook-stove.

In place of the customary plain or corrugated lining of iron or other substance, I provide an open frame, A, of cast-iron, intersected by cross-bars B C, so as to present a series of openings, D, to receive blocks or panels, E, of soapstone, fire-tile, or other refractory mineral.

The said bars and frame flare rearward, to receive the correspondingly-flaring or dovetailed edges of the panels, and are also armed with protuberances, *b*, so as to leave passages, *c*, for the entrance of numerous minute currents of air, which, having absorbed heat from and cooled the bars A B C, become effective to promote combustion, and to prevent the formation of smoke.

The panels E are preferably made so as to project somewhat forward of the fire-face of the frames, to protect the latter from direct contact with the incandescent mass, and so as to afford channels *d* for the entering air.

The air being permitted to pass in front of the panels, thereby prevents the formation of clinkers upon them.

The panels being inserted, are held securely to their places by binders F, whose dovetailed extremities, *f*, enter and wedge tightly within dovetailed lips or lugs

G, on the rear side of the frame. The binders may have orifices *f'*, to facilitate the passage of air.

The said frame may have, at its lower edge, a grating, H, for the admittance of draught to the rear bottom of the fire-place.

The top of the frame may have the usual flange I, for resting against the oven-plates.

Small panels, as represented, can be furnished at a nominal cost, and are less liable to be cracked or broken than if made of one large block, and should one receive an injury, it can be easily and cheaply replaced.

The binders are preferably stiffened with ribs or beads, as shown in figs. 2 and 3.

Although here shown adapted for the fire-back lining of a cook-stove, the principle may manifestly be extended to the ends or other walls of the fire-place, or to heating-stoves, or open fire-places.

I claim herein as new, and of my invention,

1. Providing the fire-chambers of grates, stoves, &c., with a lining consisting of a metallic frame, which is adapted to receive removable blocks of soapstone, fire-clay, or other refractory substances.

2. Providing the fire-chambers of grates, stoves, &c., with a lining consisting of a metallic frame, which is adapted to receive removable blocks of soapstone, fire-clay, or other refractory substances, said frame or blocks, or both, being either perforated, slotted, or otherwise arranged, so as to admit air into the fire-chamber proper, substantially as herein described and set forth.

3. The metallic frame A B C, having openings D, and protuberances *b*, when used in connection with the removable blocks E, for the purpose of admitting air, as above explained.

4. The combination, substantially as described, of the metallic frame A B C, rearwardly-flaring openings D, protuberances *b*, tapering blocks E, and one or more binders F, or its equivalents, for the object stated.

5. Projecting the blocks E in front of the exposed face of the metallic frame A B C, as herein set forth.

In testimony of which invention, I hereunto set my hand.

CHARLES TRUESDALE.

Witnesses:

GEO. H. KNIGHT,  
JAMES H. LAYMAN.