

W. C. DAVIS.
Oven Plate for Stove.

No. 109,187.

Patented Nov. 15, 1870.

Fig. 1.

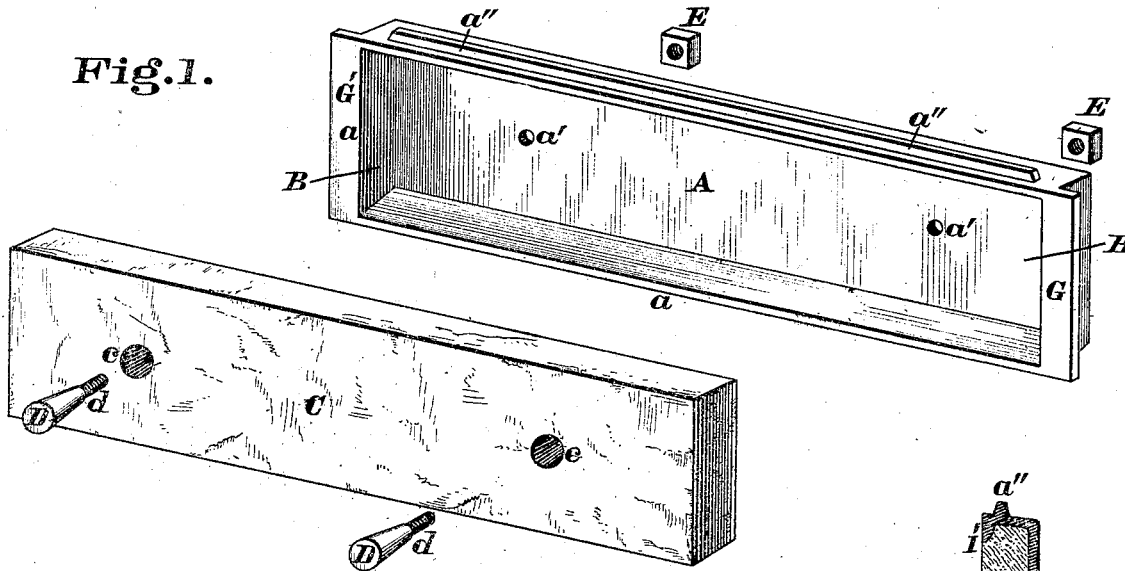


Fig. 5.

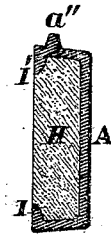


Fig. 2.

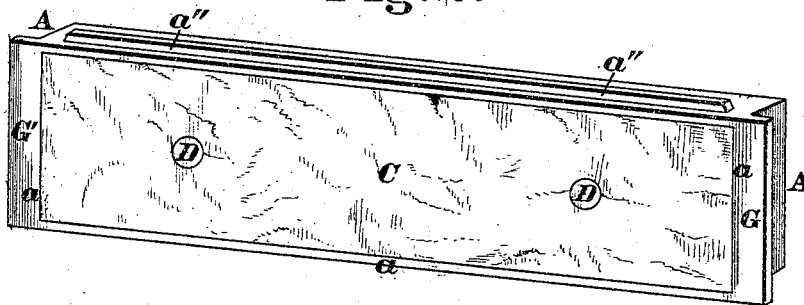


Fig. 3.

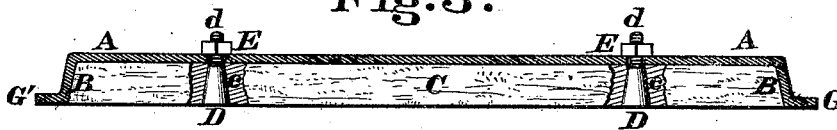
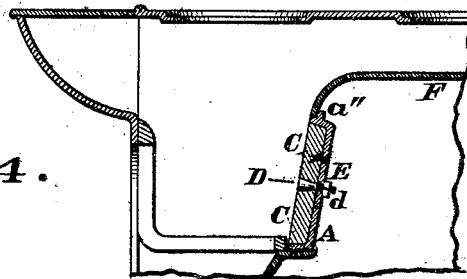


Fig. 4.



W. C. Davis
INVENTOR.
By Knight Bros.
Attys.

Attest.
Jas. H. Layman.
William S. Bauer.

United States Patent Office.

WILLIAM C. DAVIS, OF CINCINNATI, OHIO.

Letters Patent No. 109,187, dated November 15, 1870.

IMPROVEMENT IN OVEN-PLATES FOR COOKING-STOVES.

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

I, WILLIAM C. DAVIS, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Oven-Plate for Cook-Stoves, of which the following is a specification.

Nature and Objects of the Invention.

This invention relates to that member of a cook-stove commonly known as the upper front-oven plate, or, in other words, the plate that is interposed between the upper front part of the oven and the fire-chamber; and

My improvement consists in the construction of a recessed plate, having a rib on its upper surface for the retention of the oven-plate and flanges on its ends which fit into grooves in the side plates of the stove, the recess in the plate being filled with a refractory material, held in position by conical bolts.

General Description with reference to the Drawing.

Figure 1 is a side spective view, showing the various parts of my oven-plate in a detached condition.

Figure 2 is a perspective view of the complete plate ready for insertion in the stove.

Figure 3 is a horizontal section of the same.

Figure 4 is a vertical section through a portion of the front part of a cook-stove, with the oven-plate in position; and

Figure 5 is a vertical section showing a modification of my invention.

The oven-plate proper consists of a metallic frame, A, which is open in front, as at *a*, and closed at the back, top, and bottom, and both ends, so as to form a pit or recess, B, for the reception of a tile or slab, C, that is composed of fire-clay, soap-stone, or any other suitable refractory material.

The tile C, if that is used, is provided with one or more rearwardly-converging apertures, *c*, for the reception of conical bolts, D, whose screw-threaded shanks *d*, after passing through apertures *a'*, in the back of the oven-plate, have engaged with them the nuts E, by which the two members A C are united; but if fire-clay is used, the recess may be filled without bolts being employed.

Projecting upwardly from the frame A is a longitudinal rib, *a''*, against which the top-plate F of the oven rests, as shown in fig. 4.

The ends of frame A are provided with flanges G G', which fit between lugs or engage in grooves in the side plates of the stove, and thereby retain said frame in its proper place, and prevent ashes getting into the oven.

The slab C or filling H being composed of a material that will resist the action of the fire for a great

length of time, acts as a protection to the plate A, and thereby prevents its burning out and becoming cracked and warped, and protects the oven-plate, instead of a fire-plate, as is now generally used for that purpose.

The tile being secured directly to the plate, without any intervening space between them, the oven is sufficiently guarded from intense heat at that part, and with a considerable saving of space and material, allowing a larger oven in a stove of given capacity than where a space is left between the members A C, or the tile is secured to an independent frame in front of said oven-plate.

The conical shape of bolts D, when tile is used, insure the retention of the tile within its frame, no matter how much the exposed surface of the former may be worn away by the action of the fire.

If fire-clay or other plastic refractory material, H, is used, the bolts will be found unnecessary to its retention. Spurs, projections, or flanges on the inside surface of the plate, as shown at I I, in fig. 5, will suffice to retain the protecting material.

In the drawing, the oven-plate is shown as having only one tile secured within it, but it is evident two or more may be employed, as circumstances may dictate.

The plate A *a* B being entire, there is no danger of exposing the oven to the direct rays and influx of ashes from the fire, even should the tile or filling from some accident become broken or lost.

It will be seen that this arrangement dispenses entirely with any special guard-plate, (fire-back,) such as is commonly interposed between the front oven-plate and the fire-chamber, and thus saves both expense and room of such guard-plate.

Claim.

I claim as my invention—

The recessed metallic frame A, provided with a longitudinal rib, *a''*, for the retention of the oven-plate and flanges G G', fitting in grooves in the side plates of the stove, the recess in said metallic frame being filled with a refractory material, C, held in position by conical bolts D D, all arranged and constructed as set forth.

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

WILLIAM C. DAVIS.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.