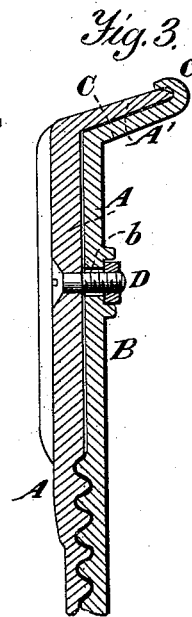
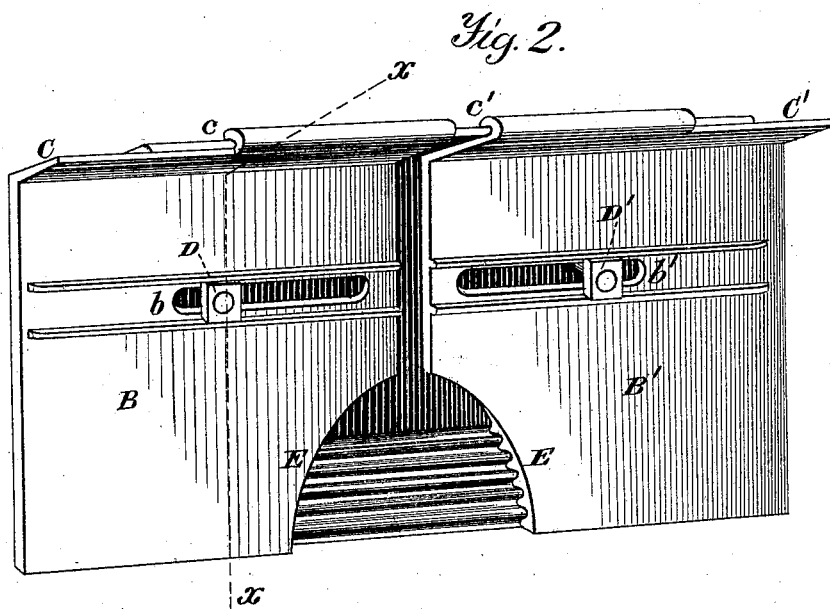
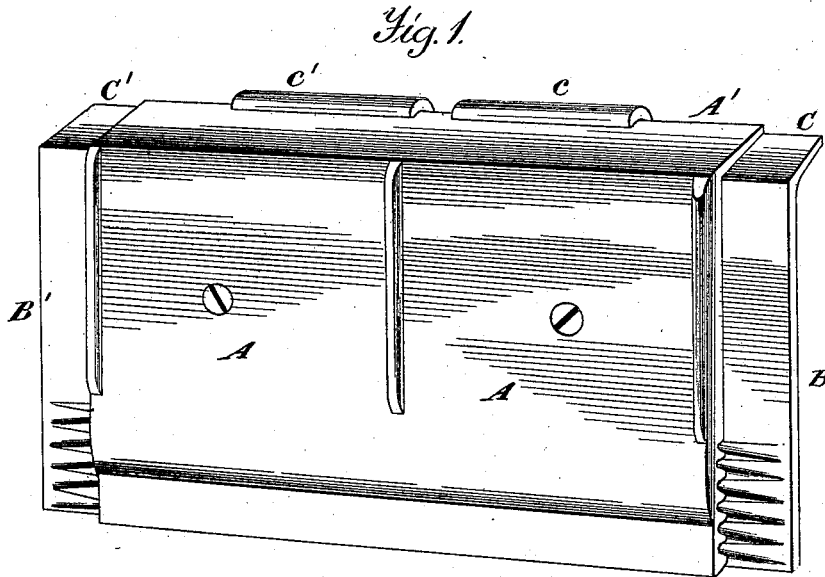


C. W. WARNER.
Stove-Back Lining.

No. 210,584.

Patented Dec. 3, 1878.



Witnesses.
A. Ruppert.
A. Orth

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UNITED STATES PATENT OFFICE.

CHARLES W. WARNER, OF LA FAYETTE, INDIANA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JACOB F. MARKS, OF SAME PLACE.

IMPROVEMENT IN STOVE-BACK LININGS.

Specification forming part of Letters Patent No. **210,581**, dated December 3, 1878; application filed November 25, 1878.

To all whom it may concern:

Be it known that I, CHARLES W. WARNER, of La Fayette, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Stove-Back Linings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of the front of my improved stove-back lining. Fig. 2 is a perspective view of the rear of the same. Fig. 3 is a vertical section at the line *x x* of Fig. 2.

My invention relates to stove-back linings; and it consists in the manner of attaching the adjustable pieces to the main piece of the lining, and the form of the adjustable pieces constructed so as to preserve the main piece.

A is the main piece of my stove-back lining, with the front, as shown in Fig. 1, exposed to the fire. A' is a flange of this main piece A, which extends rearward, and serves as a means of hanging or attaching the adjustable pieces B B' of the lining thereto. B B' are adjustable pieces, constructed with flanges C and C', upon the outer edges of which are grooves *c* and *c'*.

These plates A and B and B' are corrugated, and the flanges A' and C and C', and the grooves *c* and *c'* are so constructed and arranged that the grooves *c* and *c'* will engage the edge of the flange A', and the plates B and B' are hung or attached in close contact with the plate A.

In constructing and operating stove-back linings formed with a tongue and groove, to serve as a central attachment of the plates B B' to the plate A, the expansion and contraction, being more rapid in the parts made lighter by the formation of the groove or dovetail, causes the main plate to crack along the groove and become worthless. This I avoid

by dispensing with the tongue and groove, and attaching the adjustable plates to the main plate by means of the grooves *c* and *c'*, and the flange A', slots *b* and *b'*, and bolts D and D'.

In constructing and applying stove-back linings I have also discovered that when the plates B and B' are full, and their inner edges parallel, they serve to retain the heat, or by other means their expansion and contraction cause excessive warping of the plate A in that part of it left in single plate by the extension of the plates B and B'. This warping in a very short time causes the main plate A to break and become worthless. I have discovered that by cutting away a part of the adjustable plates B B', as shown in Fig. 2, at E and E' the plate A is not so affected, and does not warp and break.

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

1. The combination of the corrugated plate A, having parallel faces, and being of uniform thickness throughout its extent, and having a flange, A', on its upper edge, and one or more adjustable plates, B and B', constructed substantially as set forth, attached to the plate A, having a grooved flange, embracing the flange A', and corrugated to correspond with the plate A, as and for the purposes substantially as described.

2. An adjustable stove-back lining combining in its construction a flanged back plate, A, and adjustable extension-plates B B', swung therefrom or attached thereto by slot and bolt, and cut away, as at E and E', on the lower opposite corners to prevent cracking of the plate A, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES W. WARNER.

Witnesses:

D. P. HOLLOWAY,
A. ORTH BEHM.