S. L. POLLOCK.

Fire-Proof Shutters.

No. 205,297. Patented June 25, 1878.

Fig. 1.

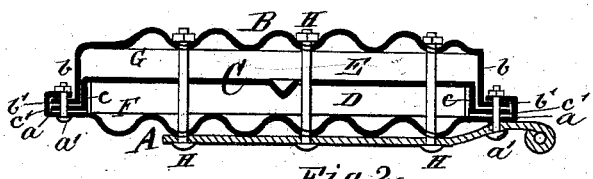


Fig. 3.

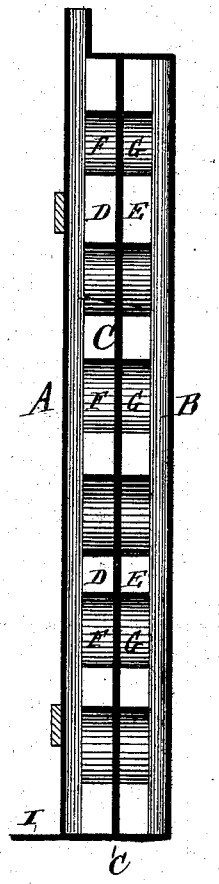
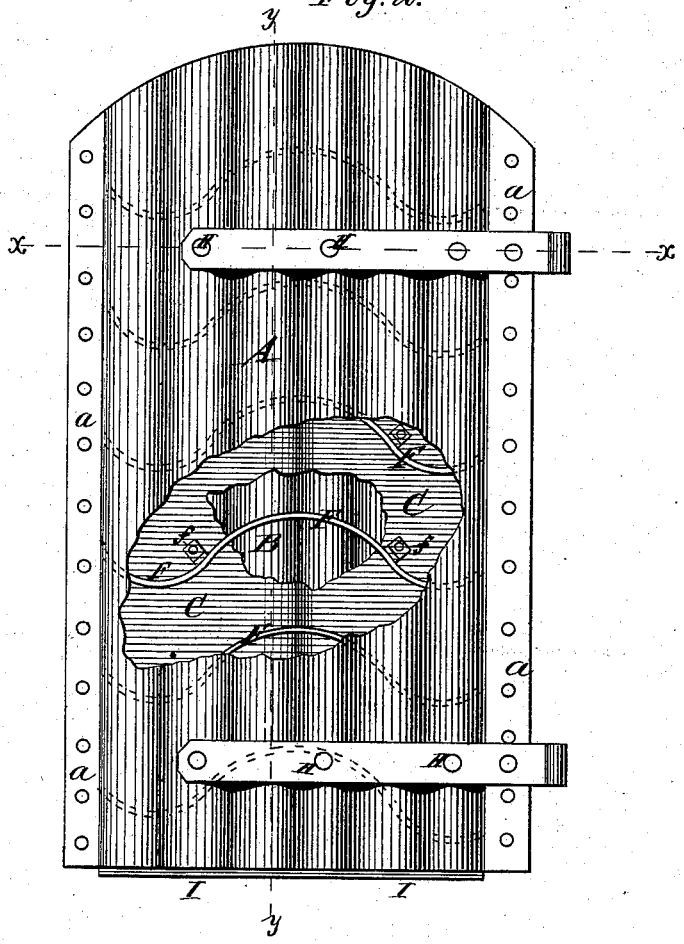


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SIMON L. POLLOCK, OF ST. PAUL, MINNESOTA.

IMPROVEMENT IN FIRE-PROOF SHUTTERS.

Specification forming part of Letters Patent No. **205,297**, dated June 25, 1878; application filed May 3, 1878.

To all whom it may concern:

Be it known that I, SIMON L. POLLOCK, of St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and Improved Fire-Proof Shutter, of which the following is a specification:

The object of my invention is to improve the construction of plain and corrugated iron shutters for doors and windows, in such a manner as to adapt them for utilizing the non-conducting qualities of inclosed columns of air to the protection of property against fire.

The invention consists in a fire-proof shutter formed of the combination of an interior and an exterior sheet-iron wall, separated from a central partition-wall by metallic cross-strips, and joined at the edges by flanges to form closed chambers for inclosing air without admitting its circulation, as will be hereinafter described.

In the accompanying drawing, Figure 1 represents a horizontal or cross section, on the line *x x* of Fig. 2, of my improved fire-proof shutter. Fig. 2 is an exterior side elevation of the same, parts being broken out. Fig. 3 is a vertical section taken on the line *y y* of Fig. 2.

Similar letters of reference indicate corresponding parts.

A is the outer and B the inner side of a window-shutter, both made of corrugated sheet-iron, the interior plate B having its edges bent first at right angles to its main surface, to form a deep flange, *b*, and then again the edge of the flange *b* bent at right angles to the flange and parallel with the main surface, to form a flange, *b'*, for bolting the interior plate B to the flange *a* of the exterior plate A.

C is a plain iron plate interposed between the plates A and B as a central partition, dividing the space between them in about two equal-sized chambers, D and E, and having an edge flange, *c*, of about half the depth of and parallel with the flange *b*, and a flange, *c'*, parallel with and interposed between the flanges *b'* and *a*, the latter being bent over and around the edges of the flanges *c' b'*, and the same rivets or bolts *a'* fastening them all together.

The partition wall or plate C has a central crease made in it parallel with the corrugations of the other plates, as shown in the drawing, to allow for expansion by heat.

The central plate C is held separated from the plates A and B by series of curved or straight iron strips F G, which are provided with lugs *f*, and are fastened to the plate C by rivets through the said lugs.

The hinge-bolts H and several other bolts are made long enough to go through the two chambers D E from the outer to the inner side of the shutter, to strengthen the latter and clamp the sheets A B C tightly against the edges of the strips F G, to keep the chamber-walls at the proper distance apart, and prevent their collapsing by accidental extra strain.

The chambers D E are closed above and below by iron plates, the lower plate having an extension, I, in front of the exterior plate A, which extension or plate I may be bent down, if desired, to close tightly against the window-sill and prevent flames and water from entering under the shutter.

I do not limit myself to the corrugated iron plates and particular form of the shutter shown, as the plates may be plain and the form varied without departing from my invention.

I am aware that it is not new to make a corrugated iron door or shutter of two or more sheets of corrugated metal, the corrugations at right angles to each other, and inclosed at their edges by channel-iron bars, while the parts are all bolted or riveted together.

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

A fire-proof shutter consisting of the walls A B C, bolted together, the cross-strips F G, and the flanges *a b b' c c'*, as shown and described.

SIMON LOCKE POLLOCK.

Witnesses:
WILLIAM Y. HORNE,
D. L. KINGSBURY.