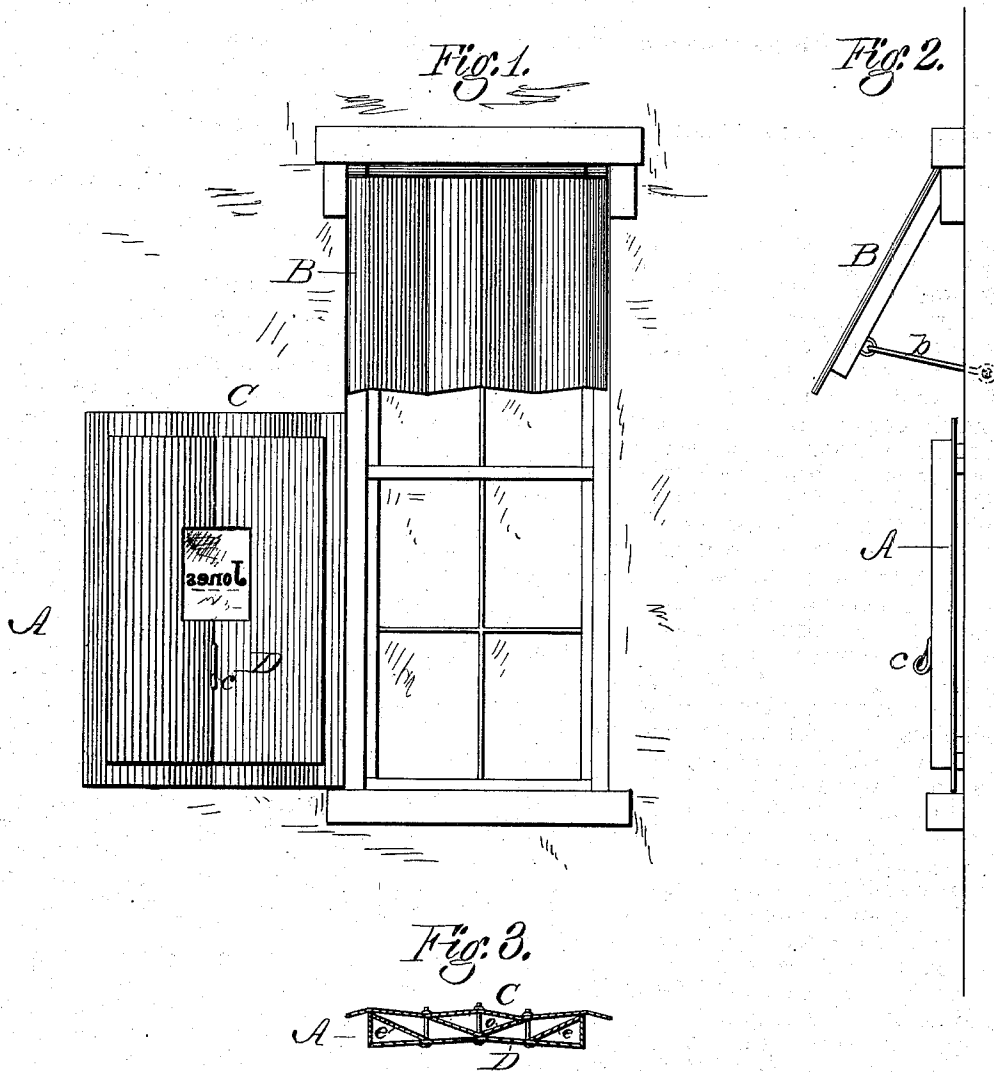


W. W. PERKINS.
Fire-Proof Shutters.

No. 157,479.

Patented Dec. 8, 1874.



Witnesses:
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W. B. Chaffin

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UNITED STATES PATENT OFFICE.

WILLIAM W. PERKINS, OF REDWOOD FALLS, MINNESOTA.

IMPROVEMENT IN FIRE-PROOF SHUTTERS.

Specification forming part of Letters Patent No. **157,479**, dated December 8, 1874; application filed October 5, 1874.

To all whom it may concern:

Be it known that I, WILLIAM W. PERKINS, of Redwood Falls, in the county of Redwood and State of Minnesota, have invented certain Improvements in Fire-Proof Shutters, of which the following is a specification:

My invention consists of a fire-proof shutter constructed of two metal plates with diagonal plates inserted between them in such a manner as to brace and strengthen the shutter, and also form a series of air spaces or tubes within it. It also consists in providing the shutter with a hook for attaching a rope or other device to be used as a fire-escape, all as hereinafter set forth.

Figure 1 is a front view, and Fig. 2 a side view, of the shutter as applied to a building. Fig. 3 is an end view of the shutter.

In constructing my improved shutter I provide a plate, D, of sheet metal, and, after bending its two edges at right angles along its sides, and shaping them so as to be readily riveted to the other plate, C, as shown in Fig. 3, I provide strips *e*, which I secure to the plate D in a diagonal position, as shown, these strips *e* extending from top to bottom. To the plate C I secure in like manner another strip, *o*, which is bent so as to be secured at its edges to the plate C, and have its apex rest against the plate D when the two plates C and D are united, as shown in Fig. 3.

It will thus be seen that these strips *e* and *o* serve as braces, rendering the shutter much stiffer and stronger than when made without them, and they divide the space between the plates C and D into a series of air spaces or tubes, which are left open at both ends. I prefer, also, to bend the outer plates, so as to give to them the form, in cross-section, shown in Fig. 3, by which they are also rendered more rigid or stiff, and less likely to warp or curl when exposed to heat.

This shutter I make in two parts, the lower part A being hung to swing around in the usual manner; but the other part, B, I hinge at its upper end, so that its lower end may be swung outward, and secured by rods *b*, as shown in Fig. 2, whereby it is made to serve as an awning to keep out the sun, it being

constructed of sheets and strips, the same as the part A.

In order that, when the shutter is closed, it shall not prevent a light from being seen from within or without, as the case may be, I make an opening, as represented in Fig. 1, through the part A, and insert therein sheets of mica, so as to permit the light to shine through. In doing this there must be one or more sheets of mica secured opposite the opening in each of the plates C and D, and they should be so secured as not to leave any openings for the flames to get through. Upon these transparent sheets, if desired, the name of the owner or occupant may be painted, thus making them serve as a sign. Upon the inner side of the part A of the blind I secure a strong hook, *c*, as shown in Figs. 1 and 2, for the purpose of attaching a rope or other fire-escape thereto, to enable occupants of the building to escape when cut off from the ordinary avenues of escape.

By these several improvements I am enabled to make a very superior fire-proof shutter, and one that can also be made to serve for other purposes without in any way interfering with its use as a fire-proof shutter.

The mica window permits a watchman or persons outside to see when a fire is started within the building, as also to see the light used by burglars or others inside. So, too, it enables a person inside to see, in case of a fire in other buildings, where or in what direction it is without opening the shutters for that purpose. This, however, I do not claim.

Having thus described my invention, what I claim is—

1. A fire-proof shutter composed of the metallic sheets C D, having secured between them a series of diagonal or brace strips, substantially as described.

2. A fire-proof shutter provided with a hook or device, *c*, for attachment of a rope or fire-escape, substantially as described.

WILLIAM W. PERKINS.

Witnesses:

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