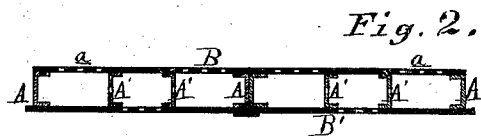
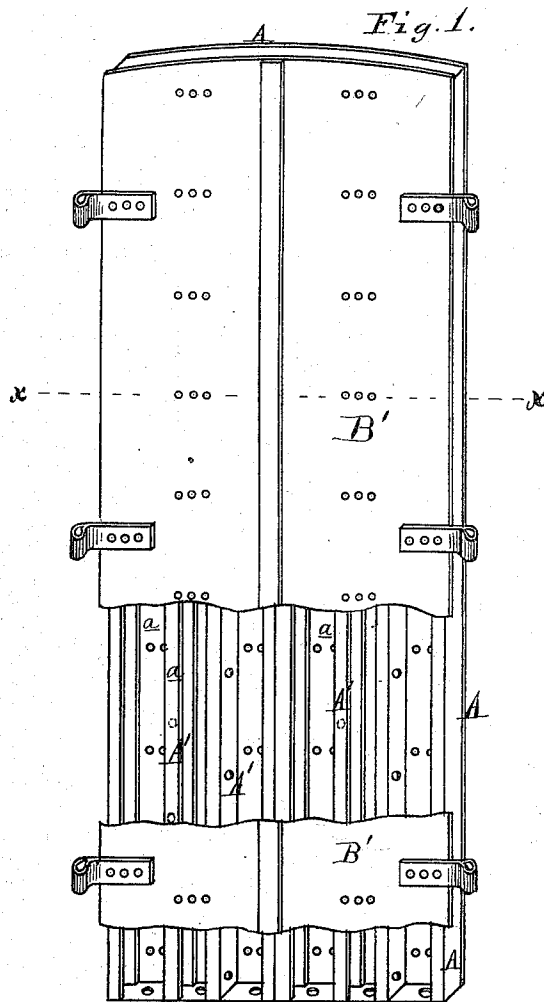


A. GOTTLIEB.
Fire-Proof Shutters.

No. 142,563.

Patented September 9, 1873.



Witnesses
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UNITED STATES PATENT OFFICE.

ABRAHAM GOTTLIEB, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN FIRE-PROOF SHUTTERS.

Specification forming part of Letters Patent No. 142,563, dated September 9, 1873; application filed July 15, 1873.

To all whom it may concern:

Be it known that I, ABRAHAM GOTTLIEB, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Ventilated Fire-Proof Doors and Shutters, of which the following is a specification:

This invention has for its object to so construct iron doors and outside shutters in a cellular form as to combine lightness and economy of cost with efficiency to resist the transmission of external heat, and to afford a ventilation for the room closed by them; and it consists in a frame of channel-iron having secured to it an outer and inner covering of sheet-iron divided into cells by vertical channel-bars, which, as well as the covering-plates, are perforated, which perforations are on varying planes, to prevent the passage of flame.

Figure 1 shows a double-winged shutter, the outer plate of each half being partially broken away to show the internal construction. Fig. 2 is a cross-section at *x x*.

In the drawing, A represents the frame of the shutter, made of channel-iron, as affording great stiffness with a minimum of weight and cost. The frame is divided by vertical channel-bars A', riveted at top and bottom. B is the inner covering of sheet-metal plates, and B' is an outer covering of the same material, both riveted to the main frame. *a* are sets of aper-

tures in the frame A, bars A', and covering-plates, no two sets being on the same horizontal plane, so as to preclude the passage of flame, while they serve not only to ventilate the building during the night and days when it is closed, but when the outer plates are heated from an adjacent conflagration a strong draft of air is established between the plates, keeping the inner one cool, and thus preventing damage to the interior of the protected building or its contents. For this purpose the bottom bars of the frames are perforated, as shown in Fig. 1, and for the purpose of allowing water to flow off which may accumulate therein.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A double-walled iron shutter divided into cells by vertical channel-bars, substantially as herein described and shown.

2. In a cellular double-walled shutter, constructed substantially as herein described, the perforations *a* in the bottom bar, the vertical channel-bars, and the covering-plates, when arranged in different horizontal planes, substantially as described.

ABRAHAM GOTTLIEB.

Witnesses:

WM. H. LOTZ,
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