

J. B. CORNELL.
Fire-Proof Shutters.

No. 141,696.

Patented August 12, 1873.

Fig. 1.

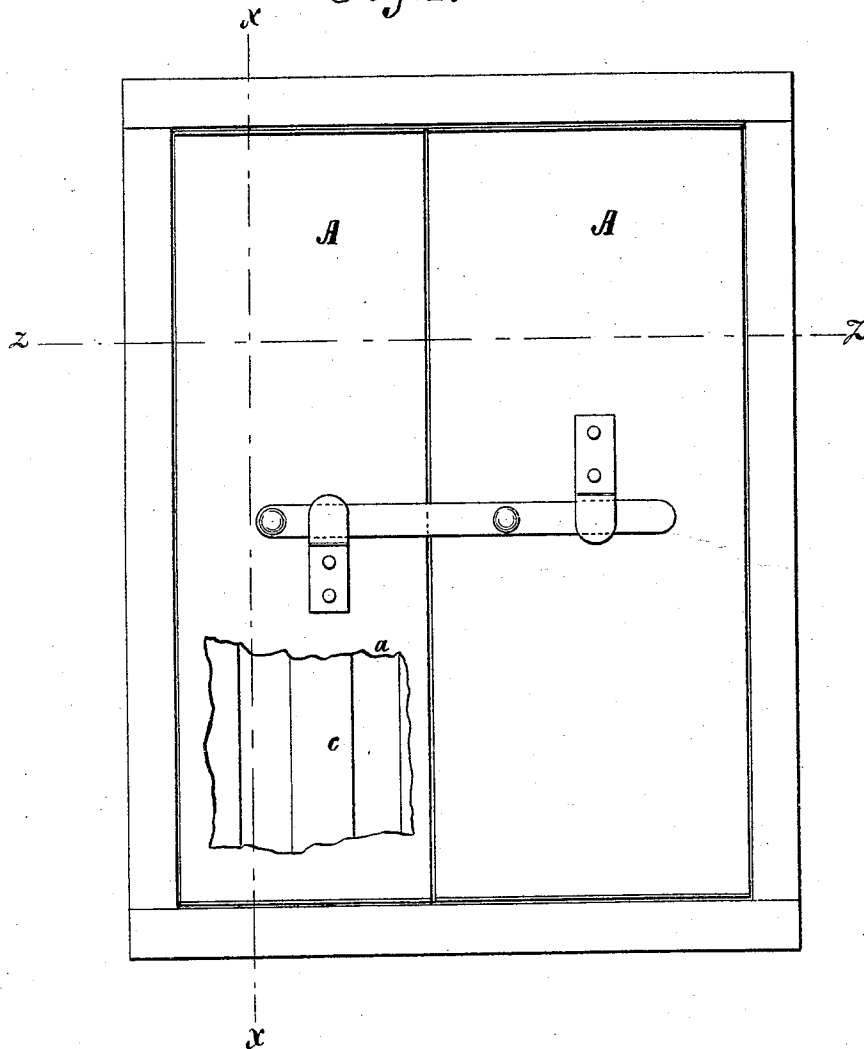


Fig. 2.

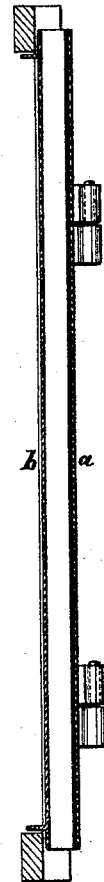
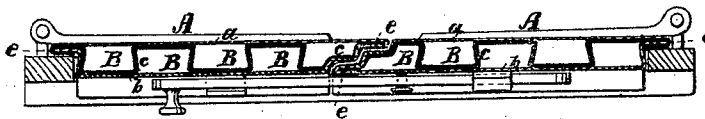


Fig. 3.



Witnesses:

A. Bennekenhoff.
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UNITED STATES PATENT OFFICE.

JOHN B. CORNELL, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-PROOF SHUTTERS.

Specification forming part of Letters Patent No. **141,696**, dated August 12, 1873; application filed July 5, 1873.

To all whom it may concern:

Be it known that I, JOHN B. CORNELL, of the city, county, and State of New York, have invented a new and useful Improvement in Fire-Proof Shutters and Doors, of which the following is a specification:

My invention consists of a door or shutter composed of three plates of metal united together side by side, the two outer sheets being plane, and the middle one being bent in zigzag or any equivalent form, so as to form channels or spaces between it and the outer sheets for the circulation of air or water to cool the door or shutter in case it is exposed to fire, and prevent the transmission of heat through the door.

Figure 1 is a side elevation of a pair of shutters constructed according to my invention, a part of one being broken out to show the interior. Fig. 2 is a sectional elevation of Fig. 1 on the line *x x*, and Fig. 3 is a horizontal section on the line *z z*.

A represents the two parts of the shutter, of which *a* represents the outside plates; *b*, the inside plates, and *c* the middle plates, the latter being bent in the zigzag form repre-

sented in Fig. 3, or any equivalent form, and arranged between the others to provide air or water chambers or grooves B, and riveted or otherwise properly secured to said plates. At the edges all three plates are arranged in compact joints of any approved form, as represented at *e*, and at the uniting joint of the two parts of the shutter, or of one part of a shutter or a door, with the jamb, one or more offsets will be formed, as with other fire-proof doors and shutters, to "break" joints, and thus oppose the passage of fire.

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

The two plane-faced plates *a b*, combined with one intermediate zigzag plate, *c*, presenting alternately to each of them a small plane surface, against which they rest, and by which they admit of being conveniently fastened together, in the manner described.

JOHN B. CORNELL.

Witnesses:

THOS. CROCKER,
EDMUND A. SMITH.