

A. B. MULLETT & F. SCHUMANN.

Fire-Proof Shutters and Doors.

No. 149,055.

Patented March 31, 1874.

FIG. 1.

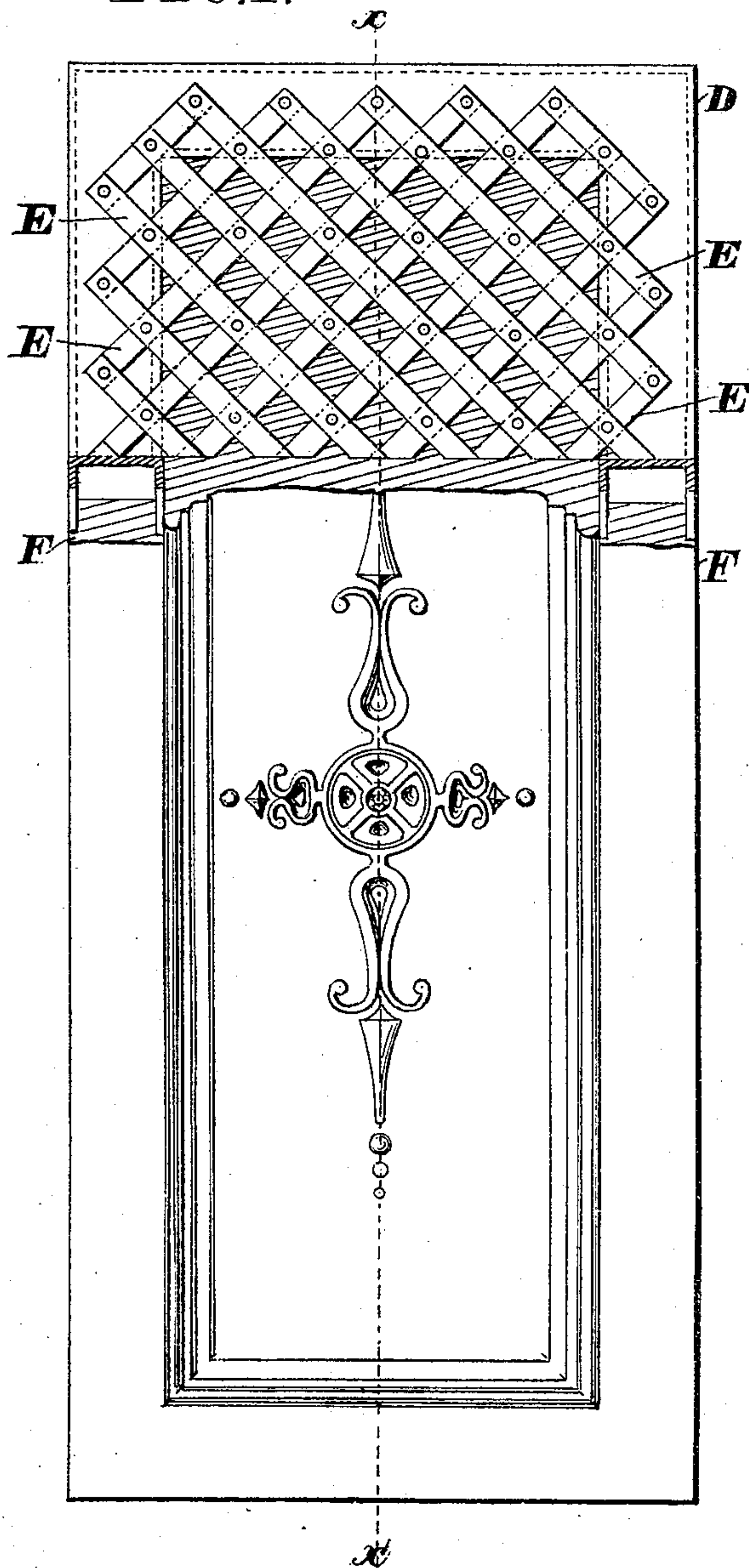
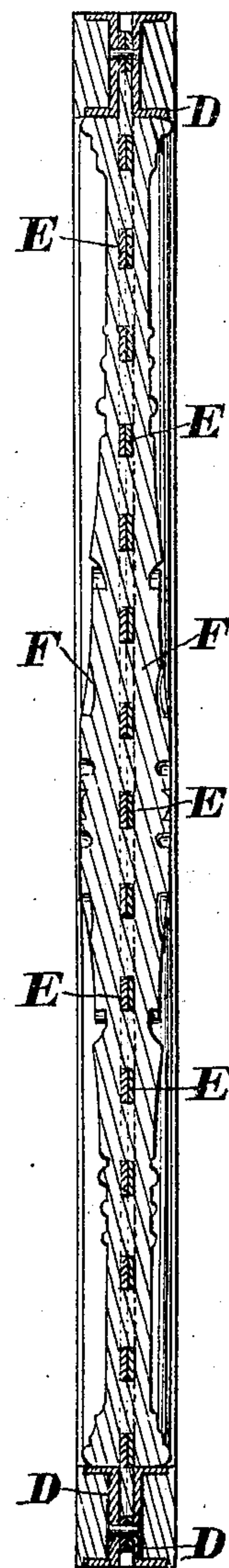


FIG. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN FIRE-PROOF SHUTTERS AND DOORS.

Specification forming part of Letters Patent No. **149,055**, dated March 31, 1874; application filed
February 25, 1873.

To all whom it may concern:

Be it known that we, ALFRED B. MULLETT and FRANZ SCHUMANN, of Washington, in the District of Columbia, have invented an Improvement in Fire-Proof Shutters, Doors, and other Structures, of which the following is a specification:

This invention relates to constructing or covering shutters, doors, or analogous structures with a fire-resisting material applied in a plastic state; and the present improvements consist in methods of applying such fire-resisting material to both sides of the frame-work of the structure, through which frame-work the plastic fire-proof material may be connected, so as to form a continuous body. The metallic stiles of the frame are constructed with cavities on both the inner and outer faces for the reception of fire-resisting material. The panels are made up of crossed bars or of perforated plates, by means of which the fire-proof material, pressed on both sides of such panels, may be securely retained.

In the accompanying drawings, Figure 1 is an elevation of a door or shutter illustrating the invention, parts of the fire-proof coating and of the frame-work being removed. Fig. 2 is a vertical section thereof on the line *x x*, Fig. 1.

The stile-frames D D may be made of box-shaped plates placed back to back, as shown in Fig. 2, or they may be L-shaped bars, or of other form, to adapt them to present cavities on the inside and outside. The panels are, preferably, formed of crossed diagonal bars E, as represented in Fig. 1, riveted together at their intersections and bolted or riveted at their ends, between the bars D D of which the stiles are formed.

It will now be seen that the fire-proof material F, being applied on both sides of the shutter or door, and pressed, as described in Letters Patent No. 127,803, granted to the under-

signed on the 11th day of June, 1872, will be united through the interstices in the panel, and will thus be formed into a continuous immovable mass. It will further appear that the material, while in a plastic state, may be molded in any desirable form on the inside and outside, so that an ornamental appearance may be imparted to both faces.

Instead of the crossed bars, the metallic skeleton of the panel may be formed of a perforated plate, which will produce the same result, in permitting the molding of the inner and outer bodies of fire-proof material in one piece.

The fire-resisting material preferably consists of asbestos and calcined gypsum, or the equivalent thereof, worked into a cohesive mass by the aid of lime-putty or other suitable cement, and applied to the frame-work in a plastic state.

The composition of asbestos, calcined gypsum, and lime-putty, which we have described as the preferred material for filling our fire-proof shutters and doors, is the invention of John E. Mulford, who has applied for a patent therefor. We do not claim the invention of this or any specific material, but propose to use any suitable fire-proof filling with the metallic frame-work to which our invention relates.

The following is claimed as new:

A door or shutter constructed as herein described, with a double box-frame, D, inclosing the edges of a panel of crossed diagonal bars E, the whole covered on both sides with a continuous body of fire-proof material, substantially as described.

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Witnesses:

T. E. MAJOR,
JNO. E. MULFORD.