

UNITED STATES PATENT OFFICE.

THOMAS BAILEY, OF NEW YORK, N. Y.

FIREPROOF DOOR, DOOR-FRAME, AND WINDOW FRAME AND SHUTTER COMBINATION.

SPECIFICATION forming part of Letters Patent No. 570,895, dated November 10, 1896.

Application filed January 16, 1896. Serial No. 575,672. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BAILEY, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Fireproof Door, Door-Frame, and Window Frame and Shutter Construction, of which the following is a specification.

My invention consists, essentially, of doors, shutters, and door and window frames composed in part of fireproof sheets of asbestos board, or metal, or both, with an exterior finish of veneer of wood glued, bolted, or otherwise secured to the inner portion, or with other protective coating, as paint, in a construction of thin, light, and practicable doors, shutters, and frames for prevention against the extension of fire from one room to another, more particularly for use in what are now considered fireproof buildings, but which are lacking in these respects. The said improvements are also applicable for protection against exterior fires, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view, with parts broken out, of a door composed of an inner fireproof sheet, as asbestos board or sheet metal, with an exterior veneer of wood secured to the fireproof sheet in the simplest form of my invention. Fig. 2 is a transverse section of Fig. 1 on line *x x*. Fig. 3 is a perspective view of a door, with a part broken out, in which the inner portion is of dovetail corrugated sheet metal with the sides covered with asbestos board, the grooves of the corrugations being filled with wood. Fig. 4 is a transverse section of Fig. 3 on line *w w*. Fig. 5 is a perspective view of a door having the like dovetail corrugated sheet-metal portion with the sides covered with asbestos sheets and an exterior of wood veneer, but without the wood filling in the grooves. Fig. 6 is a vertical section of the door of Fig. 5 on line *y y* with the grooves of the corrugated sheet filled with wood. Fig. 7 is a perspective view of a door constructed same as in Fig. 5, except the ribs and grooves of the corrugations are arranged vertically and the grooves are filled with wood. Fig. 8 is a transverse section of Fig. 6 on line *z z* with the grooves of the

corrugations of the sheet metal filled with wood. Fig. 9 is a transverse section of a like door, as shown in Fig. 7, except the corrugations of the metal sheet are of plain oval form. Fig. 10 is a perspective view of part of a door or window frame constructed in accordance with my invention.

In Figs. 1 and 2, *a* represents a sheet or plate of fireproof material, as asbestos board, or it may be sheet metal, on each side of which is a wood portion for a stiffener to the fireproof material and for a finish in the character of an ordinary door, the said wood finish comprising in this case panels of thin boards *b* and thicker stiles *c* and cross-pieces *d*, but it may be modified, as desired.

For more substantial doors and shutters, and also more effective for protection against fire, I employ a metallic sheet for the center portion, which is corrugated, as in Figs. 3 to 9 inclusive, with asbestos board *f* on each side and the wood finish exterior to the asbestos board, and all bolted, riveted, or otherwise secured together, or the metal center and the asbestos board may be used without the exterior finish, as in Fig. 3, particularly when corrugated metal is used, which I prefer, especially dovetail corrugated metallic sheets, as in Figs. 3 to 8, inclusive, for the middle portion, but they may be corrugated in ordinary oval or fluted ribs and grooves, as *h*, Fig. 9, and I will also in some cases fill the grooves with wood strips, as *i* or *j*, to or through which the asbestos board *f* and the wood finish may be nailed, bolted, or may be glued, and the corrugated sheets may be stayed through the corrugations by rods *k*, when desired. The asbestos board is especially adapted to be glued on the wood strips *j* or to have the wood finish glued on it, owing to its porous and absorbent nature.

The window and door frames will be constructed in like manner as the doors and shutters, except the wood finish will only be applied to the exterior, as in Fig. 11, in which like corrugated sheets *a'* are represented for the metal portion, and a like paneled wood finish *b' c' d'*, except on the side *l*, to which the door or window is to be fitted, which will be rabbeted or grooved, as usual for such connection. When the asbestos board is to be used as the outer sheet of the structure, it will be

covered with paint of strong substantial character adapted to glaze and harden the surface for protection against abrasion.

5 In the foregoing description I have referred
mainly to doors, but I wish to be understood
as meaning shutters as well, as they are prac-
tically the same so far as my invention is con-
cerned, and it is the same in regard to frames,
whereof the construction will be practically
10 the same, whether for door or window frames.
It is also applicable to wainscoting and other
parts of buildings.

I claim—

1. In fireproof door and window construc-
15 tion, doors, shutters, and door and window
frames, consisting of an inner portion com-
posed of a sheet or plate of fireproof material,
a covering of asbestos board and an outer fin-
ish of wood glued or otherwise secured to said
20 asbestos board, substantially as described.

2. In fireproof door and window construc-
tion, doors, shutters, and door and window

frames, consisting of an inner fireproof por-
tion of corrugated sheet metal with wood
strips in the grooves, and a covering of asbes- 25
tos board, said asbestos board glued, nailed,
or bolted to the wood strips and having an ex-
terior protective coating substantially as de-
scribed.

3. In fireproof door and window construc- 30
tion, doors, shutters, and door and window
frames, consisting of an inner fireproof por-
tion of dovetail corrugated sheet metal, a cov-
ering of asbestos board, and an exterior wood
finish on the asbestos board substantially as 35
described.

Signed at New York city, in the county and
State of New York, this 11th day of January,
A. D. 1896.

THOMAS BAILEY.

Witnesses:

W. J. MORGAN,
C. SEDGWICK.