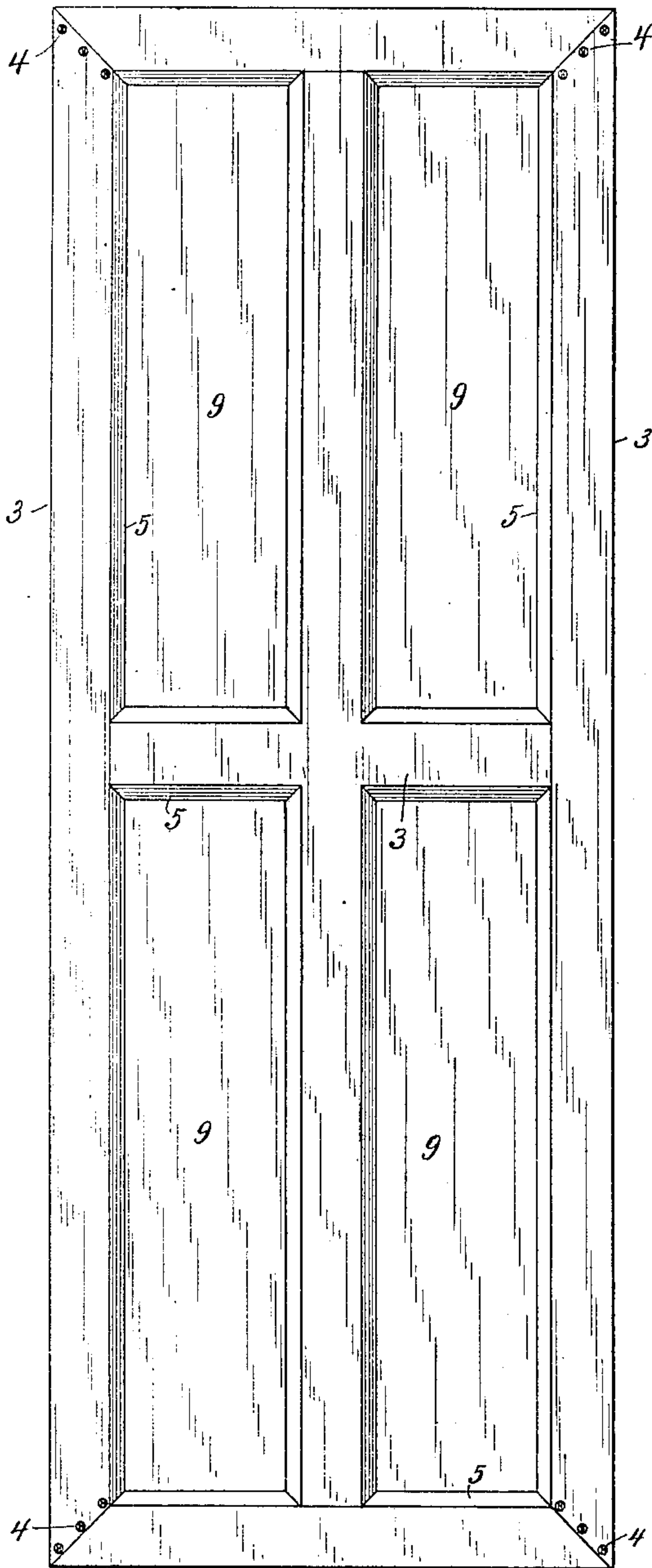


No. 825,777.

PATENTED JULY 10, 1906.

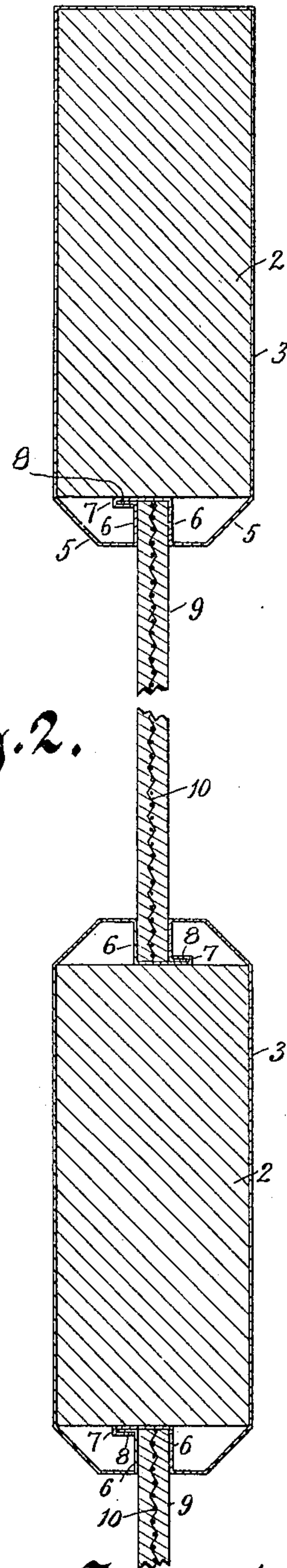
E. B. TONNSEN.
FIREPROOF DOOR.
APPLICATION FILED APR. 1, 1905.

Fig. 1.



Witnesses:
C. H. Keeney.
Anna F. Schmidtbauer

Fig. 2.



Inventor.
Elihu B. Tonnson
By Benedict Morrell
Attorneys.

UNITED STATES PATENT OFFICE.

ELIBERT B. TONNSEN, OF MILWAUKEE, WISCONSIN.

FIREPROOF DOOR.

No. 825,777.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed April 1, 1905. Serial No. 253,359.

To all whom it may concern:

Be it known that I, ELIBERT B. TONNSEN, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Fireproof Doors, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to an improved fireproof door, or means in the nature of a door or shutter for closing an aperture in a wall of a building in such manner as to be proof against fire, either by permitting the fire to set the door or closure in flame or by permitting the fire to pass through or destroy the door or closure so as to permit of the passage of fire through it.

My invention consists of the door, its parts, and combinations, as herein described and claimed, or the equivalents thereof.

In the drawings, Figure 1 is an elevation of my improved door. Fig. 2 is a longitudinal section of fragments of the door, exhibiting my improved construction.

That my improved door may be strong and durable in character, while light in weight and inexpensive of construction, the frame of the door, including the longitudinal stiles and the transverse rails of the door, is formed of wood, thereby making a frame strong and durable, light in weight, and of inexpensive construction.

In the drawings the door shown in Fig. 1 has such a frame, the parts 2 2 of Fig. 2 being transverse rails of the frame and made of wood. The entire frame is similarly constructed of wood, and this frame is entirely covered, and thereby protected, by sheet metal in ordinary doors, advisably of iron or steel, forming a fireproof case 3, inclosing the entire wood frame. In building the door the metal case for the middle stile and the middle rail is first made and the wood interior stile is inserted in the case, and the transverse rail or the parts thereof are then inserted in the case, and the case being made for the outside stiles and the end rails the wood interior stiles are inserted in the cases, and the wood end rails are inserted in their cases, and the parts are then put together, and the joints at the middle may then be all soldered or brazed together, or joints may be made by securing the ends of overlapping parts of the case to the wood by means of screws 4.

In making the metal cases for the stiles and

the rails, the edge of the case at the edge of the stile and the rails which form the walls of the area in the door for a panel or panels instead of being fitted tightly to the wood of the stile or rail is carried inwardly therefrom, forming non-contacting walls 5, which being continued toward each other are before they come together bent inwardly, forming panel-walls 6 6, and then one of these panel-walls is carried across the bottom of the panel-opening and behind and beyond the other panel-wall and is then provided with a return-bend 7, forming a pocket along near the surface of the wood of the stile or rail, into which a flange 8 of the other panel-wall enters, thereby forming a seam or joint between these panel-walls, and a closure of the case inclosing the stile or rail. At the same time a panel-groove is formed in the casing by the casing and along on the inside of the wood, stile, or rail. When the door is put together as hereinbefore described, the panel 9 is put in place in the grooves of the case along the stiles and rails of the door and in the areas provided for panels.

The panels 9 are made of asbestos, ground and pulverized and mixed with and held together by some cement or earthy material, the panel being, when dry and set, firm and hard and absolutely fireproof. The panel may be with or without ornamentation, as desired. The asbestos slabs of which these panels are made may be formed with an interior wire fabric 10, if desired, whereby the strength of the panel would be increased; but such interposed wire in the panel is not ordinarily required and may be omitted with entire safety in doors or closures of buildings of small size or ordinary construction.

What I claim as my invention is—

1. In a fireproof door-like aperture-closure, a wood frame having panel-openings, and a metal case for the frame consisting of sheet metal bent to fit about and inclose each rail and stile of the frame, the margins of the sheet metal along the edges thereof being turned inwardly from the side surfaces of the case at the edges of the panel-aperture or apertures and being again bent and turned inwardly of the case away from the panel aperture or apertures forming the walls and bottom of a panel groove or grooves and the edges of the sheet metal being secured to each other at and closing the bottom of the groove.

2. In a fireproof door, a wood frame including rails and stiles about a panel aper-

ture or apertures, a stile or rail case of a single piece of sheet metal, the sheet metal being bent into an elongated chamber inclosing a wood stile or rail the edges of the metal approaching each other along the lengths of the case and medially of the panel fronting inner edge thereof, the inner edges of the metal being turned inwardly toward the stile or rail and then brought together and secured to each other forming a panel-groove with the

metal-securing seam at the bottom of the groove and inside of the case and adjacent to the rail or stile.

In testimony whereof I affix my signature in presence of two witnesses.

ELIBERT B. TONNSEN.

Witnesses:

C. T. BENEDICT,

ANNA F. SCHMIDTBAUER.