

N. PAINE.
DOOR.

APPLICATION FILED FEB. 2, 1909.

946,460.

Patented Jan. 11, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

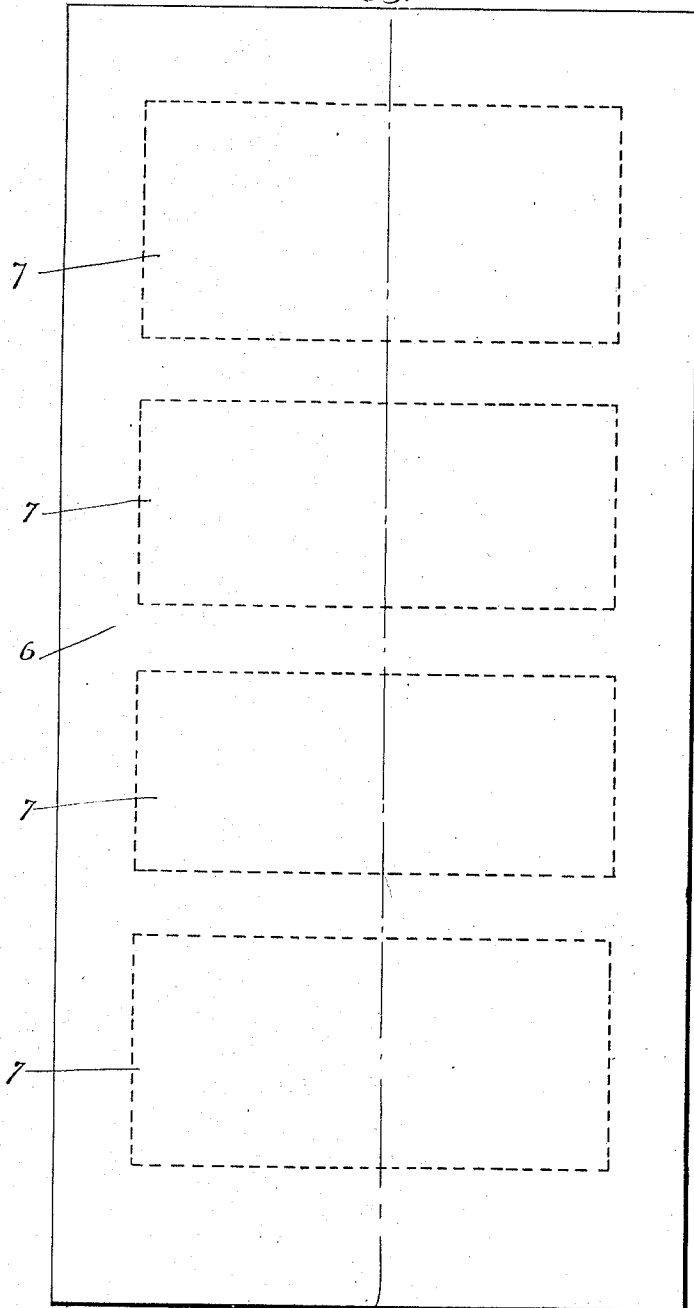
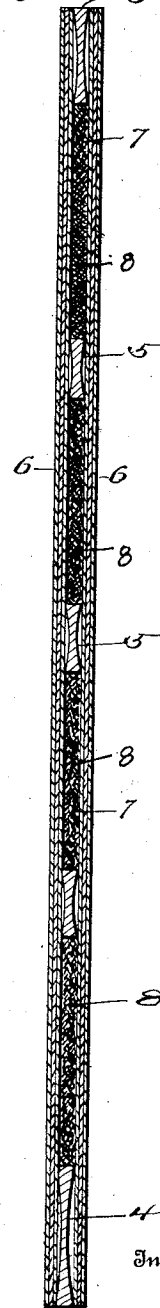


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

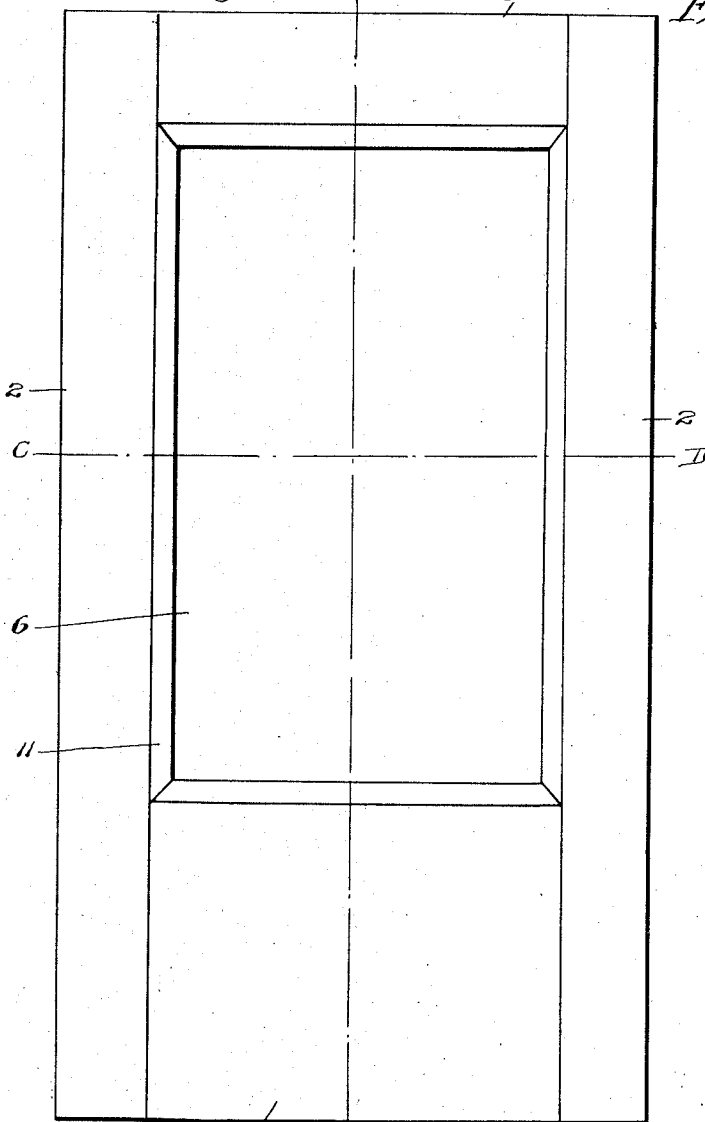


Fig. 4.

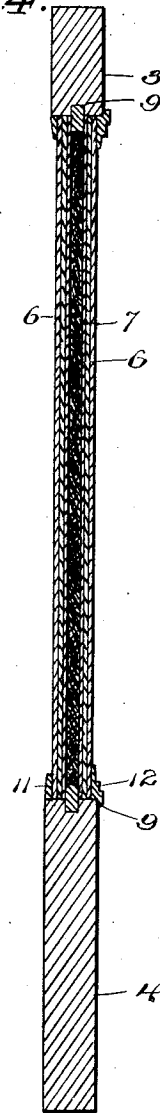
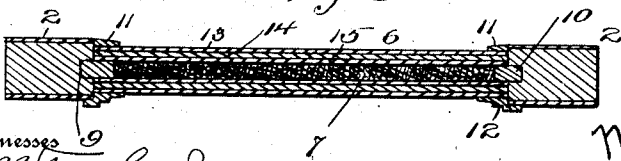


Fig. 5.



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UNITED STATES PATENT OFFICE.

NATHAN PAINE, OF OSHKOSH, WISCONSIN.

DOOR.

946,460.

Specification of Letters Patent.

Patented Jan. 11, 1910.

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To all whom it may concern:

Be it known that I, NATHAN PAINE, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Doors, of which the following is a specification.

My invention relates to doors of a special construction for the purpose of making them "sound proof".

My invention consists in providing an air space interior of the panels of the door and intermediate of the members of the door, for the purpose of subduing sound transmission.

My invention further consists in providing such air space in multiples throughout any of the different members of the door.

My invention further consists in providing any non-sound-conducting material, such as cork or sawdust, throughout the entire air space of the door or interposed in multiples between any of the members of the door providing such air space.

My invention further consists in the combination of such air space with any non-sound-conducting material.

In the accompanying drawing Figure 1 represents a front view of one form of my invention and Fig. 2 represents a vertical section of the same on the line A—B. Fig. 3 represents a front view of my invention as applied to panel doors. Fig. 4 represents a vertical section on line A—A of Fig. 3 and Fig. 5 represents a cross-section on line C—D of Fig. 3.

Referring to the drawing by numerals 2, 2 represent the stiles, 3 represents the top rail, 4 the bottom rail and 5, 5, 5 the intermediate rails of the door. The stiles and rails constitute the frame of the door. The drawing illustrates a veneered door and the panel-casings are constructed three-ply.

In the illustration shown in Figs. 1, 2 the ordinary door frame is first constructed consisting of the stiles, top and bottom rails and any number of intermediate rails desired doweled and glued together in the usual manner. The three-ply veneer casing 6, 6 is then glued to each side of the frame making a flush-panel-door and providing the air-spaces 7, 7, 7, 7, between the stiles and the rails interior of the door. After attaching one of the veneer faces the air spaces

may be filled with non-sound-conducting material 8 and then the other veneer face attached, thus confining the non-sound-conducting material within the air spaces.

In the construction shown in Figs. 3, 4, 5, the frame is similarly constructed and in addition there is provided a strip 9 recessed in a groove 10 provided around each panel opening. The panel-casings 6, 6 are glued to the strip 9 upon each side, thus affording the air space 7. Retaining or ornamental moldings 11, 12 may be attached around the panel upon each side of the door.

It will be observed that the three-ply casing consists of the outer piece of veneer 13, the middle piece 14 and the inner piece 15 (Fig. 5) the grain of the wood of each piece being opposed to the grain of the adjoining piece.

In Fig. 2 I have shown an illustration embodying a grooved intermediate rail providing an air space in the rail as well as the panel. I am able to adapt my invention to every style of modern veneered door to provide a means of subduing sound transmission.

Having thus described my invention what I claim is,

1. In a door comprising in its construction a pair of upright stiles and top and bottom rails connecting said stiles, intermediate rails positioned between said top and bottom rails and having grooves formed in their faces, a covering positioned on each side of said stiles and said rails, the said grooves forming air spaces beneath said covering, substantially as shown and described.

2. In a door comprising in its construction a pair of upright stiles, top and bottom rails connecting said stiles, intermediate rails positioned between said top and bottom rails, the said top and bottom rails and said intermediate rails being provided with grooves in their faces, a covering positioned on each side of said stiles and all of said rails, the said grooves provided in said rails forming air spaces beneath said covering, as shown and described.

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

NATHAN PAINE.

Witnesses:

R. H. DOWNES,
M. H. O'BRIEN.