A. L. PENWELL.

COMBINATION DOOR.

APPLICATION FILED MAR. 2, 1909.

940,719. Patented Nov. 23, 1909.

Fig. 1.

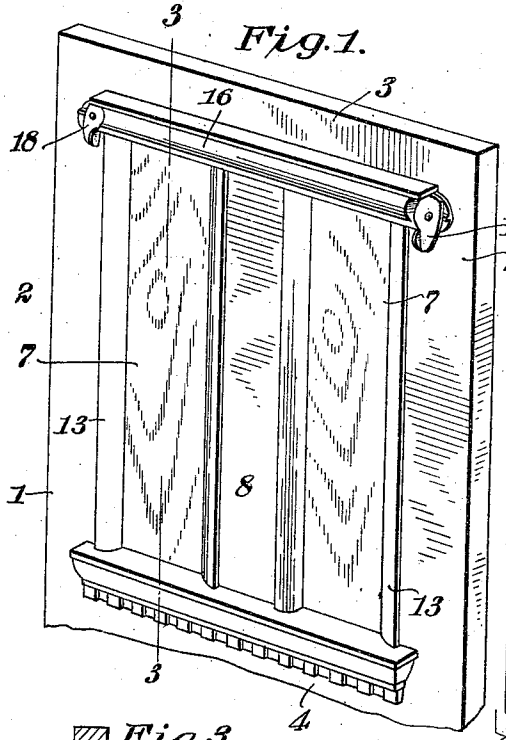
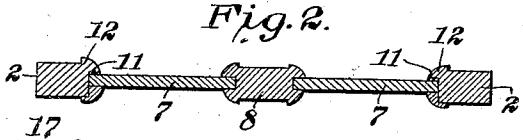


Fig. 2.



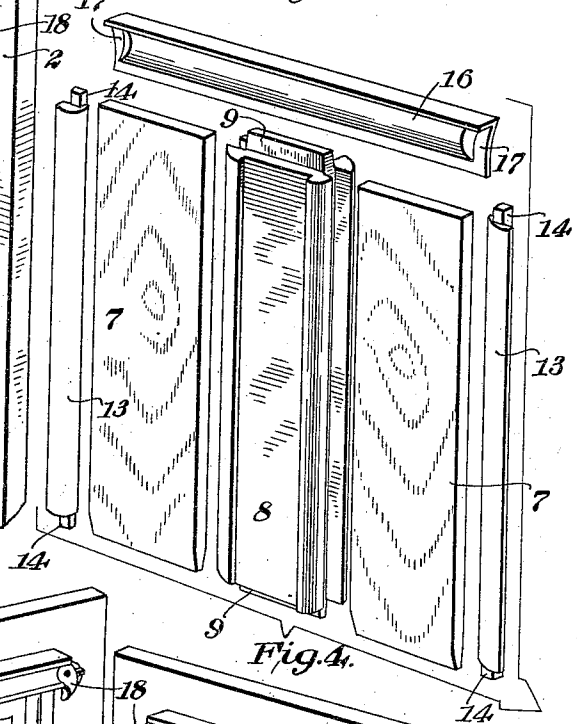


Fig. 4.

Fig. 3.

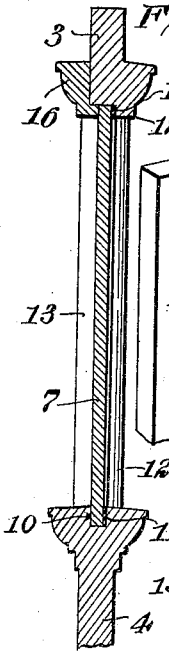
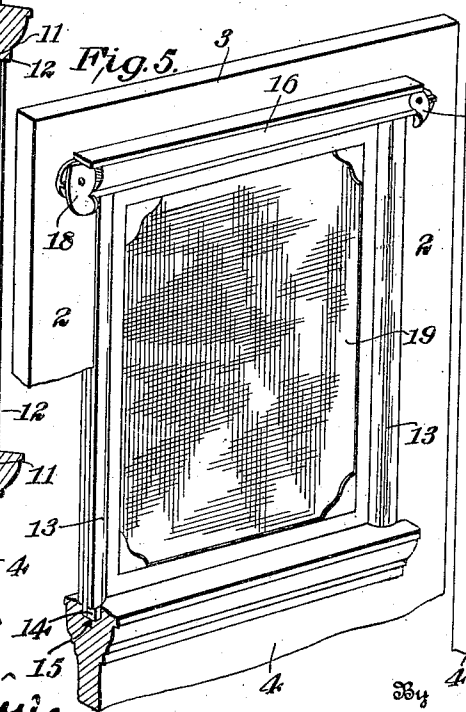


Fig. 5.



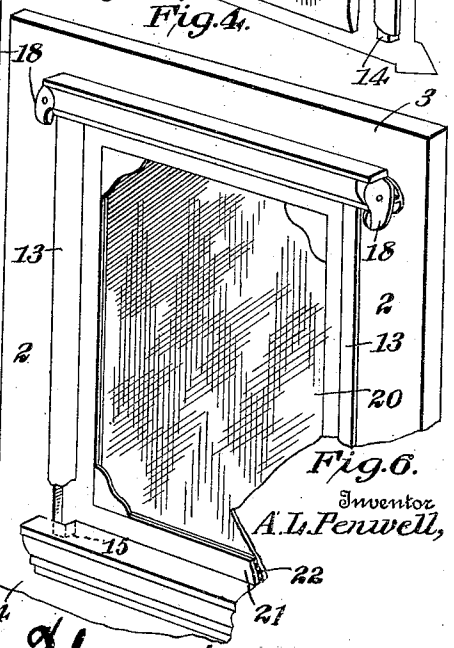


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

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COMBINATION-DOOR.

940,719. Specification of Letters Patent. Patented Nov. 23, 1909.

Application filed March 2, 1909. Serial No. 480,827.

To all whom it may concern:

Be it known that I, ANSON L. PENWELL, a citizen of the United States, residing at Leland, in the county of Josephine and State of Oregon, have invented certain new and useful Improvements in Combination-Doors, of which the following is a specification.

This invention comprehends certain new and useful improvements in doors of that type adapted particularly for use in doorways leading to the exterior of a building, and the invention has for its object an improved door construction which embodies a peculiar arrangement of parts, whereby the panels of the door are retained in position in such a manner as to be susceptible of being quickly and conveniently removed when desired and without the services of a skilled laborer.

A further object of the invention is an improved door, the upper panels of which are solid and are adapted to be removed and replaced by either a screen panel or a glass panel, such removal being capable of being accomplished from the inside only, so as to preclude unlawful entry into the building.

With these and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features thereof in the appended claims.

For a full understanding of the invention and the merits thereof and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a fragmentary perspective view of a door constructed in accordance with my invention, showing the same equipped with wooden panels; Fig. 2 is a transverse section thereof; Fig. 3 is a vertical section on the line 3—3 of Fig. 1; Fig. 4 is a detail perspective view, showing the panels, munting and molding strips in adjusted position; Fig. 5 is a perspective view illustrating the application of the screen panel; and, Fig. 6 is a similar view of the glass panel.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing, the numeral 1 designates a panel door which may be of any desired or approved construction or design except as hereinafter noted, and the upper portion of which is illustrated in the drawing and embodies the customary stiles 2 and top and middle rails 3 and 4. The opening through the door frame between the stiles and the rails 3 and 4, is adapted to be closed by two upper panels 7 between which is preferably interposed a munting 8. The munting is formed at its opposite ends with tenons 9, the lowermost one of which together with the adjacent edge portions of the panels, is adapted to be fitted in a groove or channel 10 formed in the upper edge of the middle rail 4. When thus in position the other edge portions of the panels and the upper tenon 9 are arranged to bear against an outstanding ledge 11, which is constituted by the top and side moldings 12 disposed at the outside of the door, the ledge being preferably covered with rubber or similar material in order to effect a tight joint.

On the inside of the door the moldings overlap both the panels and adjacent portions of the door frame and are designed to be removably held in position. In the present instance this object is attained as follows: The side moldings 13 are formed at their opposite ends with tenons 14, the lowermost tenons being adapted to enter mortises 15 formed in the middle rail 4, so that the said side moldings are supported with their upper tenons in abutting relation to the lower edge of the top rail 3 and in horizontal alinement with the upper tenons 9 of the munting. Overlapping these upper tenons and also the upper edge portions of the panels 7, is a top molding or cap 16 which is designed to be detachably connected to the door frame and has its opposite end portions reduced, as at 17, and designed to be engaged by turn buttons 18. By virtue of this construction, when occasion demands the removal of the upper panel 7 from the door, it is merely necessary to move the turn buttons 18, so as to release the top molding 16 and admit of the latter being removed. This in turn releases the tenons 14 at the upper ends of the side moldings 13, so that the latter may be slipped upwardly from engagement with the mortises 15 of the middle rail, whereupon the two panels 7 and the interposed munting 8 are moved in-

wardly at their upper ends to clear the top rail 3 and are then withdrawn from the groove 10 to be entirely removed from the door. After the parts have been thus removed I may substitute therefor a single screen panel 19, or may employ a glass panel which consists of a plate of glass 20 and a separate frame 21, the frame and the glass being both inserted in the door frame and retained therein by the detachable moldings. The plate of glass is interposed between the ledge 11 and the frame 21, and the latter is preferably provided with a rubber or similar coating 22 where it contacts with the glass, so as to insure a weather proof joint and admit of the glass yielding to a certain extent upon vibration.

Among the many advantages residing in this structure attention is particularly directed to the fact that the change from solid wooden panels to either a glass or screen panel may be quickly and conveniently effected when desired and without the necessity of employing a skilled laborer for this purpose. By providing these three separate sets of panels, three different doors may be produced in effect, and this at a comparatively small cost. Furthermore it is to be noted that the door embodies to a marked degree the characteristics of simplicity, durability and efficiency, while the strength or rigidity of the structure is not materially reduced by employing the removable panel sections.

Having thus described the invention, what is claimed as new is:

1. The combination with a door having a panel-opening, of a removable panel adapted to be fitted into said opening, molding strips overlapping the panel and opposite edges of the opening and engaging another edge thereof at another end, another molding strip disposed at the remaining edge of the opening and overlapping the corresponding ends of the first named moldings to retain the same in such engagement, and means for detachably securing the last named molding to the door.

2. The combination with a door having a panel-opening, of a removable panel adapted to be fitted into said opening, molding strips overlapping the panel and opposite edges of the opening and engaging another edge thereof at another end, another molding strip disposed at the remaining edge of the opening and overlapping the corresponding ends of the first named moldings to retain the same in such engagement, and turn buttons connected to the door and designed to be moved into engagement with the last named molding.

3. The combination with a door having a panel-opening, of a removable panel adapted to be fitted into said opening, molding strips overlapping the panel and opposite edges of the opening and formed at their ends with tenons, the opening being provided at another edge with mortises designed to receive corresponding tenons, another molding disposed at the remaining edge of the opening and overlapping the other tenons, and means for detachably securing the last named molding to the door.

4. The combination with a door having a panel-opening provided at its lower edge with a groove and at its other edges with an outstanding ledge or shoulder, of a removable panel adapted to be fitted into the said opening and received in the groove at the lower end thereof, molding strips overlapping the panel and side edges of the opening and engaging the lower edge thereof at one end, another molding disposed at the upper edge of the opening and overlapping the corresponding ends of the first named moldings to retain the same in such engagement and hold the panel against the ledge, and means for detachably securing the last named molding to the door.

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

ANSON L. PENWELL. [L. S.]

Witnesses:
C. R. Fifield,
Amos L. Espey.