(No Model.)

S. V. MERRIMAN.

DOOR.

No. 385,566. Patented July 3, 1888.

Fig. 1

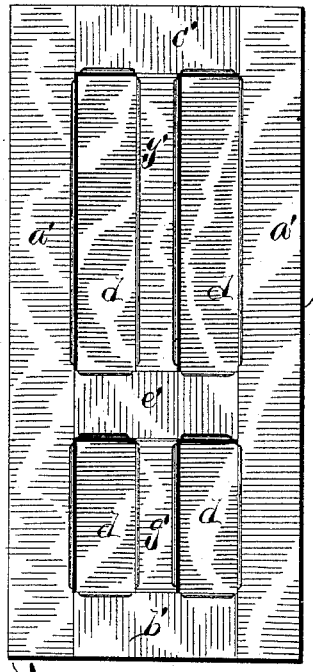


Fig. 2.

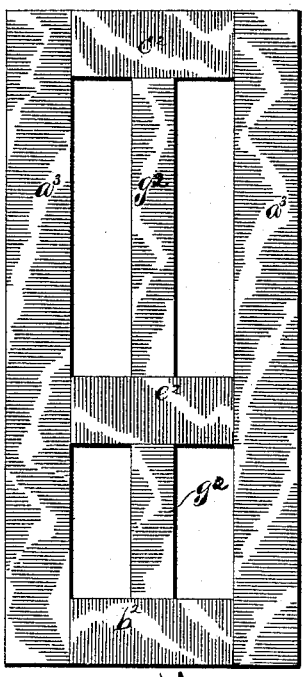


Fig. 4.

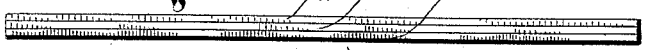


Fig. 3

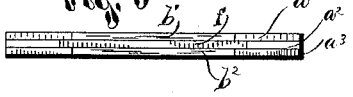
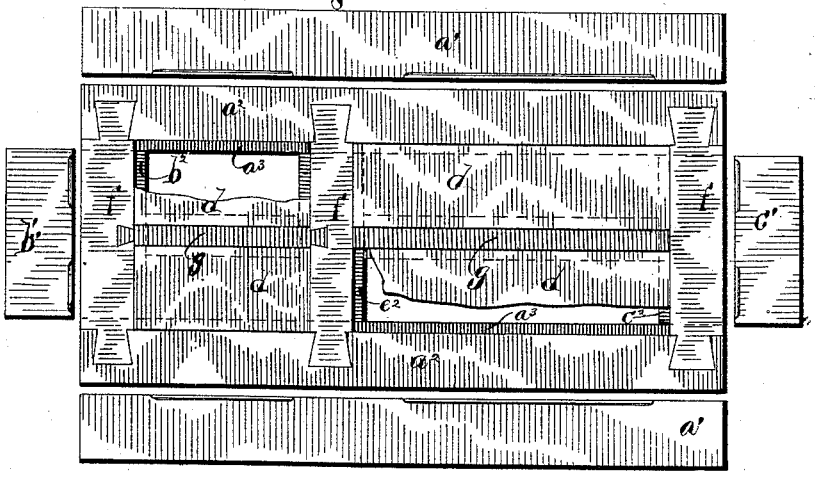


Fig. 5



WITNESSES:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

SEYMOUR V. MERRIMAN, OF SYRACUSE, NEW YORK.

DOOR.

SPECIFICATION forming part of Letters Patent No. 385,566, dated July 3, 1888.

Application filed August 27, 1887. Serial No. 248,009. (No model.)

To all whom it may concern:

Be it known that I, SEYMOUR V. MERRIMAN, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Doors, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in doors and sashes, and has for its object the production of a door which shall be very economical to manufacture and at the same time overcome the tendency which exists in the door of common manufacture to warp and shrink out of shape; and to this end my invention consists, essentially, in a door consisting of two outer exterior forms and a central or interior filling interposed between the exterior forms, the said central filling having interlocked dovetail joints, all as hereinafter more fully described, and pointed out in the claims.

In specifying my invention reference is had to the accompanying drawings, forming a part of this specification, like letters indicating corresponding parts in all the views, in which—

Figure 1 is a top plan view of the completed door made after my invention. Fig. 2 is a longitudinal edge view of the same. Fig. 3 is a transverse edge view of the same. Fig. 4 illustrates the outer or exterior form employed in the first step in the method of making a door according to my invention; and Fig. 5 illustrates the final step, or the door in condition for the final step, in the method of making the same.

A represents a door made according to my invention, in which a' a^2 a^3 are the stiles. c' c^2 b' b^2 are the top and bottom cross-rails. g g' g^2 are the panel-rails. e' e^2 are the central cross-rails.

The outer or exterior form is composed of the stile-pieces a' a' and the upper cross-rail c', the lower cross-rail b', the panel-rails g' g', and central cross-rail e'. These parts are all cut out in suitable lengths for the door or sash of the required dimensions, and are then either covered with glue on their inner or meeting edges and united or fitted together edgewise, or simply placed together, as best shown in Fig. 4, these parts, respectively, being laid up in a press, either hydraulic or screw-power. A central or filling section, as best shown in Fig. 5, is then prepared of the stiles a^2 a^2 and cross-rails f f f, the said parts being united preferably with dovetailed joints, as shown in said Fig. 5. The panel stile-rails g g may be either dovetailed or united with a common joint. I thus form the central section into a door or sash skeleton with firmly-united joints, and the same serves as a bracing-frame for the other or exterior forms of the door. It will be noted that the central or filling section of this compound frame is of the same outer dimensions as the outer or covering frames, and that when laid together one upon the other the outside edges of the stiles and top and bottom cross-rails are flush with each other. These parts of the central or filling section are, however, not as wide as those of the outer ones, and in consequence the overlap (on the inside edges) of the outer sections forms a groove, in which the edges of the panels are received and held when the door is completed. I then cover the upper surface of the exterior form, prepared as above described, with glue, and lay the central filling section or skeleton in position on the exterior form, as best shown in Fig. 5, for the outer form, as represented by a^3 a^3 b^2 c^2, Fig. 4. Thus, as will be observed in Fig. 5, the outer edges of the central filling section coincide with the outer edges of the aforesaid outer form, and a frame or space for the paneling d d is provided. After the central section is laid over the outer form, as shown in Fig. 5, the panels d are inserted in the frame provided, as described, and the third part or exterior form, which is prepared exactly as the outer form, composed of the stiles a^3 a^3, &c., is then applied on top of the central filling section or skeleton, and the whole is then subjected to pressure. After the glue becomes hard, the door is ready for the finishing process. Thus it will be observed that a door constructed according to my invention is composed of three parts, which may be designated two outer or exterior forms and a central or interior filling or skeleton interposed between the exterior forms, and a door thus constructed possesses numerous advantages over the present methods of constructing doors. In the first place, the material of which the exterior forms are composed can be quite thin—say, if a door of three inches in thickness is desired, the exterior

forms may be made of fine quality of lumber of a half-inch in thickness, while the central section can be made of coarse two-inch stuff; or, the separate forms and filling may be divided up and made of inch stuff, as desired. Furthermore, the door constructed according to my invention is built up after the manner of forming material for patterns; hence the timber can be put together with the grain running in opposite directions, and all warping and shrinking thereby prevented, which is of great importance in constructing fine qualities of doors. Furthermore, the cost of making doors according to my invention is greatly decreased, since, as already stated, the main portion of the timber used may be of cheap quality, with the exterior only of fine quality of material, and a much superior door or sash may be produced by reason of lapping the timber with the grain in opposite directions. The additional advantage accrues from the fact that the joints do not show from the exterior of the door, and all of the parts of the door are susceptible of being finished upon machines; hence all hand-work in the production of the door is dispensed with.

I do not restrict myself to the specific form of joint shown, since any form of joint whereby the parts are firmly interlocked will answer the purpose; but I prefer the dovetailed joint illustrated in Fig. 5 of the drawings.

It will be observed, also, that the frame for the paneling of the door is formed by the peculiar manner of laying up the outer form and central filling-section, and that a very superior and economically-manufactured article is thereby produced.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a door, the combination of three separate wooden frames secured together side by side, the middle section being dovetailed together and made of narrower parts than the outer ones, to form a groove to receive the panels, substantially as shown and described.

2. In a door, the combination of three separate frames of the same outside dimensions, secured together side by side, the middle section being made of narrower parts than the outer ones, whereby a groove is formed to receive the panels, substantially as shown and described.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 23d day of August, 1887.

SEYMOUR V. MERRIMAN.

Witnesses:

CHARLES E. SHANDY,

FREDERICK H. GIBBS.