

No. 682,321.

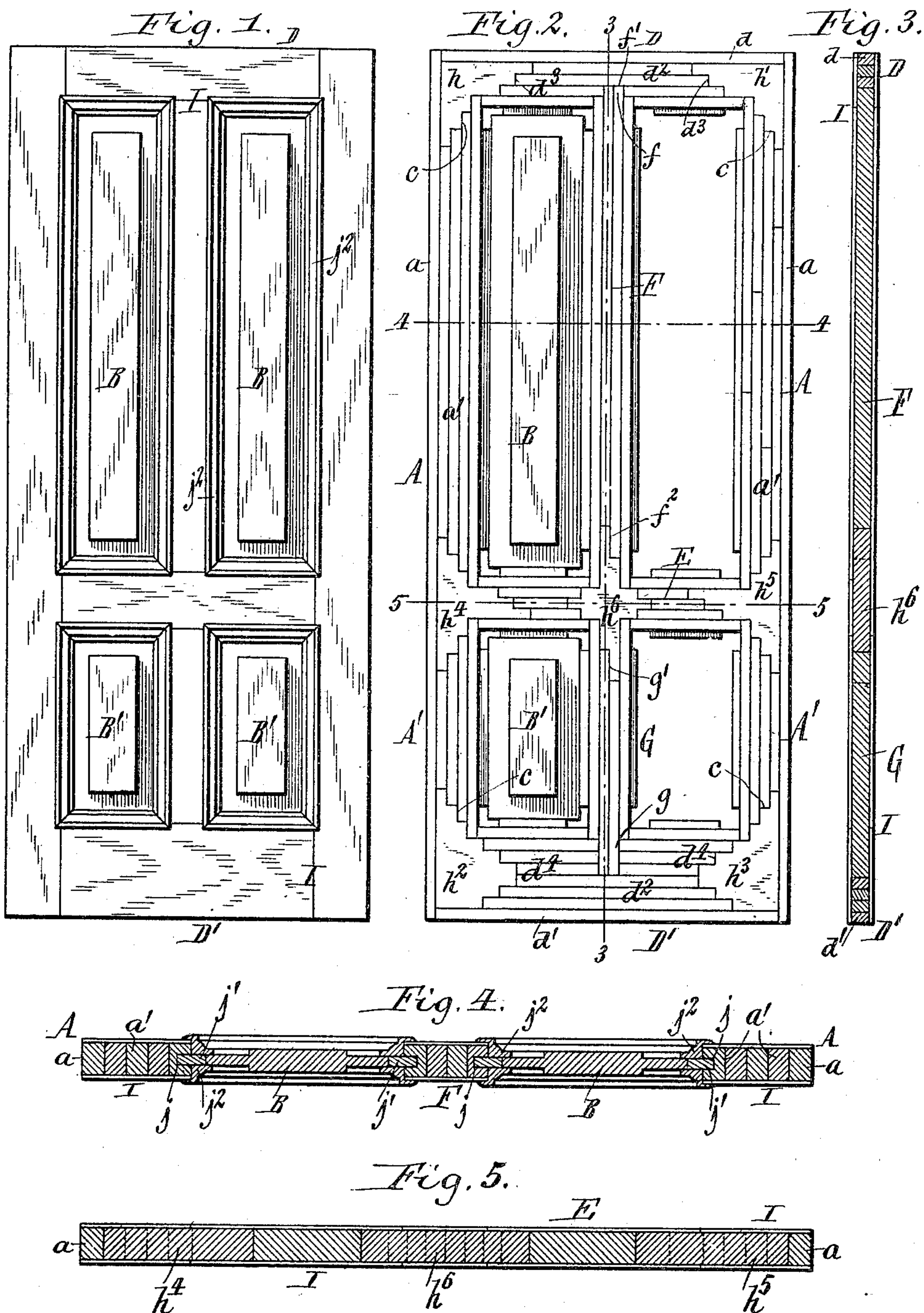
Patented Sept. 10, 1901.

F. J. CRONIN.

DOOR.

(Application filed Sept. 21, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK J. CRONIN, OF UTICA, NEW YORK.

DOOR.

SPECIFICATION forming part of Letters Patent No. 682,321, dated September 10, 1901.

Application filed September 21, 1900. Serial No. 30,701. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. CRONIN, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented new and useful Improvements in Doors, of which the following is a specification.

This invention relates to doors in which the body is built up of strips or pieces of cheap or soft wood which are covered with a veneer of more expensive hard or soft wood.

The object of my invention is to cheapen the construction of such cored doors.

In the accompanying drawings, Figure 1 is a face view of a door constructed according to my invention. Fig. 2 is a face view of the same before the veneer is applied thereto, the two right-hand panels being omitted. Fig. 3 is a transverse vertical section in line 3 3, Fig. 2. Fig. 4 is a horizontal section in line 4 4, Fig. 2, showing both of the upper panels in the door. Fig. 5 is a similar section in line 5 5, Fig. 2.

Like letters of reference refer to like parts in the several figures.

Each stile of the door is preferably built up of an outer or facing strip a , which extends from the top to the bottom of the door, and shorter inner strips a' , arranged side by side and made of a thickness corresponding, preferably, to the width of the facing-strips a . The stiles are preferably divided into upper and lower sections $A A'$, which are arranged opposite the upper and lower door-panels $B B'$, respectively. If desired, each strip a' may consist of a number of short pieces, as shown in the upper section of the right-hand stile. The ends of these stile-sections terminate at a distance from the upper and lower ends of the door and are stepped, as shown at c , or, in other words, the strips a' of each section successively extend beyond each other at both ends from the outermost toward the innermost of said strips.

$D D'$ are the top and bottom rails of the door, which are preferably built up of strips of uniform thickness similar to the stiles $A A'$. The outermost or facing strips $d d'$ of these rails preferably extend continuously from one of the upright facing-strips a to the other, while the inner strips d^2 terminate at a distance from said upright facing-strips.

The ends of the short strips d^2 of the upper rail are stepped, as shown at d^3 , the steps of this rail being preferably arranged in diagonal alinement with the adjacent steps c of the upper stile-sections A , as shown. The lower rail is somewhat deeper than the upper rail and its short strips are stepped similar to those of the upper rail; but the ends of the inner strips of said lower rail are preferably stepped in the reverse direction to those of the outer strips, as shown at d^4 .

E is the intermediate or lock rail, which is also composed of strips arranged side by side and which is preferably divided into two sections arranged on opposite sides of the vertical center line of the door. The ends of the strips of the lock-rail sections are stepped like those of the stile-sections and the top and bottom rails, as shown.

F is the upper muntin, which is built up of strips like the stiles and rails of the door and which is formed at its upper end with a tenon f , fitting into a mortise f' , formed in the top rail, as shown. The lower ends of the strips which form the upper muntin terminate at a distance from the lock-rail and are stepped or constructed to extend one beyond the other, as shown at f^2 .

G is the lower muntin, which is made up of strips like the upper muntin and is mortised at its lower end in the bottom rail, as shown at g . The upper ends of the lower muntin-strips stop short of the lock-rail and are stepped similar to the upper muntin, as shown at g' .

By constructing the various frame members of the door-body as hereinbefore described spaces are formed in the corners of the door, also between the opposing ends of the stile-sections $A A'$ and the outer ends of the lock-rail sections and also between the opposing inner ends of the muntins and the opposing inner ends of the lock-rail sections. These various spaces are filled by locking or connecting blocks $h h^6$, which are of the same thickness as the strips of the various frame members of the door, so that the strips and said filling-blocks are flush on both sides of the core or door-body. These filling-blocks are stepped or shaped to conform to the stepped ends of the contiguous strips, so as to fit closely between the same, and are glued

or otherwise secured at their edges to said strips, so as to form a lock or connection between the adjacent ends of the various frame members of the door. The corner-blocks h h^3 5 and the side blocks h^4 h^5 at opposite ends of the lock-rail are formed to fit the adjacent facing-strips a , d , and d' of the stiles and the top and bottom rails and are glued or otherwise secured to said strips. These filling- 10 blocks may be cut or sawed from any cheap or inferior wood or other light material, or they may be molded of any suitable composition. By forming or arranging the strips of the several frame members so as to present 15 stepped ends and constructing the contiguous edges of the filling-blocks correspondingly the strips are glued to the blocks along a portion of their sides, as well as at their ends, thereby increasing the extent of the attaching-surface and forming a correspondingly 20 stronger joint. While such stepped joints are preferably employed, the same result may be obtained, although in an inferior degree, by making the contiguous faces of the blocks 25 and strips straight or without steps. The core or door-body so formed is covered on each side with a facing I of veneer, which is preferably applied in strips, as shown in Fig. 1. These veneer-strips are glued to the faces 30 of the various strips forming the frame members. If desired, the strips may also be glued together at their sides, but this is ordinarily not necessary, as the veneer-facings unite the strips sufficiently to form a strong and rigid 35 core.

The panels of the door may be secured in place in any well-known manner. In the preferred construction shown in Figs. 2 and 4 of the drawings the members of each panel- 40 frame are provided in their edges with grooves j , which receive projecting ribs j' , between which the panel is centered or fitted, and the panel is secured in place by molding-strips j^2 , which overlap and conceal the joint between the panel and said ribs. 45

Although I have shown my invention applied to a cored door-frame, it is obvious that

the same is applicable to other cored wood-work of a similar character.

I claim as my invention—

1. A frame for doors and similar articles having adjacent frame members separated by intervening spaces and each member being constructed of strips which are arranged side by side and which project successively one 55 beyond the other so as to produce a stepped end on the member, and filling or locking blocks arranged in said recesses and having correspondingly-stepped faces which are secured to the stepped ends of the frame mem- 60 bers, substantially as set forth.

2. A cored door having stiles composed of upper and lower sections each of which is built up of strips of uniform thickness arranged side by side and having their ends 65 stepped or arranged to project successively beyond each other, a lock-rail composed of similar strips having their outer ends stepped, and filling-blocks arranged in the spaces between the adjacent ends of the stile-sections 70 and the lock-rail and having its edges stepped to fit the contiguous portions of said members, substantially as set forth.

3. A cored door having a lock-rail composed of sections arranged on opposite sides 75 of the vertical center line of the door and each built up of strips of uniform thickness arranged side by side and having their ends stepped or arranged to project successively beyond each other, upper and lower muntins 80 composed of similar strips having stepped inner ends, and a filling or locking block arranged in the space between the opposing stepped ends of the muntins and the lock-rail sections and having stepped edges con- 85 forming to the corresponding ends of said members, substantially as set forth.

Witness my hand this 8th day of August, 1900.

FREDERICK J. CRONIN.

Witnesses:

THEO. L. POPP,
E. A. VOLK.