May 14, 1957 C. C. LINCOLN, JR 2,791,809

DOOR CONSTRUCTION

Filed Aug. 30, 1955 2 Sheets-Sheet 1

Fig. 1.

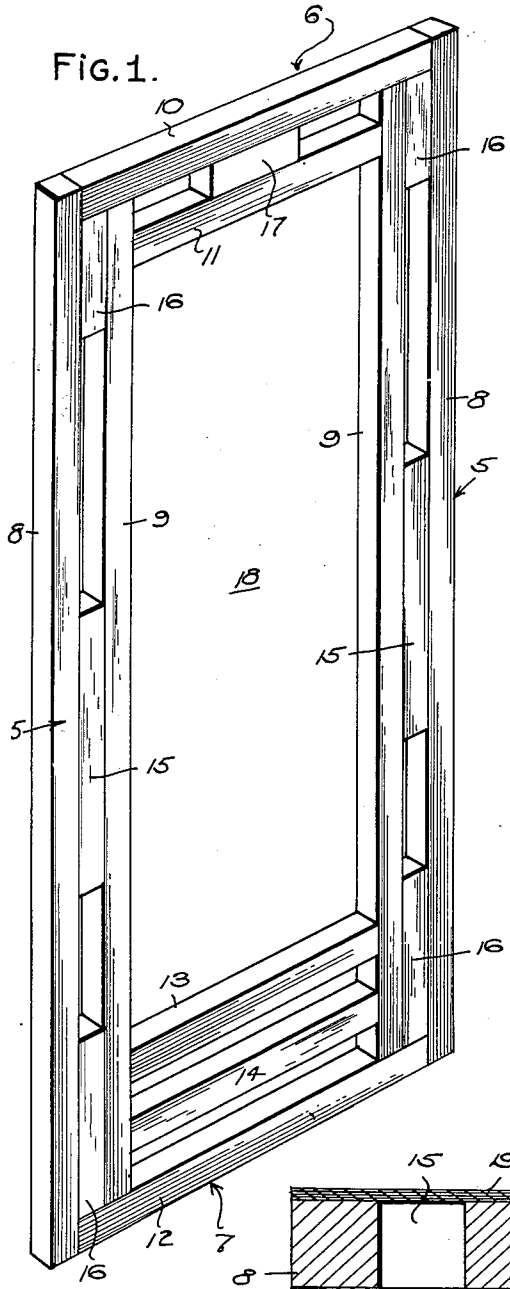
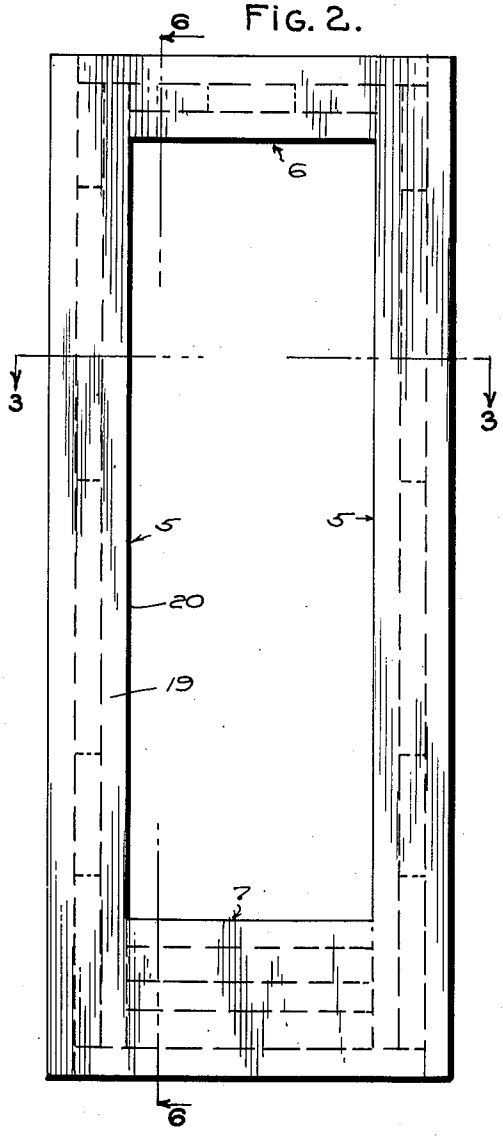


Fig. 2.



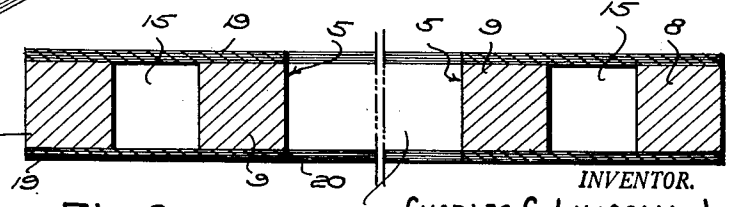


Fig. 3.

INVENTOR.
CHARLES C. LINCOLN, JR.
BY
James H. Ryles
ATTORNEY.

May 14, 1957 C. C. LINCOLN, JR 2,791,809

DOOR CONSTRUCTION

Filed Aug. 30, 1955 2 Sheets-Sheet 2

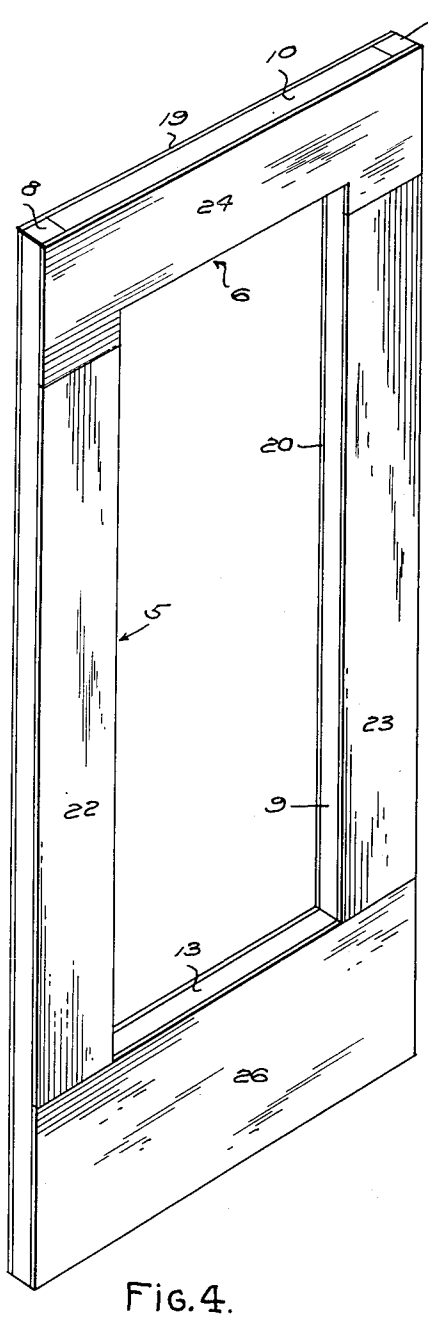


Fig. 4.

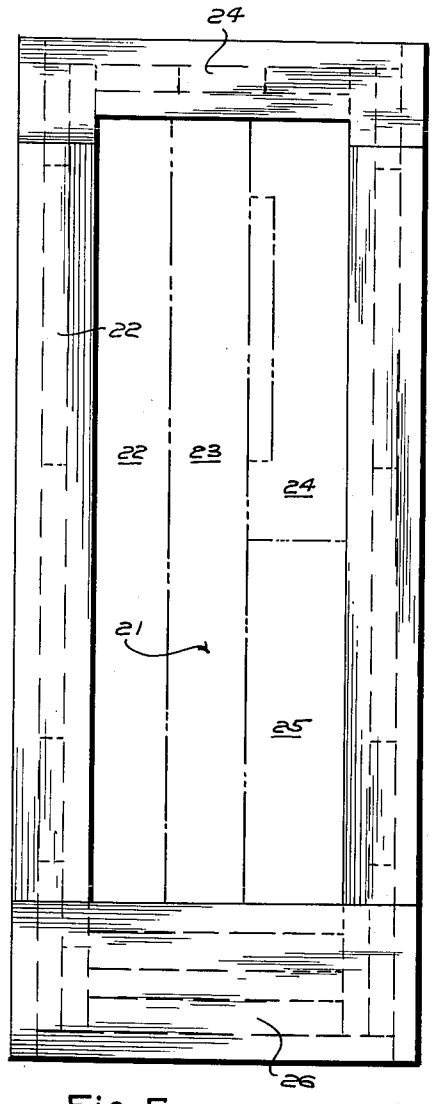


Fig. 5.

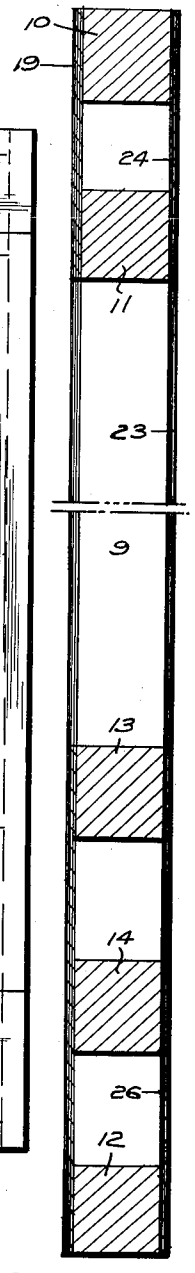


Fig. 6.

INVENTOR.
CHARLES C. LINCOLN, JR.
BY
James M. Hyles
ATTORNEY.

United States Patent Office 2,791,809 Patented May 14, 1957

2,791,809

DOOR CONSTRUCTION

Charles C. Lincoln, Jr., Miami Beach, Fla.

Application August 30, 1955, Serial No. 531,418

1 Claim. (Cl. 20—35)

This invention relates to a novel door construction and primarily to a closure door that is constructed for the detachable support of insert panels, such for instance as jalousie devices, although readily lending itself to solid panels, glass panels or the like.

The invention contemplates a novel closure door that is fabricated in a manner to constitute a frame for various transparent, translucent or other ornamental inserts.

The invention further contemplates a frame that is fabricated in a novel manner from a plurality of overlapping rails that are arranged in a manner to most effectively brace the frame against sagging, twisting or in otherwise deteriorating to the extent that the device will fail to function as a true closure. The invention also contemplates the application to the fabricated frame upon its opposite sides, a complete covering of plywood veneer and with the veneer being cemented to the frame to be flush with its marginal edges whereby to present the appearance of a solid flush panel door.

The invention further contemplates a novel arrangement of inserts that are disposed at critical points within the fabricated frame and with the inserts constituting in effect a solid structure at those critical points whereby the door will be reversible and with the inserts permitting the mortise mounting of conventional lock and latch devices and the mounting of the conventional hinge devices.

Another object of the invention resides in a novel economical manner for the application of the plywood veneer, whereby a single sheet of plywood forms a continuous facing for the outer side of the door and with a panel section removed from the sheet of veneer to form the opening of the frame and with that section of the veneer as removed being so proportioned and cut as to form the major veneer cover for the inner side of the door to thereby very materially reduce the cost of manufacture.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred embodiment of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

Figure 1 is a perspective view of a fabricated frame constituting the basic structure of a closure door,

Figure 2 is a face view of the outer side of a completed frame for the support of removable panels,

Figure 3 is a transverse section, taken substantially on line 3—3 of Figure 2,

Figure 4 is a perspective view of a completely assembled door frame viewed from its inner side,

Figure 5 is an inner side elevation of a completely assembled door construction embodied in the invention and,

Figure 6 is a vertical section taken substantially on line 6—6 of Figure 2.

Referring specifically to the drawings, and particularly to Figure 1, there has been illustrated a frame including parallel stiles 5, a head rail 6 and a base rail 7. Each of the stiles 5 comprise outer and inner spaced apart and parallel rails 8 and 9, here shown as being conventional wood strips corresponding generally to the well known 2" x 2". The head rail 6 embodies an outer rail 10 and a parallel spaced apart rail 11. The base rail 7 embodies an outer rail 12 and innermost rail 13 and an intermediate rail 14. The rails 12, 13 and 14 are parallel and spaced apart a predetermined distance in order to constitute adequate height for the base rail of the door. As clearly shown, the rails 8 of the stiles overlap and are rigidly connected with the rails 10 and 12 of the header 6 and the base 7. The rails 8, 10 and 12 thus constitute the major dimensional frame that is proportioned in accordance with recognized standard stock door sizes. The rails 9 of the stiles 5 are rigidly connected with the rails 10 and 12 and determine by their spacing the transverse width of the frame opening. The rails 11, 13 and 14 extend between the rails 9 and are rigidly and permanently connected together. It will thus be apparent that a very rigid frame has been provided that is in itself adequately braced against any tendency to twist or to sag, since the overlapping and inter-locking arrangement of the rails positively brace the elements of the frame throughout its circumference.

Intermediate the height of each stile 5, there has been positioned a filler rail section 15. The fillers 15 snugly engage between the rails 8 and 9 and are flush with the opposite faces of the rails. The inserts 15 are glued, or otherwise permanently connected with the rails 8 and 9 and constitutes in effect with the rails 8 and 9 a solid structure that permits of the solid mortise engagement of the conventional lock sets from either edge of the door. Filler rails sections 16 are engaged between the rails 8 and 9 adjacent to their upper and lower ends and with the fillers 16 being permanently connected with the rails 8 and 9 and with the rails 10 and 12. The fillers 16 thus provide in effect a solid structure whereby to receive relatively long screw fastenings employed to mount the conventional door hinges. Intermediate the length of the header 6, is a relatively short rail section 17, snugly engaged in flush relation between the rails 10 and 11. The insert 17 serves as a rigid and solid base wherein conventional door closures or the like may be connected to the door header 6. It will now be clearly apparent that a novel rigid frame has been provided that is adequately braced in all directions and provides for a rectangular opening 18, and with the opening 18 being proportioned to receive various closure panels, such as jalousie devices or the like. With the arrangement of the inserts 15 and 16, the frame obviously will be reversible in use.

It now becomes necessary in order to provide a finished product, to completely cover the inner and outer faces of the frame. Such covering for the frame consists of the well known plywood veneer panel having at least one face finished in a material corresponding to the desired finish for the door. A sheet of the plywood veneer 19 is cut to the exact size of the marginal edge of the frame. This sheet is then cut away to form a rectangular opening 20 that is dimensioned exactly to correspond to the rectangular opening 18 formed by the frame. The sheet 19 is then permanently cemented to one side of the door frame, being flush with the marginal edges of the frame and flush with the marginal edges of the opening 18. It is of course most desirable that the plywood be cemented to the entire exposed faces of the several rails and that the cement be of the well known marine type, whereby the finished door may readily function in the capacity of either inner or outer closure. The

sheet 19, thus completely encloses and seals the interior structure of the frame against the entry of moisture and thus effectively and additionally imparting rigidity to the frame. That portion of the plywood sheet that has been cut away and, is now designated by the numeral 21, Figure 5, is employed as the covering means for the major portion of the inner side of the door frame. The panel 21 permits the cutting into strips 22 and 23 that are of a width to fully overlie the inner side of the stiles 5 for their major height. The panel 21 also permits the cutting of a covering sheet 24 for the header 6. There will obviously be a relatively small section 25 that is inadequate to cover the lower or base 7. It thus becomes necessary to employ a rectangular sheet 26 that extends for the full width of the frame and the full height of the base 7. The panel 26 together with the panels 22, 23 and 24 are permanently cemented to the inner side of the frame, to be flush therewith and with the abutting portions of the panels 22 and 23 with the panels 24 and 26, being the only joints appearing upon the surfaces of the finished door and these joints are so close that they do not detract from the appearance of the door and, the ability of the operator to utilize what, heretofore has proven waste material, such as the panel 21 justifies the forming of the inner veneer facing of the door in sections. However, with the marine cement, there will be no opening wherein moisture could enter the frame of the device. The plywood employed is preferably of a thickness substantially ⅛ of an inch and its several laminations are united by the well known marine glue.

It will be apparent from the foregoing that a very novel closure device has been provided. The assembly of the fabricated frame is most novel and embodies a structure that is rigidly braced against sagging, regardless of which side of the door receives the hinge device. The stiles and their inserts are identical and permits of the door being swung from either edge. The dimensions of the various rails will obviously vary in accordance with the recognized thickness of inner and outer closure devices. The frame assures that the opening 18 will remain true at all times whereby jalousie devices or other closure panels may be quickly and easily installed therein or substituted one for the other in accordance with various climatic conditions. The use of the several rails, constituting the frame also presents a very economical assembly for the door, since the cost of the rails is very considerably less than the cost of stiles of solid construction.

It is to be understood that the invention is not limited

to the precise arrangement shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claim.

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

A door construction that is formed of a plurality of wood sections that are all square and identical in cross-section, stiles and rails that are assembled to form a rigid rectangular frame, outer stile members and outer rail members that are rigidly connected together at their abutting ends, inner stile members for each stile that are disposed in parallel spaced apart relation to the outer stile members and with the opposite ends of the inner stile members being rigidly connected to the outer rail members, inner rail members that are disposed parallel to and in spaced apart relation to the outer rail members and with their opposite ends being rigidly connected to the inner stile members, the spacing of the several members being equal to the thickness of the rails, a filler block fixedly positioned between the inner and outer members of the upper rail intermediate the length thereof, an elongated filler block fixedly positioned between the inner and outer members of the stiles intermediate their height, upper and lower corner filler blocks that are fixedly positioned between the inner and outer stile members, the several members and the blocks being flush upon opposite sides of the door, another rail member that spans the opening of the frame transversely and that is parallel to and spaced from the inner rail member of the lower rail, the last named member being rigidly connected to the inner stile members, a panel that overlies one side of the door to be coextensive therewith and with the panel being cut away to fully expose the opening of the frame, the opposite side of the door being covered by strips of panelling that has been cut from the first named panel, the several blocks and their associated stile members forming a relatively wide and substantially solid timber at points upon the opposite edges of the door for the mortised mounting of lock devices and for the reception of relatively long hinge mounting screws.

References Cited in the file of this patent

UNITED STATES PATENTS

1,769,985	Coleman	July 8, 1930
2,444,343	Eisinger	June 29, 1948