T. F. BERRILL & H. R. GOGAY.

DOOR AND WINDOW CONSTRUCTION.

APPLICATION FILED MAR. 13, 1916.

1,287,622. Patented Dec. 17, 1918.

2 SHEETS—SHEET 1.

Fig. 1

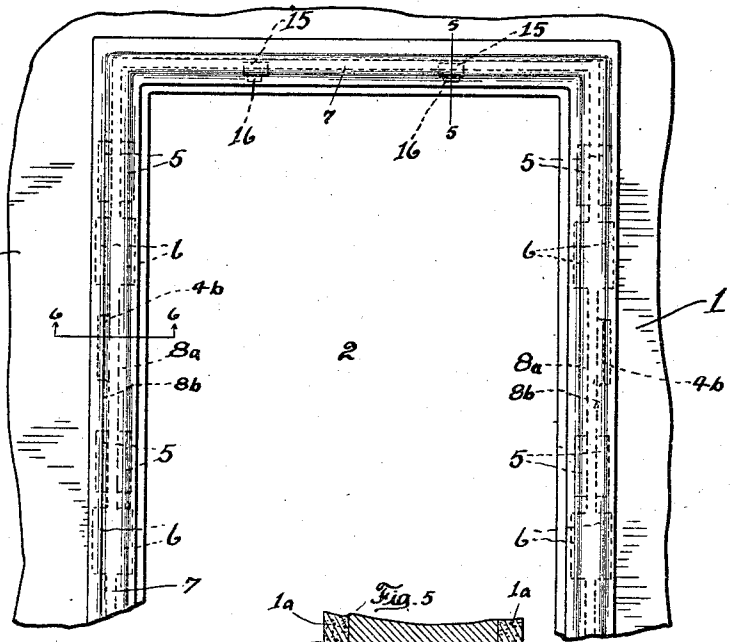
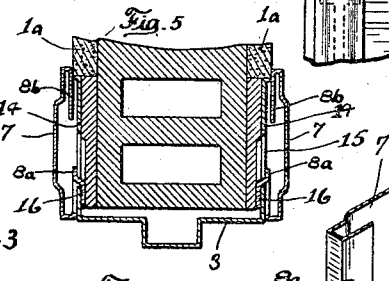


Fig. 5



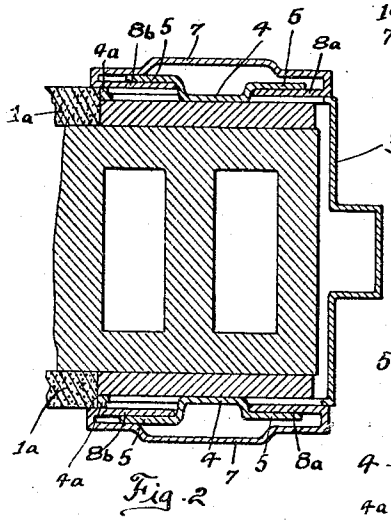
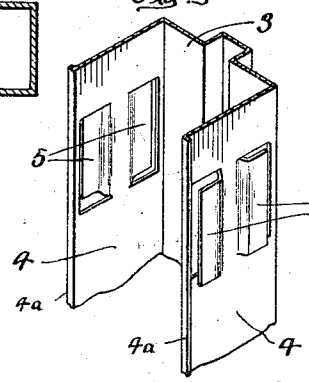


Fig. 2

Fig. 3



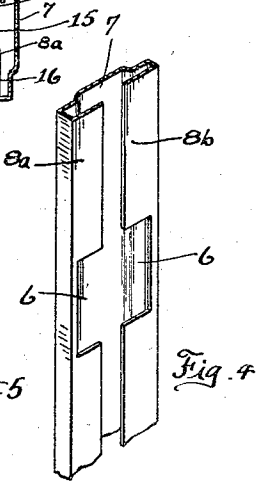


Fig. 4

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2 SHEETS—SHEET 2.

Fig. 6

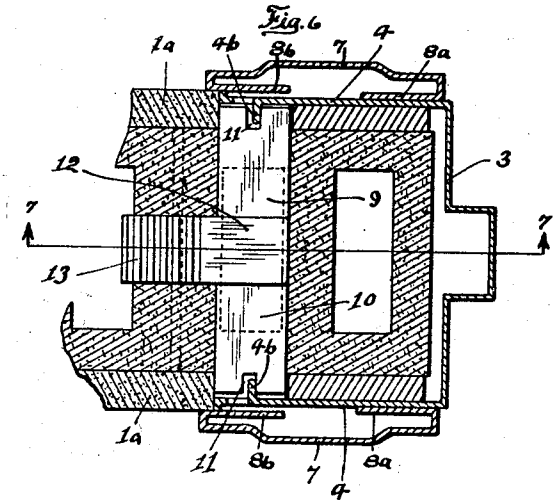


Fig. 7

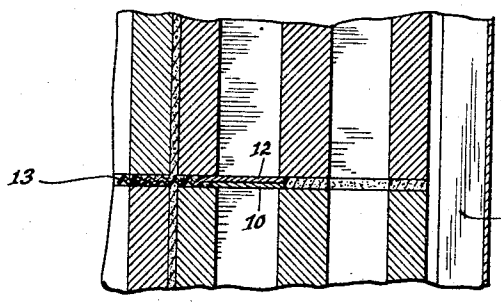
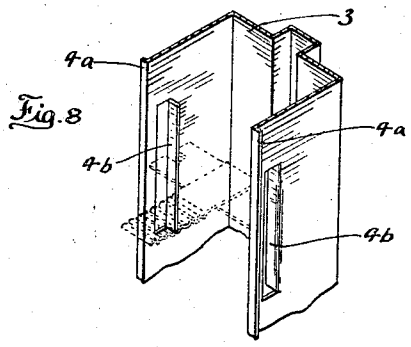


Fig. 8



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DOOR AND WINDOW CONSTRUCTION.

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To all whom it may concern:

Be it known that we, THOMAS F. BERRILL and HARRY R. GOGAY, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Door and Window Constructions, of which the following is a specification.

Our invention relates to door and window construction and is particularly directed to that type of construction employed in fireproof doors and windows. Primarily, our invention aims to provide a type of structure which may be very readily assembled and to be mounted in such assembled position without the necessary use of screws and bolts or the like. In other words, we aim to provide a type of construction which may be interlocked one with the other as regards the general frame piece and the trim structure, this interlocking relation being such as to form an entirely rigid assembly.

Our invention has for a further object the provision of means whereby the main frame structure may be rigidly anchored in its correct position, thereby not depending solely on the accuracy of workmanship on the part of the wall or partition builder.

Still a further object is the provision of such type of structure that the main frame piece does not become marred by the plasterer when exceptional care is not taken by him when surfacing the wall with plaster.

The preferred embodiment of our invention is shown in the accompanying sheets of drawings, in which similar characters of reference designate corresponding parts, and in which:

Figure 1 is a view in side elevation showing the frame and trim pieces in their assembled relation,

Fig. 2 is an enlarged cross section taken through the structure shown in Fig. 1, and showing the manner of connection between the main frame and the trim structures,

Fig. 3 is a fragmentary perspective of a portion of the frame piece showing the tongue structure for engaging the trim,

Fig. 4 is a fragmentary perspective of the trim section used by us,

Fig. 5 is an enlarged cross section taken on line 5—5 of Fig. 1.

Fig. 6 is an enlarged cross section taken on line 6—6 of Fig. 1 and showing particularly the manner of anchoring the main frame to the wall or partition.

Fig. 7 is a section taken on line 7—7 of Fig. 6, and,

Fig. 8 is a fragmentary perspective of a portion of the main frame showing the manner of securing the anchor in position.

The present invention is directed particularly to the type of structure used in connection with doors, but it will be understood that the same is equally applicable to windows and the like. In these several views, the wall proper is designated by the reference numeral 1 and it is in the wall opening 2 that the finished framework and trim are to be placed. The general framework or main frame comprises a portion 3 shaped to adapt itself to the desired type of wall and has each of its two sides 4 bent laterally or outwardly to present the projecting lip or shoulder 4^a. This shoulder is provided for the two-fold purpose of providing a gage to which the plasterer may work when surfacing the wall proper with a plaster as is shown at 1^a and also for preventing the outside surface of the main frame piece from becoming soiled or marred during this plastering operation and before the trim pieces have been placed in position. It will, of course, be understood that the trim pieces are not placed in position until after the wall has been surfaced with plaster and in forming a gage to which the plasterer may work, these shoulders 4^a also present an edge over which the plasterer may slide his tool. In so doing, it is only the outer edge of the shoulders 4^a that this tool comes in contact with and consequently the remaining surfaces of the faces 4 may not become smeared. The faces 4 are also each provided with a number of oppositely disposed inwardly projecting tongues 4^b, which tongues are struck out of the body portion proper of the faces as indicated more clearly in Figs. 6 and 8. These inwardly projecting tongues then serve as tracks or guides into which the anchors 9 are slid. These anchors are provided in order to more securely or more rigidly hold the frame piece in position and to overcome all possibility of the frame-

work from shifting from its true position. The anchors themselves are composed of cross plates 10 whose opposite ends are slotted as shown at 11 to engage the tongues 4^b as is shown in Figs. 6 and 8 and laterally projecting anchor strips 12. These anchor strips are secured to the cross plates 10 in any desirable manner as by riveting or spot welding and their outer ends are preferably corrugated as is indicated at 13, so that they may more securely embed themselves in the mortar between the bricks forming the wall construction proper. These tongues 4^b are made of a length so that the anchors may be located so that they will fall adjacent a mortar joint, it being only necessary, therefore, to make these tongues 4^b of a length slightly longer than the height of the building bricks. The portions 4 are also each provided with a series of tongues 5, which tongues are preferably, although not necessarily, arranged in pairs and disposed at intervals throughout the height of the frame. These tongues are preferably struck out of the metal forming the framework itself as is indicated particularly in Fig. 3 and are designed to be of a size to fit into notches 6 formed in the trim section 7. It will be understood that these trim sections may have any desired shape as regards their exterior appearance but they are each preferably provided with a turned-under portion 8^a and 8^b along opposite edges as is shown and it is these turned-under edges that are notched out, as is shown at 6, in the manner corresponding with the size and location of the tongues 5. It will appear that one of these tongues 5 is located at a greater distance from the plane of the faces 4 than the other and also that the turned-under edge 8^a is located a greater distance from the outer face of the trim section 7 than is the turned-under edge 8^b. This structure is provided in order to complete the fit over the outwardly projecting shoulders 4^a, as will be more clearly seen in Fig. 2 and as shown in this figure, one edge of each trim overlaps the joint between the shoulders 4^a and the plastering, which makes for a very sightly appearance when the parts are assembled. The cross piece 14 of the main frame or that portion which spans the distance between the two longitudinal side pieces is preferably notched out as is shown at 15 in Fig. 5, and the lower edge 8^a of the trim piece is provided with a series of tongues as shown at 16. These tongues are of a size to fit the notched out portions 15 to enable them to slide into the coöperative position shown in Fig. 5 to hold the upper portion of the structure in position.

The manner of assembling our type of structure is as follows: The main frame section formed of the portions 3 and 4 is set into position and a wall built around it. During the process of building this wall, the anchors 9 are placed in position and also built into position whereby the main framework is rigidly held in its proper position. After this framework has thus been set, the plasterer may surface the wall and in doing so utilize the edges 4^a as a gage and incidentally, this gage prevents his tools from coming into contact with the exposed surface of the framework to smear it. The tongues 5 are so formed that they project from the side of the wall a distance to accommodate the turned under flanges 8^a and 8^b and the trim sections are then located so that the notched-out portions 6 may pass over these outwardly projecting tongues 5. In this manner the two turned under edges or flanges 8^a and 8^b will be made to lie adjacent the side faces 4 of the main frame to give a finished appearance and in the same manner, the tongues 16 carried by the edges 8^a of the cross piece of the trim, will be made to engage the rear surface of the faces 4 of the main frame. After these trim portions have been placed in this position, they are shoved or slid down a distance so that their lower edges engage the floor or some other limiting surface. It is essential only that they be slid down to a position so that the tongues 5 engage the inside faces of the flanges 8 and thus made to engage these flanges to securely hold the parts in position. The function of the notches 6 is to permit the assembling of the various sections and after this has been accomplished, they have no other function.

What we claim, is:

1. A structure of the character described comprising a frame member shaped to fit the inside of a wall opening, a plurality of tongues arranged in pairs struck out of the side faces of said member, a trim structure, and oppositely disposed flanges carried by the inner and outer edges of said trim structure and turned under the same to project toward each other, said flanges being provided with a series of notched out portions extending from their edges toward the edges of the trim structure and located at a level so that when the trim is slid into position, said flanges will be engaged by said tongues.

2. A structure of the character described comprising a frame member shaped to fit the inside of a wall opening, a laterally projecting shoulder around the outside edges of the faces of said frame lying parallel with the building wall to form a plaster gage, a plurality of tongues carried by said frame member, a trim structure, and a flange on the outer edge of said trim structure turned under the same and of a size to overlap the joint between said shoulder and the wall

plaster, said flange being provided with a series of notched out portions starting from its free edge and extending toward the outer edge of the trim to coöperate with said tongues so that when the trim is slid into position said flanges will be engaged by said tongues.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS F. BERRILL.
HARRY R. GOGAY.

Witnesses:
H. A. WHEELER,
ERNEST L. LINN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."