D. M. KELLY.

FRAME FOR WALL OPENINGS.

APPLICATION FILED MAY 15, 1916.

1,197,031.

Patented Sept. 5, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

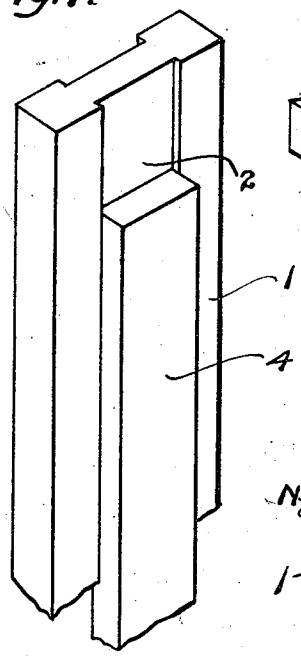


Fig. 3.

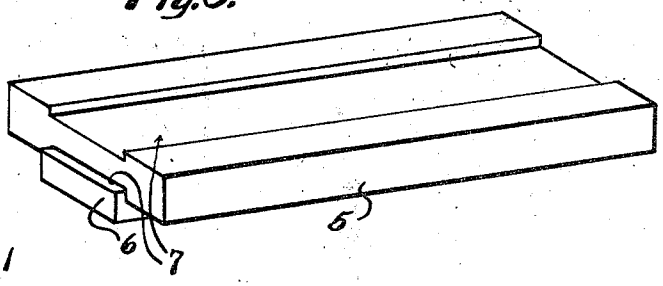


Fig. 4.

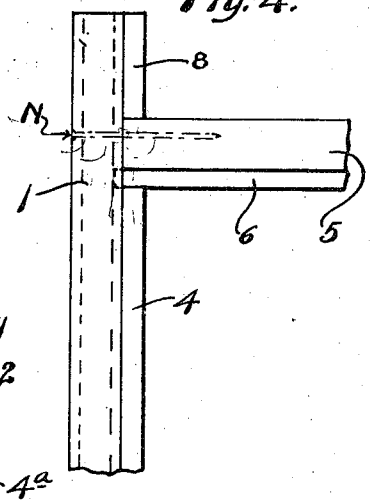


Fig. 5.

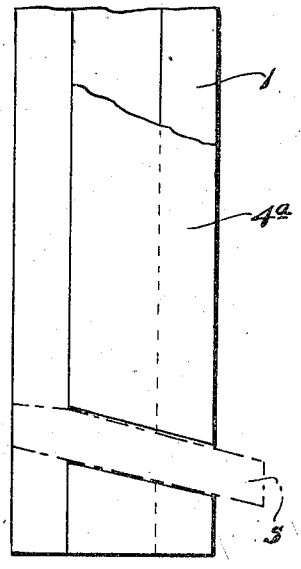


Fig. 2.

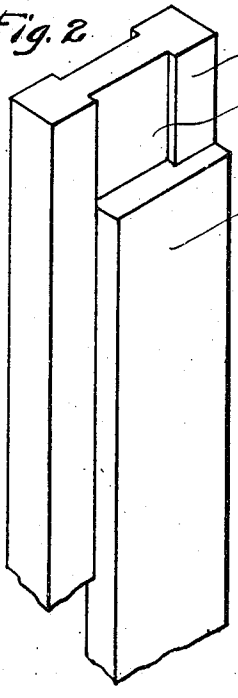
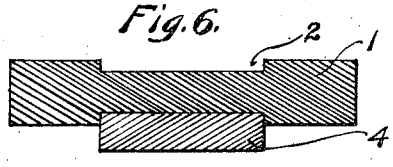


Fig. 6.



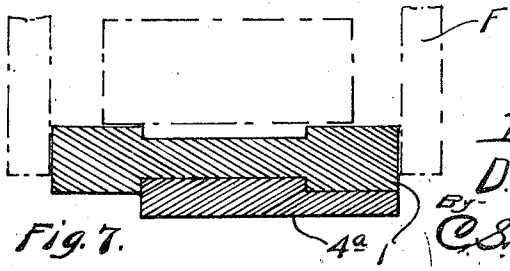


Fig. 7.

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2 SHEETS—SHEET 2.

Fig. 8.

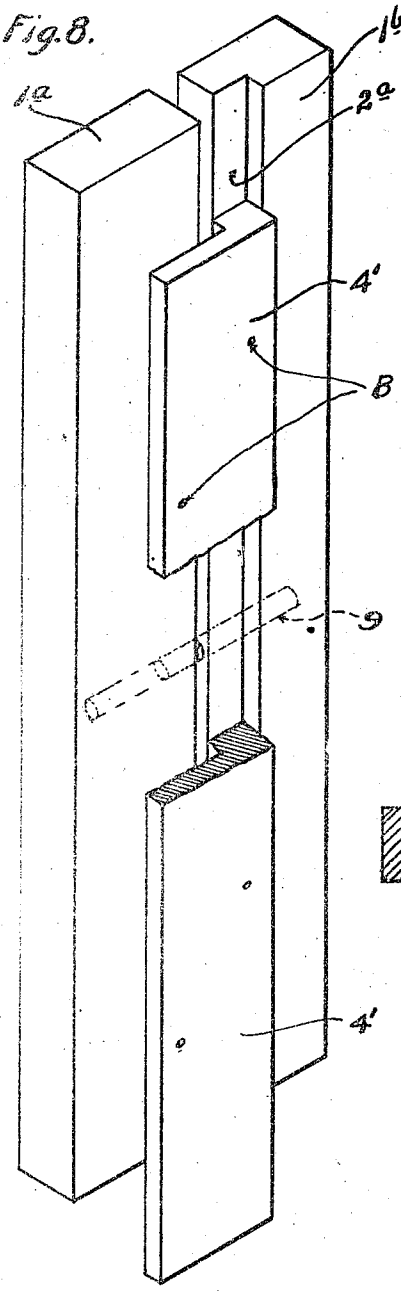


Fig. 9.

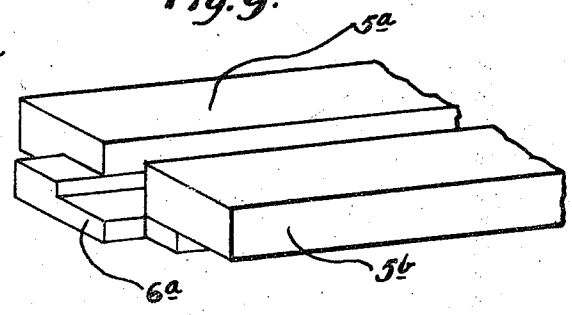


Fig. 10.

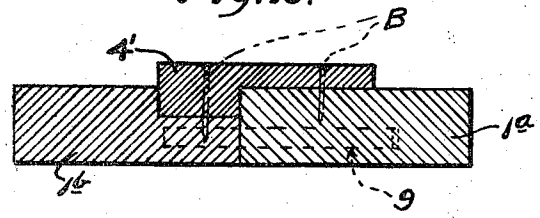
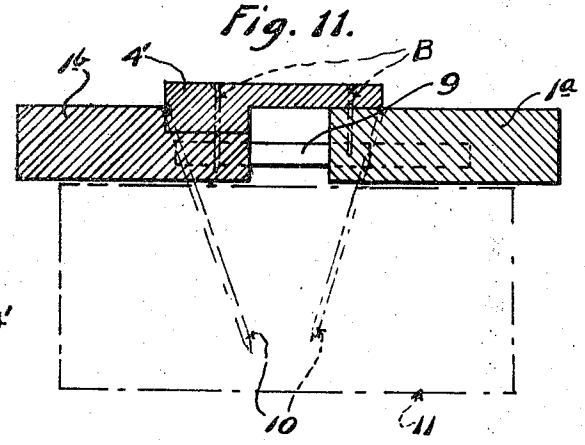


Fig. 11.



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UNITED STATES PATENT OFFICE.

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FRAME FOR WALL-OPENINGS.

1,197,031. Specification of Letters Patent. Patented Sept. 5, 1916.

Application filed May 15, 1916. Serial No. 97,527.

To all whom it may concern:

Be it known that I, DANIEL M. KELLY, a citizen of the United States, residing at the city of Cairo, in the State of Illinois, have invented a certain new and useful Improvement in Frames for Wall-Openings, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates generally to wooden building structures, and more specifically to improvements in the construction of frames for wall openings, such as door-frames, sash-frames, and the like.

In the common construction of such frames, a jamb and head are employed to finish the opening, and upon the jamb and head is mounted or formed a continuous stop against which the wall closure, such as the door, rests when in closed position. In present practice, the lumber which is designed for use in this situation is suitably formed at mills and sold in various lengths, the stop strip being either separate from the jamb strips, or formed as an integral bead upon the latter. In shaping the material for a frame, it is necessary to gain or slot out portions of the stop or jamb to accommodate the head pieces, and in assembling the parts considerable care must be exercised to insure their being properly centered and squared with one another.

It is the purpose of my invention to produce a construction in which the gaining of the material is obviated, and the proper centering and squaring of the members of the structure require but little effort.

A correlative object of the invention is to provide a form of material for frames which may be universally employed in either outside or inside frames; which lends itself, with but slight and simple alteration, to various sizes and types of frames; and which requires but a minimum amount of cutting in forming a frame.

A further object is to provide a form of frame material which may be easily handled, and which may be packaged in such shape as to protect it from injury and preserve it against warping while in shipment or storage.

A still further object of my invention is to provide a form of frame material for the use indicated, which contains certain features of adjustability whereby it is adaptable to frames of different width, without necessitating dressing down or special forming of the material.

Other and further objects of my invention will be obvious, or pointed out hereinafter.

In the accompanying drawings, I show a structure which is illustrative of my invention.

Figure 1 is a perspective view of a side piece adapted for inside door frame construction. Fig. 2 is a perspective view of a side piece adapted for an outside door frame. Fig. 3 is a perspective illustrating a head piece. Fig. 4 is a detail illustrating the manner in which the head and side pieces are assembled. Fig. 5 is an elevation of an outside jamb construction illustrating the maner in which the sill is inserted. Fig. 6 is a detail illustrating the cross section of the piece illustrated in Fig. 1. Fig. 7 is a detail illustrating the cross section of the piece shown in Fig. 2, together with associated frame parts. Fig. 8 is a perspective illustrating a modified form of the invention in which the jamb strip is arranged for adjustment in width. Fig. 9 is a perspective illustrating a head piece of similar construction. Fig. 10 is a cross section of either of said members showing the piece at its minimum width adjustment. Fig. 11 is a cross section of a jamb piece illustrating its disposal in the casing and showing it in an adjusted position to provide greater width.

As shown in the drawings, the numeral 1 indicates the jamb member, which is a dressed strip of proper dimensions, shaped on its opposite sides to provide similar grooves 2. Arranged to fit snugly, but slidably, in either of these grooves is a stop strip 4, the same being of sufficient thickness to extend the desired distance beyond the face of the jamb 1 to form the stop. The head strip 5 is preferably of cross section similar to the jamb strip, and associated with it is the

head stop strip 6. The head stop strip is designed to fit in either of the grooves 7 of the head strip, and is somewhat longer than the latter, so that its ends may project beyond the ends thereof. These pieces may be formed as just described at the mill, and cut into convenient lengths which may be laid flat together and securely crated so that they form a package convenient for shipment and storage, and one which will hold them against warping.

In installing a frame, pieces of the proper length are taken, and assembled in the following manner: The jamb pieces are left somewhat longer than the height of the door opening, as is customary. The stop strip 4 is placed in a groove 2 of a jamb strip with its upper end at the proper distance from the lower end of the jamb piece to determine the height of the door opening, and secured in place, as by brads. The projecting lower end of the stop strip is simply sawed off flush with the end of the jamb piece. Jamb and stop pieces for the other side of the frame being similarly prepared, the head piece is placed in position between them, the head piece, of course, having been cut off to the proper length, and the head stop strip having been cut to a length such that its extremities project from the ends of the head piece to an extent equal to the depth of the grooves 2. In assembling the head piece with the jambs, these projecting extremities of the stop piece rest upon the upper ends of the jamb stop pieces, and register in the grooves 2. The ends of the head piece fit flush against the faces of the jambs. In this fashion the head piece, perforce, is centered and squared with the jambs, and retained in place while the pieces are being secured together, as with the nails N. It will be obvious that, no matter what the height at which the head piece is placed, these same facilities for centering it on the jambs are provided by virtue of the continuity of the slots 2. The pieces cut off from the lower ends of the stop strips may be tacked in place above the head piece, as illustrated in Fig. 4, wherein they are designated by the figure 8. In this position they operate to assist in holding the head in place, and keep it square. The frame having been thus assembled, it may be placed in the wall structure and the frame finished as desired, as by the pieces marked F in Fig. 7.

It will be understood that the forms illustrated in Figs. 1, 3 and 6 are designed for use in inside door frames. By substituting the form of stop strip illustrated in Figs. 2, 5 and 7, the frame becomes of suitable form for an outside door. In this instance, the stop strip, which is designated 4^a, has a laterally projecting portion which overlies the face of the jamb, and comes out flush with the outside edge of the latter. The jamb strip is of the same form in either instance, and the simple expedient of using the proper stop strip renders the same form of jamb material applicable to either sort of frame. With either form of stop strip the parts will be properly centered at any selected height by virtue of the engagement of the extremities of the head stop strip in the grooves of the jambs. In using the form of stop strip illustrated in Fig. 2, however, it is necessary to notch the laterally projecting portion flush with the end of the head piece, which will permit the ends of the stop strip to fit into the grooves in the jambs. This is, of course, a simple operation, particularly as compared with gaining or mitering the various members to secure a good joint. The latter sorts of operations are completely eliminated by the use of my improved construction.

In inserting the sill in an outside frame, the lower ends of the stop strips are cut on the proper bevel so as to fit the slope of the sill. This construction is illustrated in Fig. 5, wherein the sill is shown in broken lines, and indicated by the letter S. The piece which is sawed off in shaping the end of the stop strip is preferably secured in place below the sill to form an additional support, as illustrated.

While I have used the terms 'door," "jamb," and "head," in the foregoing description in the manner in which they are used customarily, it will be understood that the construction is applicable to casement sash frames and other frames besides door frames, and that the pieces referred to as jamb and head may be placed in other positions. For example, in basement sash frames for masonry walls, I find it desirable to fit the ends of the vertical or side stop strips into the groove of the horizontal or head strip, reversing the relationship illustrated in Fig. 4.

From the foregoing, it will be apparent that the use of my improved material and construction will effect a very considerable saving in cost, both by virtue of the fact that a uniform shape of jamb material may be used universally in outside and inside frames, and because of the elimination of time-consuming operations in installing, such as the gaining and mitering referred to. Furthermore, by virtue of the interengagement of the members where they are joined, proper centering is insured without the necessity of careful measuring and gaging. With jamb material of the form shown, either side may be used as the outside, by virtue of the uniform arrangement of the grooves, and the arrangement of grooves on both sides of the piece also tends to prevent its warping.

In Figs. 8 to 11 inclusive, I show a modified form of my improved frame construc-

tion. It is well known, of course, that in different buildings in which my improved form of material is designed to be used, the walls are of varying thicknesses, necessitating frames of various widths for the door and window openings. To accommodate my improved form of material, and accordingly my improved frame construction, to this variation in the thickness of walls, I make the jamb and head members adjustable as to width in the following manner, as will be understood by reference to Figs. 8 to 11 inclusive. A jamb member, instead of being formed of an integral strip, is formed of two strips, 1^a and 1^b. These strips are held together and in proper alinement by means of dowels 9, which permits the strips being spaced apart to different distances, or permits their being abutted against each other. The longitudinal groove 2^a is provided in one of the strips, as the strip 1^b, contiguous to the associated strip, the inner edge of the associated strip, as 1^a, forming one wall of the groove. In this groove the stop member 4′ is arranged to slide. This stop member has a laterally projecting portion which is adapted to overlap and rest against the face of the strip 1^a. In adapting the jamb member to the thickness of the wall opening, the strips 1^a and 1^b are adjusted to the proper distance apart, the stop member 4′ is adjusted to the proper height, and the members secured in these relative positions by the brads B or similar means which will secure the stop strip to the jamb strips.

The head member is formed in fashion similar to the jamb members, being made up of the longitudinal relatively adjustable strips 5^a and 5^b, and the adjustable head stop strip 6^a. The strips 5^a and 5^b are secured together by dowels in the fashion above described, and are secured in their proper adjusted positions by securing means seated in the stop strip 6^a. In assembling the head with the jamb members, the ends of the stop strip 6^a are left protruding the proper distance to register in the groove 2^a, the extremity of the stop strip being notched to the proper width to register in the groove 2^a, and the parts placed together in the manner above described with reference to the forms illustrated in Figs. 1, 2 and 3. When the frame is placed in the wall opening, it may be suitably secured as by the nails 10 which secure the component strips of the jamb and head to the wall framing members, as the member 11.

It will be observed that by the use of this construction, a great deal of labor is eliminated, not only in the gaining or mortising of the frame members as hereinbefore referred to, but also by obviating the necessity of trimming the frame members to the proper width. Furthermore, in this modified form, the members may be assembled with expediency, by virtue of the centering and squaring function incident to the interengagement of the head and jamb members in the manner described.

Material of the form described may be shaped completely at the mill, leaving only the very simple operation of cutting off the ends of the pieces to be performed by the joiner or carpenter. Material so shaped may be sold as stock forms in suitable lengths, which may be crated together in convenient shape for handling and storage. When so crated the pieces will be protected from injury, and preserved from warping.

While I have shown herein, different forms as illustrative of my invention, I am aware that it may be embodied in various forms other than those shown without departing from the scope of the following claims.

What I claim is:

1. A frame for wall openings comprising jamb members provided with longitudinal grooves, stop members engageable in and positioned by said grooves, and a head member having terminal projections adapted to register in said grooves at any available point throughout the length of the jamb members.

2. A structure of the sort described comprising jamb members formed with outwardly opening grooves, stop members engageable in and positioned by said grooves, a head member adapted to abut the jamb members, and a stop member movably mounted on the head member and of proper dimension to register in said grooves.

3. A knock down frame for wall openings including a jamb member formed with a continuous longitudinal groove, a head member adjustable longitudinally of the jamb member and having a terminal portion adapted to register in said groove to center the members, a stop member engageable in the groove in different relative longitudinal positions to form an abutment for the wall closure and a support for the head member, and means for securing all of said members in assembled relationship.

4. A frame for wall openings including a jamb member provided with a longitudinal groove, a jamb stop member seated in said groove, a head member abutting the jamb member, and a stop member mounted on the head member and having its extremity resting upon the extremity of the jamb stop member and extending into the groove of the jamb.

5. A knock down frame for wall openings including in combination, jamb members provided with longitudinal grooves, jamb stop members engageable in said grooves at

different positions longitudinally of the jamb members, a head member formed for coöperation with the jamb members, a head stop member separably affixed to the head member and having its extremities formed to register in the grooves in the jamb members, said head member including portions for positioning the head stop member to preserve the alinement thereof, and means for securing all of said members in assembled relationship.

In testimony whereof I hereunto affix my signature this 10th day of May, 1916.

DANIEL M. KELLY.