

June 1, 1954

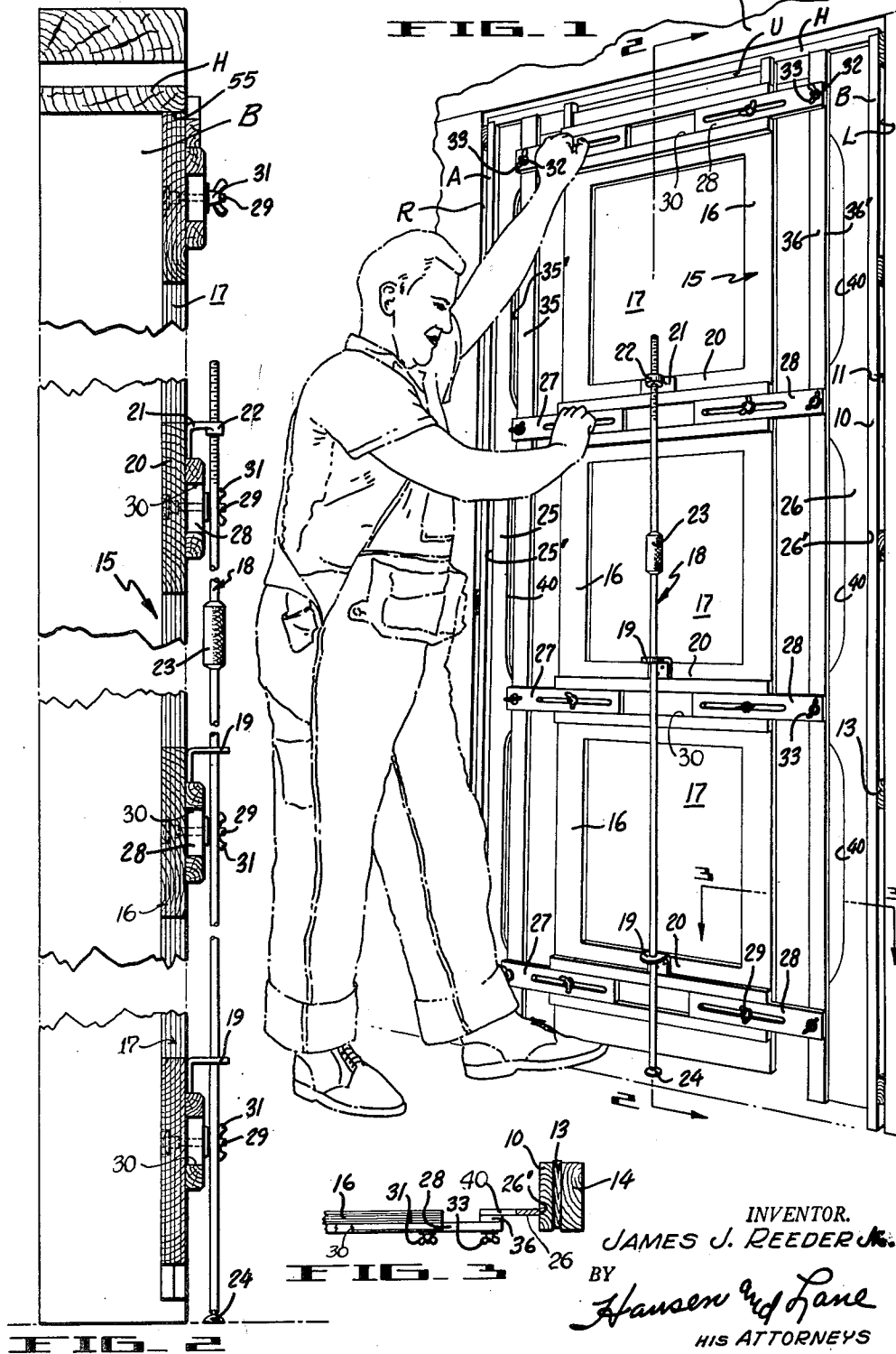
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DOOR FITTING JIG

Filed May 5, 1953

2 Sheets-Sheet 1



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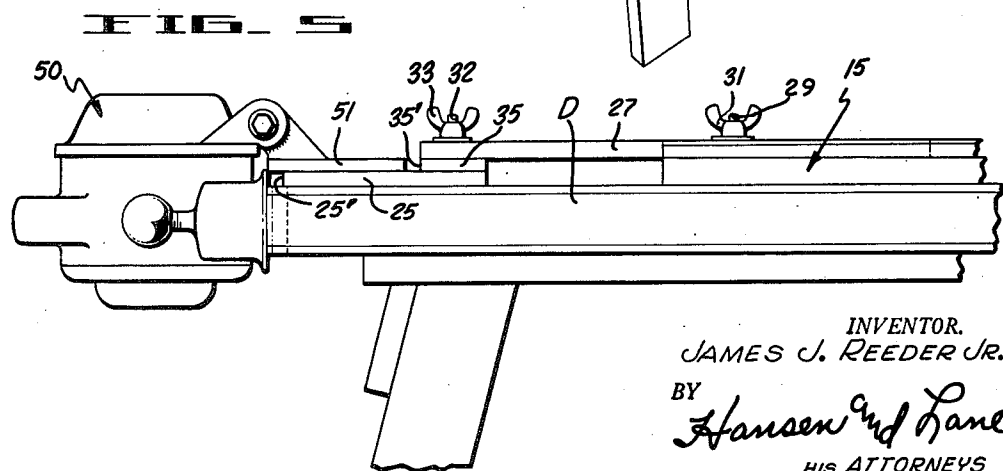
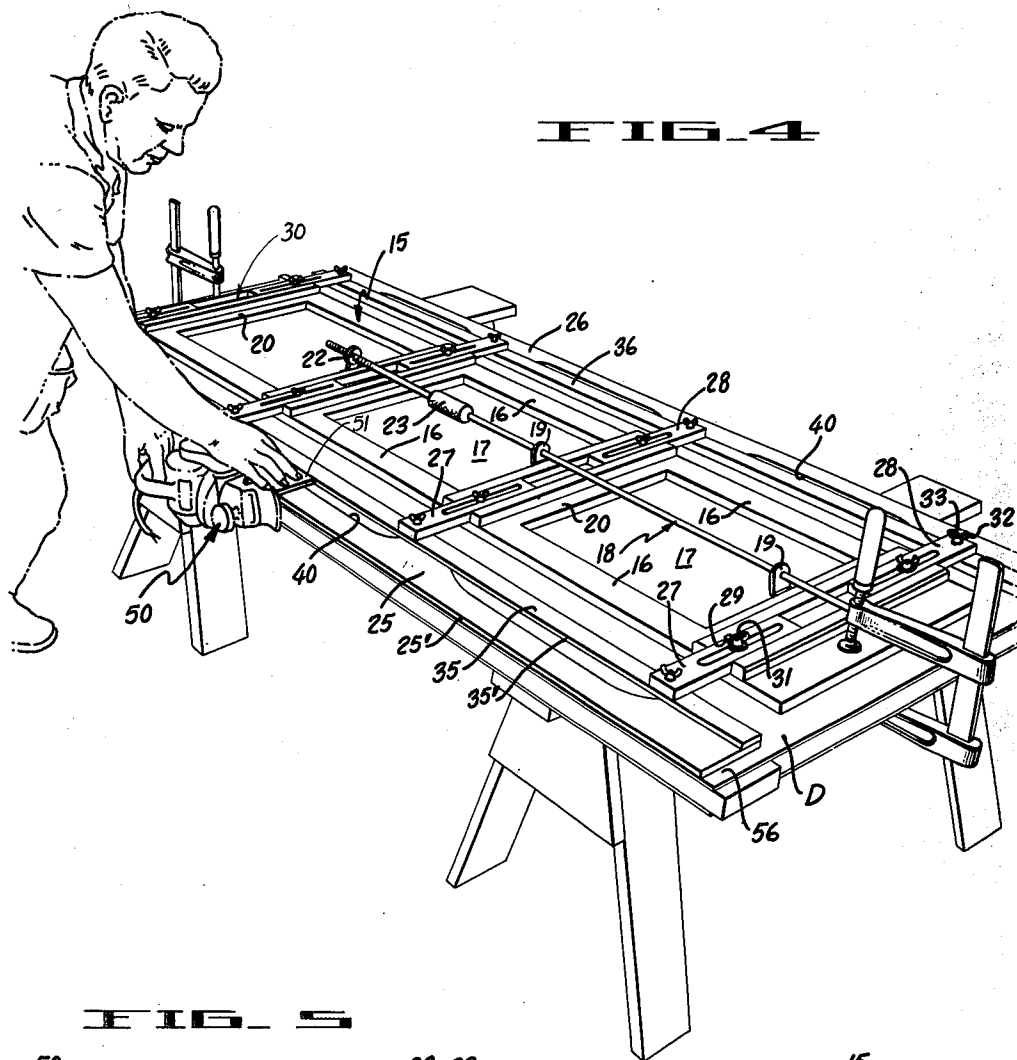
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UNITED STATES PATENT OFFICE

2,679,696

DOOR FITTING JIG

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Application May 5, 1953; Serial No. 353,140

5 Claims. (Cl. 33-194)

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This invention relates to door fitting jigs and more particularly to a device of this type having guide means thereon for facilitating shaping of the edges and/or ends of a door in conformity with an opening into which it is to fit.

In general, the present invention is associated with an adjustable frame for obtaining a template of a door opening. Such types of adjustable frames are not basically new but heretofore the template created thereby was useful only as a scribing guide requiring compensation for clearances later required between the door and the frame. In other words, to compensate for such clearances with the prior adjustable frames, the latter had to be placed over the door to be scribed and the latter scribed along one edge after which the adjustable frame had to be shifted laterally of the door and reset relative thereto before scribing the other edge of the door. Thus it will be seen that the human element entered into the final result and consequently error could occur.

The present invention contemplates the elimination of error due to resetting of the template or adjustable frame and has as its principal object the provision of a guide means for a template whereby both edges of a door can be shaped without resetting of the template or adjustable frame relative thereto.

Another object is to provide an adjustable frame with template edges adapted to conform to any deviations, arcs or curvatures in a door frame relative to plumb.

It is another object to provide a door jig with laterally adjustable slides having their outer ends pivotally associated with flexible template edges and a guide rail paralleling the latter.

These and other objects and advantages of the present invention will become apparent in the following description when read in the light of the drawings in which:

Fig. 1 is a perspective view of a door jig embodying the present invention being set into a door frame to obtain a template of the opening formed thereby.

Fig. 2 is a vertical section of Fig. 1 taken along line 2-2 thereof.

Fig. 3 is a partial horizontal section of Fig. 1 taken along line 3-3 thereof.

Fig. 4 is a perspective view of the door jig of Fig. 1 placed upon a door and illustrating the manner of shaping the edges thereof.

Fig. 5 is an enlarged end view of Fig. 4 as seen from the fore right hand end thereof.

Referring to Figs. 1, 2 and 3, a door frame 10 is shown inserted in a rough opening 11 in a wall

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12 of a building. The door frame 10 including a pair of side jambs A and B as well as a head H is set into the opening in a conventional manner by means of wedges 13. As is customary, at least five wedges are used in the space between the jambs and the vertical side edges R and L of the opening 11 to assure a firm foundation of the side jambs A and B of the frame 10 adjacent the studding buck 14 which form the opening 11. In this manner, that is by the use of wedges 13, the workman is enabled to set the door frame jambs A and B truly vertical but more often than not some slight waver, curve or irregularity may occur in the side jambs of the frame 10.

It is with the foregoing arrangement of a frame already set into a rough opening that the door jig of the present invention indicated as 15 in the drawings is adapted to be used. The door jig 15 embodying the present invention includes an intermediate base member 16 preferably constructed out of rigid material such as plywood of a sufficient number of plies to assure against warping of this intermediate member. If desired, the intermediate member 16 may have its central zones cut out as at 17 which is preferable for the purposes of the present invention. These cutout openings 17 formed in the intermediate member 16 facilitate adjustment of a vertical rod 18 guided for vertical movement in laterally extending guide clips 19 secured to the transverse portions 20 between the openings in the intermediate member 16. The uppermost clip 21 includes a threaded collar 22 to which the threaded upper end of the rod 18 extends for screw adjustment up and down relative to the guide strips 19 and to the intermediate member 16.

To facilitate turning of the screw portion of the rod 18, a hand grip 23 is provided on the rod in a suitable position within the reach of a workman manipulating the jig and as shown in Figs. 1 and 2 within the centermost one of the openings formed in the intermediate member 16. The lower end of the rod member 18 includes a swivel pad or pedestal 24 adapted to bear upon the floor of the building in which the wall 12 is formed so as to raise and/or lower the door jig 15 relative to the door frame 10. In this manner the uppermost edge U of the jig is pressed firmly against the head H of the door frame 10.

The door jig 15 includes a pair of adjustable side edges 25-26. These side edges 25-26 are joined at the respective sides of the intermediate member 16 by laterally extendable slides 27-28. These laterally extendable slide members 27-28 are guided for lateral sliding move-

ment relative to the intermediate member 16 within guideways 30 formed on the solid transverse portions 20 of the intermediate member 16. In addition to the foregoing guide connection to the intermediate member, each slide 27—28 has a longitudinal slot formed therein for receiving a bolt 29 having its head end embedded in the intermediate member as seen in dotted lines Fig. 2. The outer ends of the bolts 29 are threaded and each carry a wing nut 31 by which the slides 27—28 can be secured in lateral adjusted position with respect to their respective guideways. The outer end of each of the slide members 27—28 is provided with an aperture through which a threaded bolt 32 extends. The head end of each threaded bolt 32 is anchored suitably to its square cut head being seated well into the guide member 25 or 26 as the case may be.

Each of the threaded bolts 32 carries a wing nut 33 by which the free ends of the slide members 27—28 can be suitably secured relative to the adjustable side edges 25—26. However, when the nuts 33 are loosened there is pivotal action between the ends of the slide members 27—28 and their point of connection with the side edges 25—26.

For purposes of the present invention, the adjustable side edges 25—26 also carry a corresponding guide rail 35—36 respectively having a side edge 35'—36' respectively, running parallel to the outer edge 25'—26' respectively of the guide or side edges 25—26. As illustrated in the drawings, these guide rails 35—36 are so disposed that the bolts 32 extend therethrough so that any outward thrust of the slide members 27—28 during adjustment of the door jig within the opening 10 is impressed upon the guide members 35—36 as well as the side edges 25—26 of the door jig. In this manner the edges 25'—26' are being pressed firmly against the inner faces of the side edges of the door frame 10 so as to form a template of any irregularities, curvatures or angular shapes therein.

In order to render the adjustable side edges 25—26 flexible for the purpose aforesaid, each side edge 25—26 is recessed on its inner face as at 40. This is done to narrow down these adjustable side edges at a plurality of points along their length, namely between the points of pivotal connection thereof by way of the bolts 32 with the free ends of the respective slides 27—28. In this manner, the adjustable side edges 25—26 are made springy so as to bow or curve as well as slant into any counter or shape as may occur on the inner faces of the side jambs A or B of the door frame 10. It will thus be seen that in the setting of the door jig within a particular door frame, some of the transverse slide members may extend a greater distance from the intermediate member 16 than do others of the slide members. In this manner, the guide rails 35—36 are correspondingly curved so as to run substantially parallel with the outer or template edges 25'—26' of the adjustable side edges 25—26 of the door jig.

After the workman has set the door jig properly within the opening provided by the door frame 10, the jig 15 becomes a template conforming substantially with the opening provided by the frame 10. The jig member is then slid out of or withdrawn from the opening, all of the wingnuts being fastened down tightly so that the entire jig is now a fixed template ready for positioning on a door D in the manner as shown in Fig. 4. In this connection, the door jig 15

which now comprises a template is placed upon the door substantially centrally thereof so as to leave adequate material beyond the template edge of the jig. The jig is then clamped down firmly upon the door D in the manner as shown in Fig. 4.

The rough door D upon which the jig has been placed (Figs. 4 and 5) will extend slightly beyond the template edges of the side edges of the door jig and these extended edges of the door must now be cut down to conform to the shape of the template edges 25'—26' of the door jig. This is done by the use of a power tool such as an electrically driven plane illustrated at 50 in Figs. 4 and 5. This plane 50 is provided with a guide member 51 adapted to lie upon the upper front face of the respective side edges 25 or 26 as the case may be when the plane is applied to the door edge that is to be cut. This guide member 51 is of a dimension calculated to span the entire upper surface of the door jig side edge 25 or 26 and ultimately bear against the edges 35'—36' of the guide members 35 or 36 on the template.

As illustrated in Fig. 5, the plane is adapted to take a depth of cut upon each stroke of the plane member 50 along the edge of the door until the guide member 51 of the plane engages against the edge 35' or 36' of the guide member 35 or 36 as the case may be. The depth of cut taken by the blade of the plane as illustrated in dotted lines in Fig. 5, is such as to allow for the clearance required, for instance, $\frac{1}{8}$ of an inch at each side of the door when the latter is ultimately placed within the frame 10 for hanging thereon.

As previously stated, the adjustable side or template edges 25—26 of the jig of the present invention are adapted to bow or curve in conformity with any curvatures or angles in the side walls of the door frame as created by the wedge members when the door frame is set in place, or as caused by any warping of these side members of the door frame, after it has been set into the opening 11. Consequently, since the edges 35'—36' of the guide rails 35—36 are disposed in parallelism with the template edges 25'—26' of the side edges 25 and 26, it will be seen that the guide member 51 on the plane 50 following any of the curvatures affected on the guide members 35—36 will reflect such curvatures into ultimate cuts made by the plane to the depth of the dotted line as indicated in Fig. 5.

Consequently, once the plane 50 has been run over the door edge in accordance with the guide edge of the particular guide rail 35 or 36, the door will fit perfectly into the opening from which the template was made on the particular door jig. Moreover, since both side edges of the door may be planed without any readjustment or resetting of the door jig relative to the door, it will be seen that the ultimate cut of both edges of the door will reflect the exact shape of the door opening as formed along the inner surfaces of the side jambs A and B as well as the head H of the door frame 10.

In connection with the latter, it will be noted that when the particular door jig has been set into the opening provided by the frame 10, the pedestal member 18 being pressed firmly down against the floor will cause the upper end 55 of the jig to bear tightly against the head H of the door frame 10. In this manner, the head of the door can be scribed accurately to conform to the line at which the door should be cut in order to

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fit within the opening provided by the frame. Moreover, and by the same token, since the door jig 15 has been pressed firmly up against the edge of the opening provided by the frame 10, there will be sufficient space allotted at the lower end of the side edges 25-26 to enable the workman to scribe the slab door adjacent its lower end as indicated at 56 (Fig. 4) so that the door can be cut at its lower edge with a saw to line up with the floor and have sufficient clearance therefrom to enable the door to swing in and out of the opening after the hinges have been set to the same.

While I have described the door jig embodying the present invention in specific detail, it will be apparent that the same may be varied, altered, and/or modified without departing from the spirit of my invention.

Having thus described the invention, what I claim as new and desire to protect by Letters Patent is defined in the following claims:

1. A door jig comprising an intermediate base member, a template forming side edge disposed in the same plane and at each side of said base member, a plurality of vertically spaced horizontally extending guideways in said base member, a slide member arranged in each of said guideways for lateral adjustment, means for releasably securing said slides relative to said intermediate member, each of said slides having their outer end pivotally connected to a respective one of said side edges, and a guide rail secured to each of said side members for adjustment in parallelism therewith simultaneous with the setting of the latter into template forming relation with the inner face of a door frame.

2. A door jig comprising an intermediate base member, a door jamb engaging side edge disposed in the same plane and at each side of said base member, and each having their outer edges disposed to engage the jamb of a door, a plurality of vertically spaced horizontally extending guideways in said base member, a slide member arranged in each of said guideways for lateral adjustment, means for releasably securing said slides relative to said intermediate member, each of said slides having their outer end pivotally connected to a respective one of said side edges, each said side edge having a portion of its inner edge recessed between the points of connection thereof with said slides, and a guide rail secured to each of said side members for adjustment in parallelism therewith simultaneous with the setting of the latter into template forming relation with the inner face of a door frame.

3. A door jig comprising an intermediate base member, a template forming side edge disposed in the same plane and at each side of said base member, a plurality of vertically spaced horizontally extending guideways in said base member, a slide member arranged in each of said guideways for lateral adjustment, means for releasably securing said slides relative to said intermediate member, each of said slides having their outer end pivotally connected to a respective one of said side edges, and a guide rail secured to each

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of said side members for adjustment in parallelism therewith simultaneous with the setting of the latter into template forming relation with the inner face of a door frame, said guide rail forming a guide line parallel to the template forming side edge associated therewith adapted to be engaged by a power tool by which the door edge is later to be cut to conform with the surface against which said door edge is ultimately to be disposed.

4. A door jig comprising an intermediate base member, a door jamb engaging side edge disposed in the same plane and at each side of said base member, and each having their outer edges disposed to engage the jamb of a door, a plurality of vertically spaced horizontally extending guideways in said base member, a slide member arranged in each of said guideways for lateral adjustment, means for releasably securing said slides relative to said intermediate member, each of said slides having their outer end pivotally connected to a respective one of said side edges, each said side edge having a portion of its inner edge recessed between the points of connection thereof with said slides, and a guide rail secured to each of said side members for adjustment in parallelism therewith simultaneous with the setting of the latter into template forming relation with the inner face of a door frame, said guide rail forming a guide line parallel to the template forming side edge associated therewith adapted to be engaged by a power tool by which the door edge is later to be cut to conform with the surface against which said door edge is ultimately to be disposed.

5. In a door jig of the type including an intermediate base member and template forming side edges joined by a plurality of vertically spaced laterally adjustable slide members; the combination therewith of a plurality of guideways on said intermediate member for slidably receiving a respective one of said slide members, each said slide member having pin and slot connection with its respective guideway and the intermediate member, means on said pins for releasably securing said slide members in laterally adjusted position relative to said guideways and intermediate member, a guide rail extending parallel to each of said side edges and disposed between the latter and the free ends of said slide members, and means for pivotally connecting the free ends of said slide members to said guide rails and side edges on either side of said jig for adjusting each guide member in parallelism with the side member with which it is associated simultaneous with the setting of the latter into template forming relation with the inner face of a door frame.

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