

Sept. 15, 1959

J. C. MEHAFFY

2,904,088

JIG FOR PRE-FITTING DOORS FOR METAL JAMBS

Filed Oct. 14, 1957

FIG. 1.

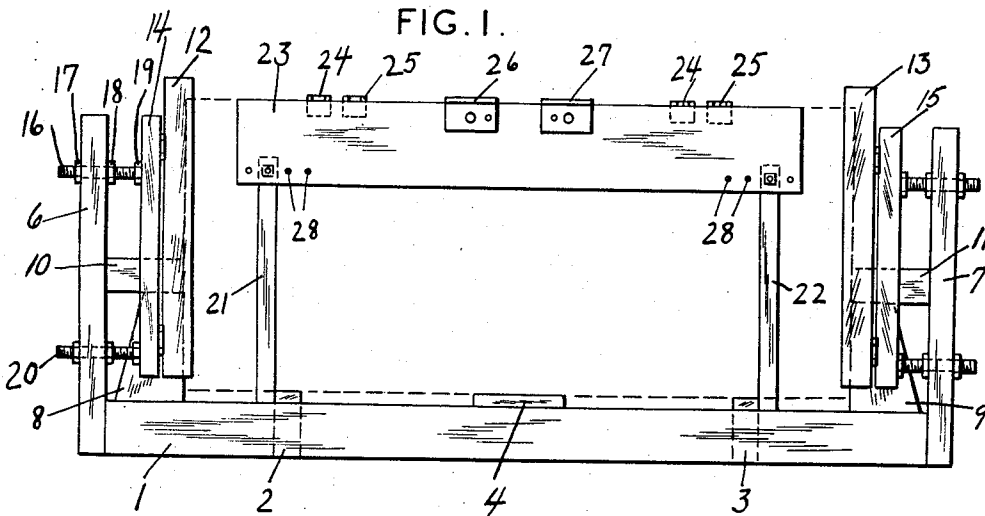


FIG. 2.

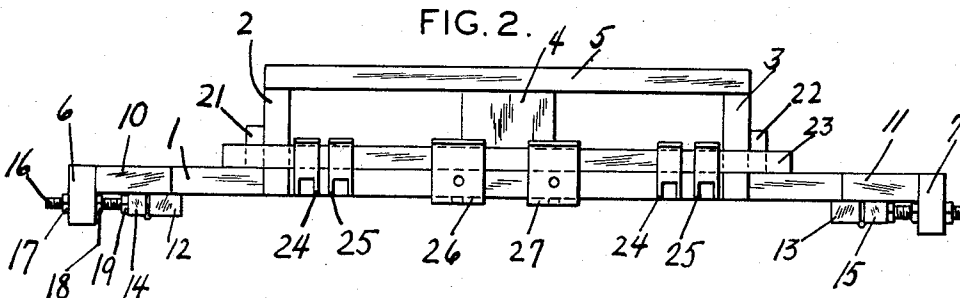
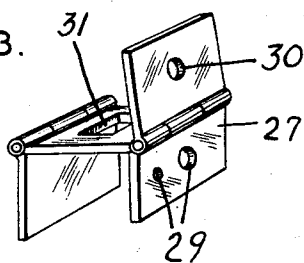


FIG. 3.



INVENTOR
JOSEPH C. MEHAFFY
BY *Frank Groom*
ATTORNEY

1

2,904,088

JIG FOR PRE-FITTING DOORS FOR METAL JAMBS

Joseph C. Mehaffy, Kirkwood, Mo.

Application October 14, 1957, Serial No. 689,876

2 Claims. (Cl. 144-288)

This invention relates to prefitting doors which are to be placed in the metal jambs of houses. The dimensions of the metal jambs are fixed and rigidly controlled at the factory and the doors they are to contain must be rapidly and efficiently cut and fitted to the jamb size.

An object of my invention is to provide a jig which may be easily adjusted and altered in dimensions to accommodate every stock size door offered by the various manufacturers.

A further object of my invention is to provide a system of color coding so that right-hand and left-hand doors may be prefitted, provided with hinges and side and edge lock holes in the same jig.

With these various objects in view, my invention consists in the novel features of construction hereinafter fully described, pointed out in the claims and shown in the accompanying drawings, in which:

Fig. 1 is a side elevational view of the jig,

Fig. 2 is a plan view of the jig, and

Fig. 3 is a perspective detail view of a side lock hole and top edge hole template of Figs. 1 and 2.

Referring to the drawings, wherein like characters of reference denote corresponding parts throughout the several views, the embodiment of the invention, as it is exemplified therein, is generally comprised in a door clamp fixture and jig assembled into substantially a unitary structure. As shown in Figures 1 and 2, the fixture is formed of a horizontal base member 1, resting on the floor and having three relatively short strut members perpendicular thereto, numbered 2, 3, and 4.

The strut members 2, 3, and 4 are joined at their opposite ends by the base member 5. Disposed at either end of the base member 1 and firmly secured thereto are the upright end supports 6 and 7 to which are also firmly secured the bumper standards 8 and 9, by the standard supports 10 and 11, respectively.

The cutoff fences 12 and 13 are hingeably mounted on the fence mounts 14 and 15 respectively. The fence mounts are adjustably mounted on the end supports 6 and 7 respectively. The manner of mounting is shown in Figure 1 at the upper left. A bolt 16 is shown passed through the end support 6, and into the fence mount 14. The relative positions of the end support 6 and the fence mount 14 upon the bolt 16 are maintained by the nuts 17, 18, and 19. A similar bolt 20 is shown at the lower left portion of the Figure 1, so that the fence mount 14 and the end support 6 are maintained rigidly upright and parallel with respect to each other by means of the pair of bolts 16 and 20. A similar arrangement of bolts and nuts maintain the relative spatial disposition of the fence mount 15 and the end support 7 at the right of Figure 1.

Also disposed upright to the base member 1 are the support arms 21 and 22. Arms 21 and 22 rigidly support the template bar 23. Mounted upon hinges on the template bar 23 are the pairs of L-shaped templates 24, 24 and 25, 25 for guiding the routing and drilling of the hinge recesses, and the C-shaped templates 26, 27 for drilling the lock holes.

2

In operation I prefer to utilize power tools in conjunction with this fixture, in the following manner. An electric hand saw, an electric planer, an electric router and several electric hand drills fitted with the appropriately sized drill bits for the various operations are hung above the fixture. It is possible to utilize either mechanically retractable or gravity retractable tools, that is, they may be hung upon wires and counterbalanced so that they will return to convenient positions above the fixture when not immediately in use. Hanging them in close juxtaposition to the sites of their use enables them to be employed with the utmost efficiency.

First the door is inserted in the fixture so that it rests on the three strut members 2, 3, and 4 and lies back against the crosspiece member 23, in a vertical position. At this juncture the choice must be made whether the door is to be fitted as a right-hand door or as a left-hand door.

If the door is for example, to be cut and fitted as a right-hand door I move it to the left in Figure 1 until it abuts against the bumper standard 8. For the purpose of easy identification, I have painted the bumper standard 8, the templates 25, 25, and the template 27 the color blue. Conversely, for a left-hand door the bumper standard 9, the templates 24, 24, and the template 26 are painted red.

For a right-hand door the operator will only work with the blue templates and the blue standard 8. After the door has been inserted, it is cut off to the proper length by means of the electric hand saw which is lowered into the proper position at the right of Fig. 1. The saw is run along the guide edge of the cutoff fence, in this case 13, cutting through the door and it is then returned to its non-use position above the fixture.

Next the electric planer is lowered into position and run along the top or lock edge of the door to provide the door with the necessary bevel to enable it to close properly and also to cut the width of the door to the exact size required.

It will be noted that the position of the crosspiece 23 is determined by its being bolted through holes 28 to the support arms 21 and 22. For a given size door the particular pair of holes chosen to bolt the crosspiece 23 to the support arms 21 and 22 will determine the proper relative positioning of the hinge holes and the lock holes.

The template 27, whose position is relatively fixed by the crosspiece position is next lowered into contact with the door edge. First I bore the side lock holes with the appropriate electric drill through the side lock guide 29, shown in Figure 3. Next, with another drill, I drill the top edge hole through the appropriate guide 30 in the template 27, shown also in Figure 3. At this point I raise the top guide plate of the template 27, containing the hole guide 30. This permits access to the lock router guide 31 of Figure 3.

With an electric router I route the face plate recess of the door lock through guide 31 into the top edge of the door. Then I raise that template 27 on its crosspiece hinge so that it is out of position and I remove the door from the fixture.

At this point the hinge provisions must be made and the door is reversed, with the door face in the same position but with its hinge edge topmost and the door is reinserted into the fixture in that position. In turning the door around, that is rotating it through 180°, to provide for the hinges I set the door against the red bumper standard 9.

Then I lower the templates for the hinges into operative position, in this case the hinge templates 25, 25. When they are in position I again use the electric router and

3

route out the hinge recesses upon the hinge edge of the door to the proper depth.

Next I insert the appropriate hinges in the previously routed recesses and, with an electric drill I drill all the hinge holes, using the hinge itself in each as a guide. Then with an electric screwdriver I drive all the hinge screws into position, so that the hinges are firmly fixed in final position.

It will be understood that for a left-hand door I would follow the same procedure, beginning by using the red colored templates and abutting the door against the bumper standard 9 which is also painted red.

With my invention it is possible to prefit a large number of doors in a relatively small period of time with a minimum of moving or handling of the door itself. Of course first the cutoff fences must be positioned through the use of the bolts 16 and 20 and the crosspiece 23 must be positioned upon the support arms 21, 22, but this is made necessary by the requirement of accommodating the various sizes of door. Once these have been set, the prefitting of all doors of that particular size can be accomplished in a most efficient manner.

In order to accommodate a variety of widths of door sizes, I have provided a series of two-inch shim blocks. A shim block of the appropriate width is laid across the strut members 2, 3, and 4 and the door is laid on the shim block. Thus the top edge of the door lies in the proper position.

Having thus fully described my invention, it is to be understood that any and all changes in design, construction, and arrangement of parts, to which the disclosed fixture and template structures are susceptible, may be resorted to, without departing from the spirit of the invention, or its scope as claimed.

What is claimed is:

1. In a device of the class described, an elongated fixture having a base adapted to support a door standing

4

on an edge to be prefitted, a pair of bumper standards mounted at opposite ends of said fixture and against one of which the door is placed, a pair of upstanding and adjustably mounted cutoff fences at opposite ends of said fixture to use as guides in cutting the door to proper length, a pair of upstanding and longitudinally aligned support arms mounted on said base in parallel relation with said cutoff fences, a template bar mounted on said support arms against one side of which a side of said door may be juxtaposed, a C-shaped lock hole template hingedly mounted on the top edge of said template bar and engageable over the edge of said juxtaposed door and a door lock router guide template hingedly mounted upon said lock hole template.

2. In a device of the class described, an elongated fixture having a base adapted to support a door standing on an edge to be prefitted, a pair of bumper standards mounted at opposite ends of said fixture and against one of which the door is placed, a pair of upstanding and adjustably mounted cutoff fences at opposite ends of said fixture to use as guides in cutting the door to proper length, a pair of upstanding and longitudinally aligned support arms mounted on said base in parallel relation with said cutoff fences, a template bar mounted on said support arms against one side of which a side of said door may be juxtaposed, and a plurality of L-shaped hinge router templates hingedly mounted on the top of the template bar and engageable over the edge of said juxtaposed door.

References Cited in the file of this patent

UNITED STATES PATENTS

2,305,124	Wilson et al. _____	Dec. 15, 1942
2,748,812	Nelson _____	June 5, 1956
2,839,104	Stiefel _____	June 17, 1958