April 23, 1957 G. A. ADOLPHSON 2,789,359

MEANS FOR LOCATING AND FORMING HINGE RECESSES

Filed April 12, 1954

Fig. 4

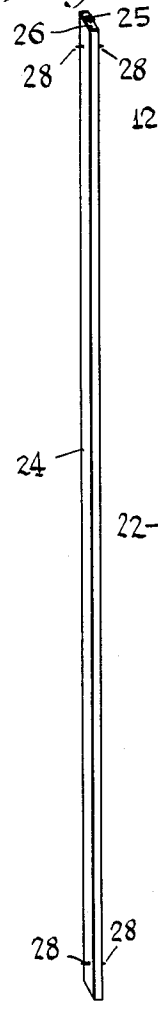


Fig. 1

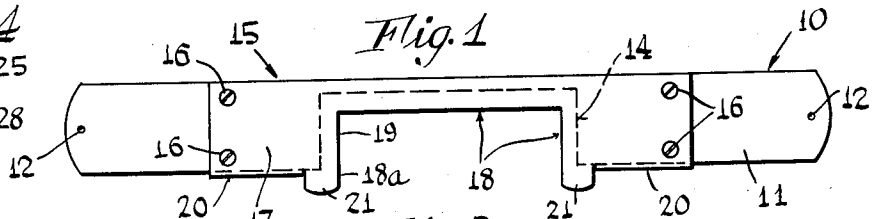


Fig. 2

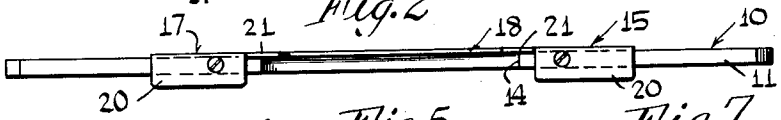


Fig. 6

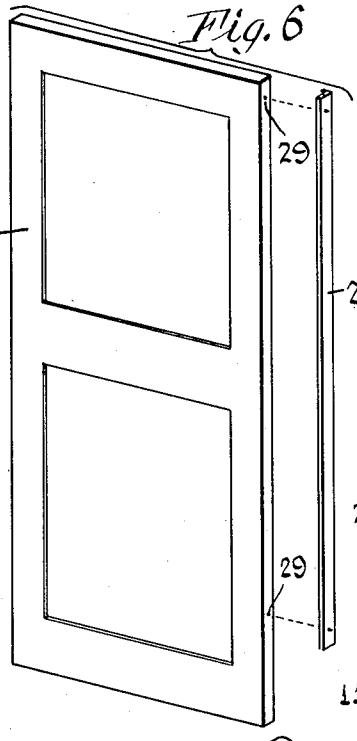


Fig. 5

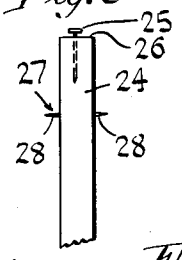


Fig. 7

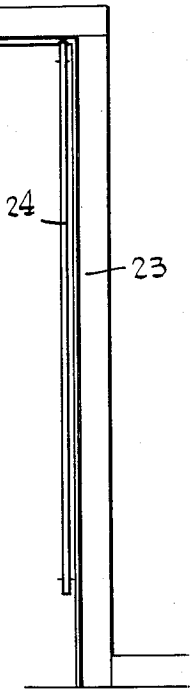


Fig. 9

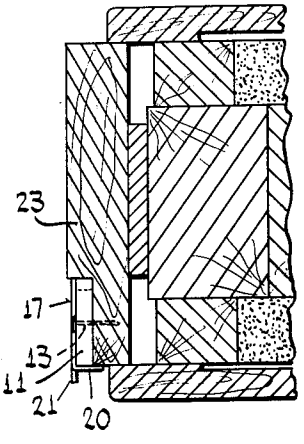


Fig. 3

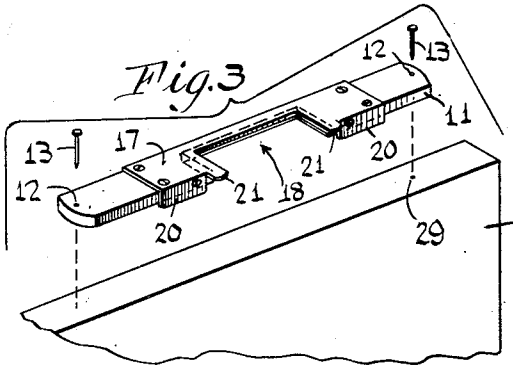
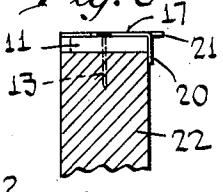


Fig. 8



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MEANS FOR LOCATING AND FORMING HINGE RECESSES

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4 Claims. (Cl. 33—197)

The present invention relates to a means for locating and forming recesses for hinge plates.

Heretofore, there has been a problem in the building trade of properly and quickly locating hinge plates on doors and door frames. Efforts have been made to overcome this problem but these have resulted in complicated attachments which, for the most part, could be used only on the door and could not be attached to the frame to cooperate to produce the necessary recesses therein.

The present invention overcomes these difficulties by providing a novel attachment which can be used to guide a routing tool in cutting the recess for the hinge plate on the door or frame and one which can be readily and easily installed. The present invention also provides a novel means for locating these attachments to greatly facilitate the operation of hanging a door.

The novel attachment for carrying out the present invention is adapted to be temporarily secured to the surface of the door or frame to be routed and includes a base member having a detachable template means thereon for guiding the routing tool. The template-plates with guide openings formed therein, according to the type of hinge that is to be mounted, can be readily mounted on the base and are provided with a locating flange means which assists in locating the template-plate on the base and also in locating the attachment in position on the surface which is to be routed.

In accordance with the present invention a simple, novel gauge member is provided by which a novel method for quickly and accurately locating the required number of attachments to be secured to the door and/or frame can be carried out.

Other features and advantages of the invention will be apparent from the specification and claims when considered in connection with the drawings in which:

Figure 1 shows a top plan view of the attachment.

Fig. 2 is a side view.

Fig. 3 shows a view of the attachment being secured in position to a door.

Fig. 4 is a view of the gauge.

Fig. 5 is a detail of the top view of the gauge member.

Fig. 6 shows the relation of the gauge member to the edge of the door.

Fig. 7 shows the relation of the gauge member to the door frame.

Fig. 8 is a sectional view showing the attachment in position on a door.

Fig. 9 is a sectional view showing the attachment in position on the door frame.

As shown in the drawings, the attachment comprises a base **10** which is in the form of a base plate **11** of any suitable material which is adapted to overlie the surface to be routed. The base plate is provided with apertures **12** adjacent the ends thereof through which a fastening means, such as a nail **13** or the like, may be driven to temporarily secure the attachment in position. The attachment has a recess **14** extending inwardly from one side intermediate the ends. A template-plate **15** which

is preferably formed of sheet metal is detachably secured to the top surface of the base by means of screws **16**. As shown in Figs. 1 and 2, the template has a flat top **17** which is provided with recess **18** adapted to be positioned over recess **14** in the base plate with the edges of the recess forming tool guiding surfaces **19** shaped to conform to the particular hinge plate being set. The template is provided with locating flange means **20** which are bent from the plate, preferably perpendicularly to the top **17** of the template so as to extend down over the side of the base plate and below the base plate to engage a side surface of the support to which the attachment is secured, as shown in Figs. 8 and 9, to locate the attachment thereon in a predetermined position with respect to the edge of a support. The template is also provided with guiding members **21** adjacent each side of the recess **18** and have a surface **18***a* forming, in effect, a continuation thereof projecting laterally from the template beyond the locating flanges which serve to guide the routing tool into the opening. It will be noted that the flat top **17** of the template provides a supporting surface of the router and provides for smooth operation thereof during the routing operation and an accurate control of the depth of the cut.

A feature of the present invention resides in the fact that the attachment can be secured to the edge of a door **22**, as shown in Fig. 8 or to the edge of the door frame **23**, as shown in Fig. 9 to permit routing of either surface for the hinge plate. As shown in Fig. 1, the mounting holes **12** and guide opening and locating flanges of the template are symmetrical so that the attachment can, by merely being reversed, function with the door and frame to form the hinge plate receiving recesses therein. This is true whether the door is hung for right or left-hand opening.

A novel means for locating the attachments on the door and frame is disclosed in Fig. 4 wherein an elongate stick **24** is provided with an abutment **25** at one end spaced from the end **26** of the stick a distance equal to the required top clearance of the door. Spaced from the end **26** of the stick are marker means **27**, herein illustrated as opposed points **28**, at required intervals depending upon the number of hinges to be applied. The gauge may be manufactured as standard equipment or can be made up on the job by a carpenter by taking a stick of wood long enough to cover the hinged section of the door and driving a nail in the end of the stick until the head projects beyond the end of the stick the required distance to form the abutment **25** for spacing the door and by driving through the stick nails to form the marker means **27** at the prescribed intervals that it is desired to set the hinges.

In accordance with the present invention a novel method of setting the hinges on the door has been discovered. In carrying out this method the gauge is positioned adjacent the door with its top end **26** aligned with the top of the door, as shown in Fig. 6, and the gauge is then tapped or otherwise manipulated to cause the marker means **27** to apply suitable marking **29** to the door which is adapted to locate the router attachment. Then the gauge is positioned in the opening of the door frame with the abutment **25** engaging the top of the frame, as shown in Fig. 7, and the marker means tapped or otherwise manipulated to provide adequate marking on the frame for the location of the attachments necessary to provide the recesses for the hinge plates.

In the illustrated form of the invention only two hinge plates are being located. However, it is to be understood that any number of hinge plates may be supplied and it is merely necessary to provide the desired number of marker means **27** on the gauge.

After the door and door frame have been adequately

marked, a plurality of attachments are then secured to the door and frame. This is accomplished, as illustrated in the exploded view of Fig. 3 showing an attachment being secured to the edge of a door, by having a hole 12 and a nail 13 aligned with the marking 29 so that the attachment is properly located lengthwise of the door. The depending flange or locating means will properly position the attachment with respect to the edge of the door. After the attachments are secured in place, a routing tool, not shown, is employed to cut out the recesses along the door and frame, thus enabling the hinges to be readily installed and the setting of the door to be accomplished quickly and accurately.

It will be apparent from the foregoing that I have developed a simple method of recessing the doors and frames for reception of hinge plates which greatly facilitates the hanging of the door.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. A routing attachment for use in forming recesses for hinge plates comprising a base adapted to be mounted on a structure and overlie the surface to be routed, said base having means at the ends thereof for temporarily securing the same in position and having a recess intermediate said ends, a template secured to said base and having locating flange means engaging a side of the base and projecting below the base to engage a side surface on the structure perpendicular to the surface to be routed, said template having a tool guiding opening corresponding to the desired hinge plate disposed over the recess in the base and having edges spaced from the sides of the recess to guide the tool during the routing operation and having guide extensions at each side of the guiding opening and projecting laterally beyond the flange to guide the tool into said opening.

2. A routing attachment for use in forming recesses for hinge plates comprising a base plate adapted to be mounted on a structure and overlie the surface to be routed, said base having means at the ends thereof for temporarily securing the same in position and having a recess extending inwardly from one edge intermediate said ends, a template secured to said base plate to overlie the same and having a flat top and depending locating flange means at one edge engaging the side of the base plate adjacent the recess and projecting below the base plate to engage a side surface on the structure perpendicular to the surface to be routed, said template having a tool guiding opening in the top corresponding to the desired hinge plate and disposed over the recess in the base plate and having edges spaced from the sides of the recess to guide a tool during the routing operation,

said template having guide extensions at each side of the guiding opening and projecting laterally beyond the flange to guide the tool into said opening.

3. A routing attachment for forming recesses for hinge plates comprising a heavy base adapted to be mounted on a structure and overlie the surface to be routed, said base having nail-receiving apertures at the ends thereof whereby the attachment may be temporarily secured in position and having a recess extending inwardly from one edge intermediate said ends, a sheet metal template adapted to overlie the base, screw means detachably securing the template to the base, said template being provided with a flat, router-supporting top having a tool guiding opening corresponding to the desired hinge plate extending inwardly from one edge and disposed over the recess in the base to guide a tool during the routing operation and downwardly bent locating flange means at the edge of the template extending perpendicularly to said flat top at each side of the opening and engaging a side of the base and projecting below the base to engage a side surface on the structure perpendicular to the surface to be routed.

4. A routing attachment for use in forming recesses for hinge plates comprising a heavy base adapted to be mounted on a structure and overlie the surface to be routed, said base having means at the ends thereof for temporarily securing the same in position and having a recess extending inwardly from one edge intermediate said ends, a thin sheet metal template detachably secured to said base to overlie the same and having a flat, router-supporting top having a tool guiding opening corresponding to the desired hinge plate extending inwardly from one edge and disposed over the recess in the base to guide a tool during the routing operation, and locating flange means depending from said edge of the template perpendicularly to said flat top at each side of the opening engaging a side of the base and projecting below the base to engage a side surface on the structure perpendicular to the surface to be routed, said template having guide extensions at each side of the guiding opening and projecting laterally beyond the flange to guide the tool into said opening.

References Cited in the file of this patent

UNITED STATES PATENTS

809,954	Huber	Jan. 16, 1906
1,016,341	Lowden	Feb. 6, 1912
1,045,511	Carlson	Nov. 26, 1912
1,050,155	Mason	Jan. 14, 1913
1,336,157	Read	Apr. 6, 1920
1,679,074	Carter	July 31, 1928
2,637,910	Buttram	May 12, 1953