Dec. 22, 1953 W. H. GOHM, SR 2,663,335

PORTABLE ROUTER-TYPE MORTISING DEVICE

Filed April 10, 1950 2 Sheets-Sheet 1

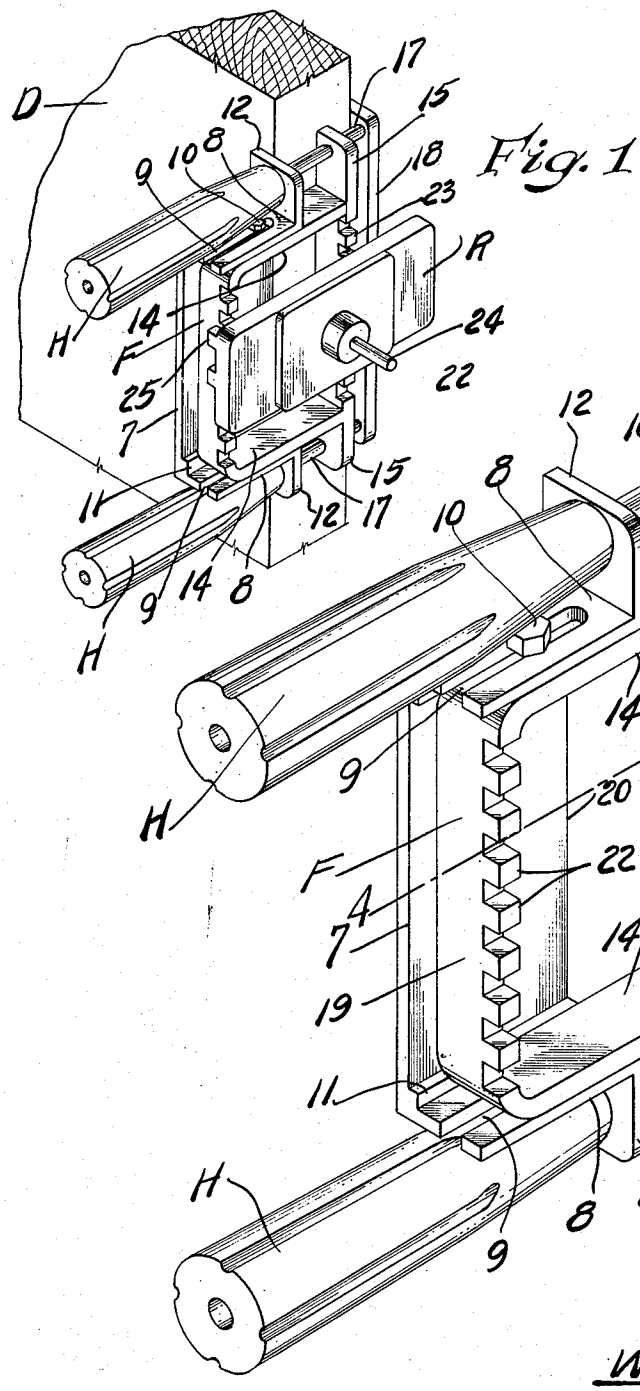


Fig. 1

Fig. 2

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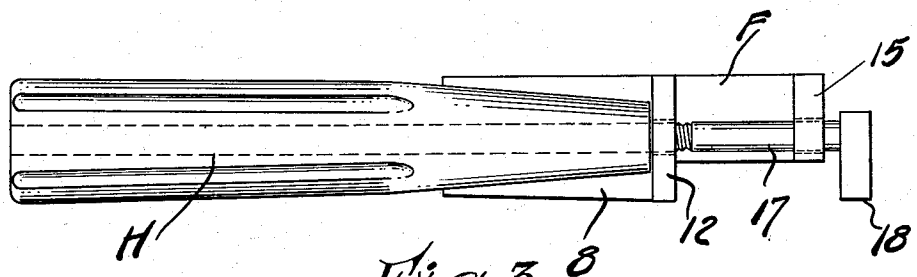


Fig. 3

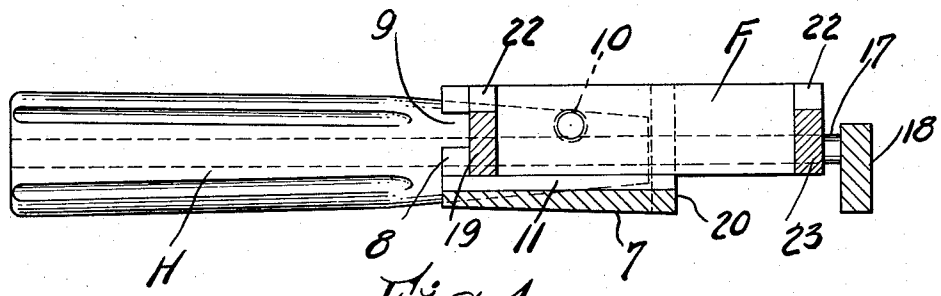


Fig. 4

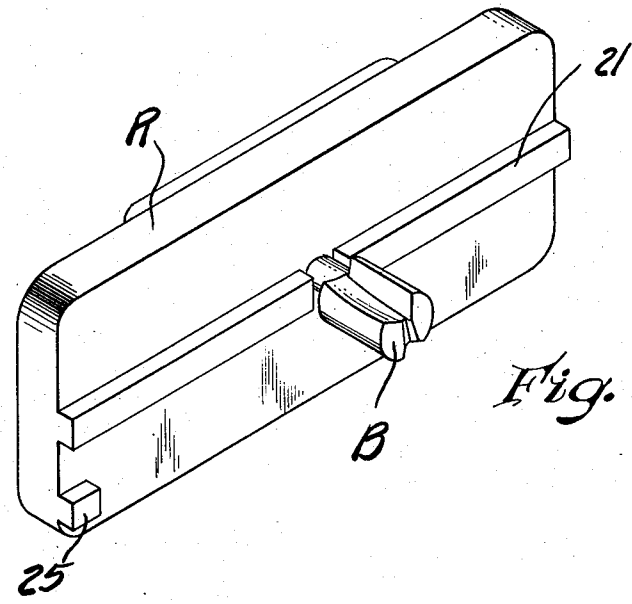


Fig. 5

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UNITED STATES PATENT OFFICE

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PORTABLE ROUTER-TYPE MORTISING DEVICE

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4 Claims. (Cl. 144—70)

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This invention relates to mortising devices, and more particularly to that class adapted to be used in making mortises in doors and jambs, for the reception of hinges.

One of the prime objects of the invention is to design a mortising device of simple, practical and economical construction for use in connection with an electric drill, so that the mortising can be easily and accurately accomplished without spoilage and in a minimum length of time.

Another object is to provide a mortising device which can be readily clamped in position; which can be easily manufactured and assembled, and which is convenient to use.

Still a further object is to provide a compact mortising device composed of few parts, all of sturdy, substantial construction, and which can be quickly adjusted to suit the work to be accomplished.

A further object still is to provide a mortising device including a router plate, adjustable on the mortising frame, and which is also transversely movable on said frame to suit the dimensions of the mortise to be made.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit, or sacrificing any of the advantages of the invention.

In the drawing:

Fig. 1 is a perspective view showing my mortising device clamped in position on a door.

Fig. 2 is an enlarged, perspective view of the device.

Fig. 3 is an edge-elevational view of the device.

Fig. 4 is a transverse-sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is an inverted, isometric view of the router plate.

Referring now more specifically to the drawing in which I have shown the preferred embodiment of my invention, the numeral 7 indicates a preferably flat base formed with vertically extending end walls 8 slotted as at 9 to accommodate set bolts 10, and a raised track or way 11 is provided at the base of each vertical wall and for a purpose to be presently described.

Opposed laterally projecting ears 12 are formed integral with the base 7 and end walls 8 respectively and in alignment with the front edge of the base, and openings 13 are provided in said ears as shown.

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A rectangular-shaped frame F is adjustably mounted on the ways 11 and overhangs the front end of the base plate, the side walls 14 being disposed in facial contact with the walls 8 of said base. Laterally projecting ears 15 are provided on the one edge of the frame F in alignment with the ears 12, and openings 16 are provided in said ears in register with the openings 13 to accommodate pins or guides 17 which project therethrough, the outer ends of the guides being anchored to a clamping bar 18 which is disposed in parallel alignment with and depends below the end walls 19 and 23 of the frame F.

The opposite ends of the guides 17 are threaded for threaded engagement with handles H which form extensions thereof. The front face of the base plate 7 is disposed below the lower edge of the frame F and forms a clamping edge 20, the bar 18 being in horizontal alignment therewith and forms the opposite companion clamp, and it will be obvious that the device may be readily clamped to a door D or any other member by placing the edge 20 of the plate 7 against one edge of the door, and the lower edge of the clamping bar 18 against the opposite edge, and upon manipulation of the handles H, the clamping bar 18 can be drawn toward the plate 7 and securely clamp the device in position.

A router plate R is adjustably mounted on the upper face of the frame F, and a centrally disposed router bit B is revolvably journaled thereon and depends a predetermined distance below the bottom face thereof, a guide bar 21 being secured to the lower face of the plate 7 and engages the teeth 22 provided on the end walls 19 and 23 of the frame F.

An electric drill (not shown) is connected to the shank end 24 of the router bit B so that the bit can be driven as the plate is moved transversely across the frame F to perform the mortising operation, the plate being moved upwardly or downwardly to engage adjacent teeth as required to suit the area to be mortised.

A stop 25 is provided on the ends of the router plate R, said stop limiting the transverse travel of the router plate on the frame F.

In practice, the handles H are manipulated to move the clamping bar 18 outwardly a distance sufficient to accommodate the edge of the door or jamb D, then by rotating the handles H in the reverse direction, the device can be securely clamped in position over the area to be mortised,

the electric drill (not shown) being attached, after which the guide bar 21 engages certain predetermined pairs of teeth 22 and the plate R is then moved transversely across the frame F, mortising a path across the edge of the door or jamb, and by shifting the plate to engage adjacent pairs of teeth etc., the necessary area can be readily mortised.

The edges of the mortised area can be finished off, when necessary, by means of a knife or other tool (not shown), and the door is then ready for application of the hinges or lock to be applied. It will be obvious that the depth of cut will be uniform and the attachment or removal of the device from the door or other member can be easily and quickly accomplished.

From the foregoing description, it will be obvious that I have perfected a very simple, practical and inexpensive mortising device for use by carpenters and other artisans for mortising work in general.

What I claim is:

1. A mortising device for doors adapted to be clamped over the edge surface to be mortised comprising, a base plate with upturned end walls, said base plate being disposed in parallel relation with said edge surface with its front edge presented to a side of the door adjacent and parallel to said edge surface, raised ways on the inner faces of said end walls, an open rectangular shaped frame having toothed front and rear walls adjustably mounted a spaced distance above said plate on said ways, said frame being adjustable on said ways transversely with relation to said edge surface, transversely disposed guide pins slidably engageable with said base plate and rectangular frame respectively to maintain the same in true relative alignment, a clamping bar rigidly secured to the ends of said guide pins and engageable with the opposite side of said door, means for adjusting said clamping bar in a direction toward the front edge of said base plate to firmly clamp the device on the door therebetween, a router plate having a guide rib on the under face thereof guiding between corresponding teeth on the front and rear walls of said frame respectively, to be movable transversely across the edge surface of said door, and a router bit journaled in said router plate and extending therethrough to progressively cut out said mortise as said router plate is moved transversely across said edge surface and then successively lifted clear of said frame and repositioned between a different set of corresponding teeth for successive passes.

2. The combination defined in claim 1 in which laterally projecting ears with aligned openings are provided on said end walls of the base plate and frame respectively, said guide pins being slidably mounted therein, and manually operable means adjustably secured to the outer ends of the guides remote from the clamping bar for adjusting said clamping bar toward and away from the base plate.

3. The combination with the mechanism set forth in claim 1 in which the end walls on the base are in facial contact with the frame, slotted passages being provided in each end wall, and bolts adjustably mounted in said passages and engageable with the frame for securing the base in adjusted position with relation to the frame.

4. A mortising device for doors and the like for clamping over the edge surface to be mortised comprising a base plate disposed in parallel relation with said edge surface, means for clamping said base plate to said edge surface, a transversely disposed, raised, open frame on said plate overlying the edge surface to be mortised, said frame having transversely spaced apart, parallel walls disposed perpendicularly with relation to said base, said walls being longitudinally toothed, a transversely disposed router plate having a guide rib on the under face thereof guiding between corresponding teeth on said spaced apart walls of said frame to be movable transversely across the edge surface of said door, and a router bit journaled in said router plate and extending therethrough to progressively cut out said mortise as said router plate is moved transversely across said edge surface and then successively lifted clear of said frame and repositioned between a different set of corresponding teeth.

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