

No. 761,861.

PATENTED JUNE 7, 1904.

C. W. WAGNER.
MORTISING DEVICE.

APPLICATION FILED NOV. 19, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

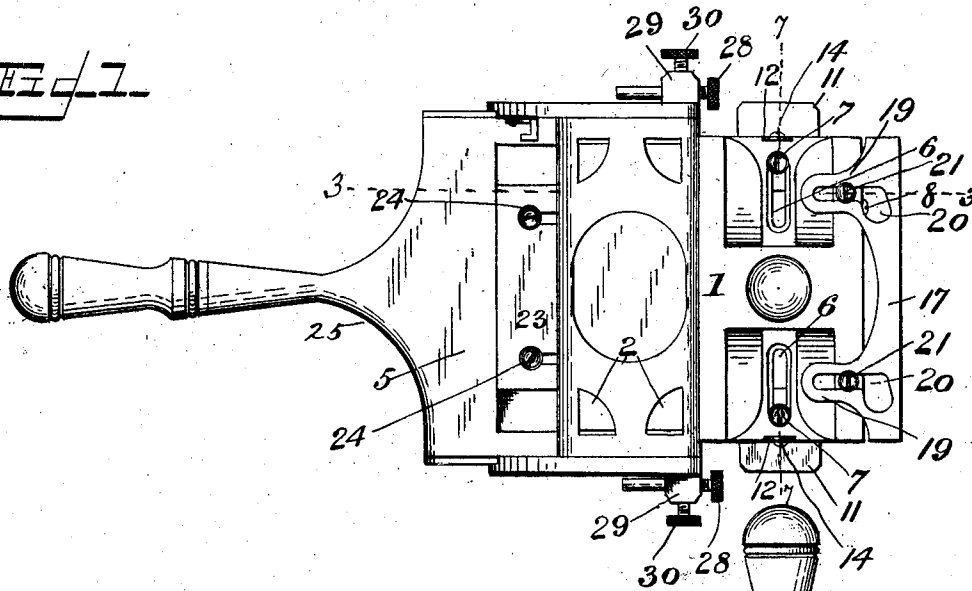


Fig. 2.

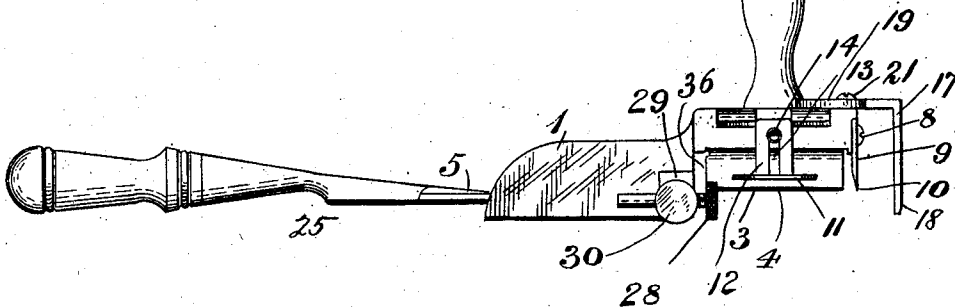
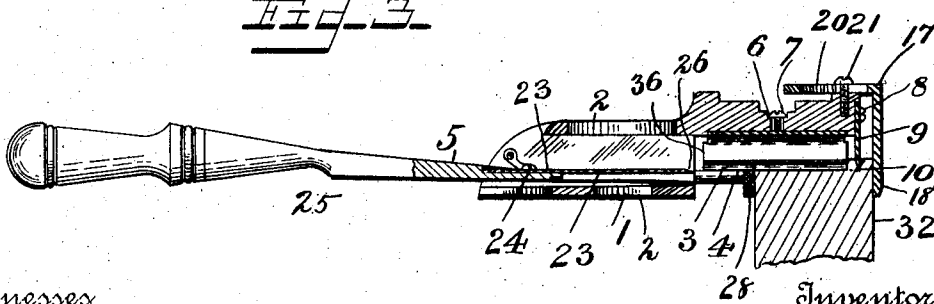


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4

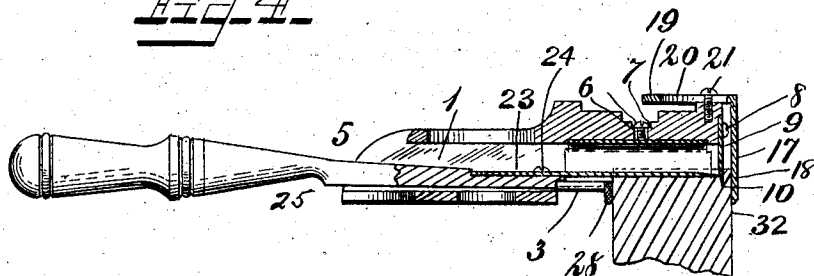


Fig. 5

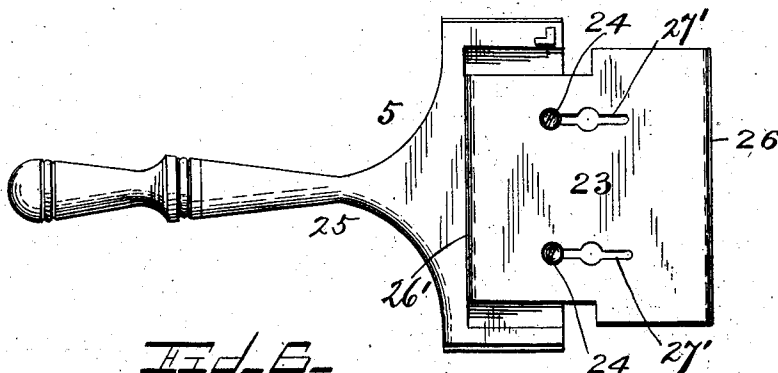


Fig. 6



Fig. 10

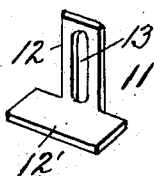


Fig. 7

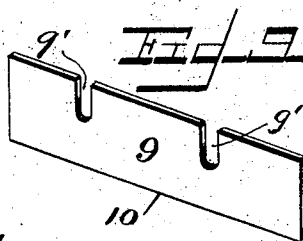
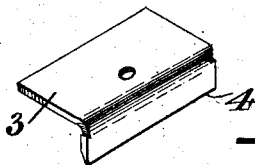
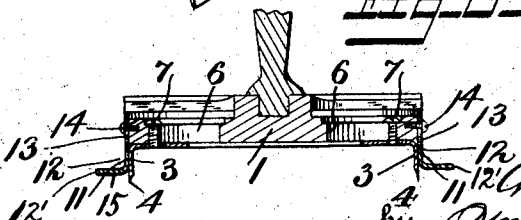


Fig. 8



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UNITED STATES PATENT OFFICE.

CHARLES W. WAGNER, OF WASHINGTON, DISTRICT OF COLUMBIA.

MORTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 761,861, dated June 7, 1904.

Application filed November 19, 1903. Serial No. 181,820. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. WAGNER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Mortising Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to devices for cutting mortises or rabbets in the edges of doors and door-frames, as well as window-shutters and window-frames, adapted for the reception of hinges whereby the doors and shutters are hinged to the respective frames.

The invention has for its object to provide an extremely simple, efficient, and cheap device of the character described adapted for quickly and neatly cutting out mortises or rabbets, thus dispensing with the usual method of cutting such mortises or rabbets by hand by means of a chisel.

A further object of the invention is to provide means whereby the dimensions—*i. e.*, the depth, width, and length—of the mortises may be varied.

With the above and other objects in view, which will become apparent from the following description when taken in connection with the accompanying drawings, the invention consists in the novel construction, arrangement, and combination of parts, fully described hereinafter and illustrated in the drawings and specifically defined by the appended claims.

In the accompanying drawings, Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a side elevation of the device, showing the same in position for cutting a mortise in the edge of a door, for instance. Fig. 3 is a sectional view on line 3 3 of Fig. 1, showing a portion of a door in position to have a mortise cut in the edge thereof. Fig. 4 is a view similar to Fig. 3, showing the device after it has been operated to cut a mortise. Fig. 5 is a detail plan view of the knife 5. Fig. 6 is a sectional view of the knife seen in Fig. 5. Fig. 7 is a detail perspective view of one of the right-angled knives or cut-

ters 3. Fig. 8 is a transverse sectional view on line 7 7 of Fig. 1. Fig. 9 is a detail perspective view of the knife 9. Fig. 10 is a detail perspective view of one of the gages 11.

My device comprises a body portion 1, of metal, and having a shape somewhat as shown. This body portion may be cut away, as at the points 2, to lighten the same. Secured to the body portion near opposite edges are knives or cutters 3, having an angular shape and provided each with a cutting edge 4. The length of the cutting edge of the knives 3 will determine the maximum width of the mortise-cut, and in order to provide for cutting mortises of different lengths I secure the knives 3 adjustably to the body portion of the device, and for this purpose I provide the body portion with slots 6, through which project headed screws 7, which screw into the cutters. When the cutters have been adjusted in a position corresponding to the length of the mortise to be cut, the screws are tightened, whereby said cutters will be firmly held in position, and when it is necessary to vary the length of the mortises which are to be cut the screws are simply loosened and the cutters adjusted by moving them toward or away from each other, as will be clearly understood.

Secured to the edge of the body portion 1 by means of screws 8 is a knife or cutter 9, having a cutting edge 10. The length of the knife 9 should be at least equal to the distance between the cutting edges of the knives 3 when the latter are adjusted as far apart as possible, and the depth of the knife 9 should be such that its cutting edge will lie in the same horizontal plane with the cutting edges of the knife 3. The knife 9 is provided with slots 9', through which pass the screws 8, and by loosening said screws the knife can be readily detached.

In order to determine the depth of the mortise to be cut, I provide gages 11, one at each edge of the body portion, said gages each comprising a right-angled plate, the arm 12 of which is provided with a slot 13, through which passes a headed adjusting-screw 14, which screws into the edge of the body portion. The distance between the plane of the edges of the knives 3 and 9 and the portion

12' of the gage will determine the depth of the mortise which is to be cut, since the knives 3 and 9 will penetrate the wood until said portions 12' of the gages 11 bear against the edge of the door or blind.

In order to avoid the possibility of that part of the door lying between the rear edge of the mortise and the edge of the door being broken away by the blow given to the knife 5 and also to firmly hold the device in position while a mortise is being cut, I provide a support 17, comprising a plate 18, provided with right-angularly extending projections or lugs 19, each provided with a slot 20, through which passes headed adjusting - screws 21, which screw into the upper face of the body portion 1 of the device.

5 indicates a knife comprising a cutting-blade 23, secured by adjusting - screws 24 to the handle 25. The blade portion is provided with a cutting edge 26, and the length of the said edge should be practically the same as the distance between the cutting edges of the knives 3 when the latter are adjusted to their maximum distance from each other. When a mortise is to be cut the length of which is to be less than the length of the edge 26, it would then of course be necessary to substitute a blade corresponding in length to that of the mortise to be cut. The substitution of blades of different lengths can be easily effected by removing the securing-screws 24.

I prefer to provide a construction of knife (seen more plainly in Fig. 5) wherein the blade 23 is provided with two cutting edges 26 and 26' of different lengths, so that by reversing the blade a length of mortise can be cut corresponding either to the length of the edge 26 or 26'. To provide for the ready reversal of the blade, I provide the same with slots 27', shaped as shown, whereby by loosening the screws 24 sufficiently and moving the blade until the enlarged central portion of the slots engage the screws the blade can be readily removed and reversed.

In order to firmly hold the body portion of the device in position while a mortise is being cut, I provide at opposite edges of the body portion headed rods or bolts 28, adapted to be adjusted in lugs 29, secured to the body portion and to be held in adjusted positions by thumb-screws 30. The width of the mortise will be determined by the distance between the knife 9 and the heads of the bolts 28. When the device is to be applied to the edge of a door or window blind, the gage 17 engages the edge 32, and the cutting edges of the knives 3 and 9 resting upon the face which is to be mortised. The rods 28 are then adjusted so that the heads thereof will bear upon the face of the door or blind opposite to that engaged by the plate 17. The operator then by means of a hammer strikes the upper face of the body portion 1, whereby the knives 3 and 9 will penetrate the wood, and by repeated blows

of the hammer said knives will penetrate the wood until the gages 11 bear upon the face of the door or blind. The knife 5 is then by means of the hammer driven inwardly until the cutting edge of said knife abuts against the knife 9, thus completely cutting out the mortise.

I would state that in order to prevent the cutting edge of the knife 5 from becoming dulled by striking against the knife 9 I provide shoulders 35 on the handle portion of the knife 5, which shoulders will strike against the edges 36 of the knives 3.

By means of my device I am enabled to cut mortises very quickly, and the mortises cut will be smooth and uniform, differing in this regard from the mortises as usually cut by hand with the aid of a chisel.

What I claim, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination with a body portion, of two knives carried thereby and arranged opposite to each other, a third knife arranged transversely of the said two knives, a fourth knife movable relatively to the other knives and adapted to complete the cutting of the mortise, a plate having right-angularly extending projections carried by the body portion and arranged in rear of the aforesaid third knife and adjustable toward and from the same and adapted to engage one face of the door or blind, the said projections being seated upon the upper face of the body portion and the plate itself extending parallel with the said third knife, and rods carried at opposite sides of the body portion adapted to engage the opposite face of said door or blind.

2. In a device of the character described, the combination with a body portion, of two knives arranged opposite to each other and carried by the body portion, a third knife carried by the body portion and being arranged transversely of the said two knives, a fourth knife movable relatively to the before-mentioned knives and adapted to effect the completion of the cut, and means carried by the body portion for holding the device securely while a mortise is being cut and for varying the width of mortise and comprising a plate having right-angularly extending projections arranged in rear of the aforesaid third knife and parallel thereto and provided with slots in the said projections and securing-screws passing through the slots and into the body portion.

3. In a device of the character described, the combination with a body portion, of three knives carried thereby and adapted to cut a mortise at three edges thereof in the manner described, two of said knives being oppositely arranged and adjustable toward and from each other, and a knife movable relatively to the other knives and adapted to complete the cutting of a mortise, said knife comprising a han-

dle or body portion and a blade detachably secured thereto, said blade having two cutting edges of different lengths.

4. In a device of the character described,
5 the combination with a body portion, of two knives arranged opposite to each other, a third knife arranged transversely to the first-mentioned knives, and a fourth knife adapted to cooperate with the other knives as described,
10 the last-named knife comprising a handle portion, a blade portion carried thereby and

shoulders on the handle portion at each side of the blade portion adapted to come into contact with the edges of the first-mentioned two knives, in the manner and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHAS. W. WAGNER.

Witnesses:

J. B. ROMAN,

JAMES C. MILLER.