

R. J. SIZER.

HINGE GAGE.

APPLICATION FILED SEPT. 9, 1911.

1,034,843.

Patented Aug. 6, 1912.

Fig. 1.

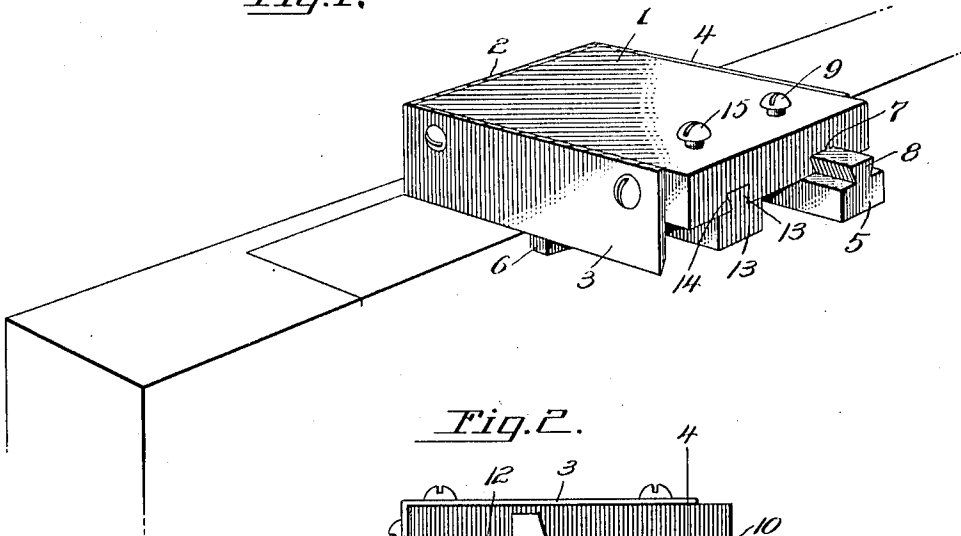


Fig. 2.

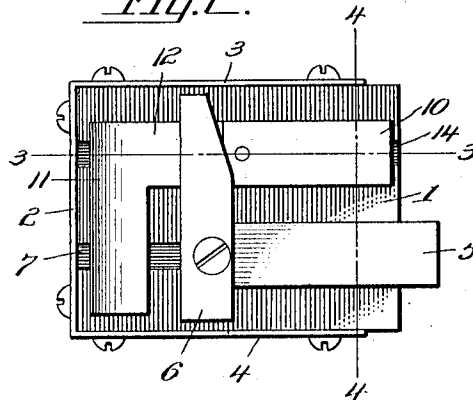


Fig. 3.

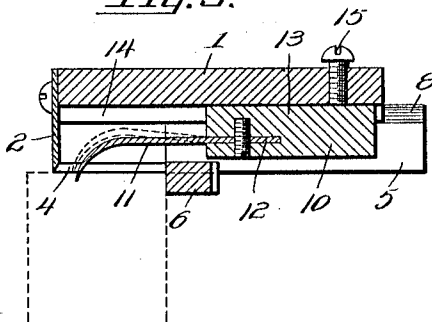
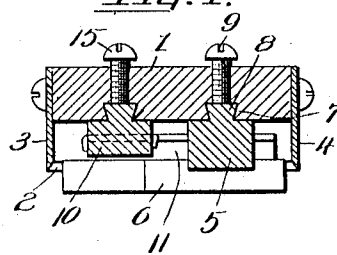


Fig. 4.



Inventor
Ralph J. Sizer.

Witnesses
F. L. Gibson.
U. B. Hillyard.

By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

RALPH J. SIZER, OF MADISON, WISCONSIN.

HINGE-GAGE.

1,034,843.

Specification of Letters Patent.

Patented Aug. 6, 1912.

Application filed September 9, 1911. Serial No. 648,581.

To all whom it may concern:

Be it known that I, RALPH J. SIZER, a citizen of the United States, residing at Madison, in the county of Dane and State of Wisconsin, have invented new and useful Improvements in Hinge-Gages, of which the following is a specification.

The present invention provides a device whereby the work of laying off the mortise for a hinge is greatly facilitated and accuracy insured.

The invention provides a device embodying depth and width gages and marking blades, the latter also serving as means for cutting the outline of the mortise simultaneously with the laying off of the same.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawing, and pointed out in the appended claims.

Referring to the drawing, forming a part of the application, Figure 1 is a perspective view, showing the application of the invention. Fig. 2 is a view of the gage as seen from the inner or bottom side. Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2. Fig. 4 is a transverse section on the line 4—4 of Fig. 2.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawing, by the same reference characters.

The device comprises a frame consisting of a block 1 and blades 2, 3 and 4 secured to three edges of the block, said blades having their outer sides straight and their inner faces beveled to form chisel cutting edges. The blade 2 is secured to one end of the block, whereas the blades 3 and 4 are fitted to opposite edges thereof, the several blades meeting at the angles to insure a neat cut at the corners of the mortise for receiving the hinge. The several blades are secured to the block or frame in a manner to admit of their removal for sharpening or to be replaced in the event of any one of the blades becoming unfitted for future effective service from any cause.

The blades project from one side of the block or frame which is designated as the inner side. Width and depth gages are fitted to the inner side of the block or frame and are adjustable toward and from the end blade 2. The width gage consists of a bar

5 and a cross head 6, the latter being secured to the inner end of the bar 5 and projecting beyond the plane of the cutting edges of the blades so as to engage with the edge of the jamb, door or other part in which the mortise is to be formed to receive the hinge. The width gage is directed in its movements and retained in the adjusted position by suitable means. A groove 7 is formed in the inner side of the block or frame 1 and receives a rib or tongue 8 upon the adjacent side of the bar 5, the groove 7 and tongue 8 being of wedge form in cross section to retain the gage in place. A set screw 9 threaded into the block 1 is adapted to engage the rib or tongue 8 so as to hold the gage in the adjusted position. When the set screw 9 is backed the width gage may be moved to any distance from the end cutter 2 corresponding to the width of the mortise to be cut for receiving a member of the hinge.

The depth gage consists of a bar 10 and a spring plate 11, the latter having a shank 12 which is secured to the bar 10, said blade being curved or deflected between its front and rear edges to throw the front portion of the plate 11 beyond the plane of the cutting edges of the blades 2, 3 and 4. The bar 10 has a rib or tongue 13, which is fitted into a groove 14 formed in the inner side of the block or frame 1, said tongue and groove being of wedge form in cross section.

A set screw 15 threaded into the block or frame 1 is adapted to engage the tongue 13 so as to hold the depth gage in the adjusted position. The plate 11 of the depth gage occupies a position between the cutter 2 and the cross head 6 of the width gage. When laying off the mortise pressure brought to bear upon the outer side of the block or frame 1 causes the projecting portion of the plate 11 to move inward or toward the frame so that the cutting edges of the blades may penetrate the wood or other material in which the mortise is to be formed for receiving the hinge member. After the mortise has been outlined the depth of the mortise may be indicated by placing the projecting edge of the plate 11 against a side of the jamb or other part in which the mortise is to be formed and tapping the block or frame 1 to cause the end cutter 2 to penetrate the edge of the jamb. The distance between the side cutters 3 and 4 corresponds to the minimum length of ordinary hinges and when laying off mortises

to receive hinges of greater length than the distance between the side cutters 3 and 4 the device is moved along the jamb, door, or like part until the mortise of required size is outlined. The end cutter 2 lays off the inner side of the mortise, whereas the cutters 3 and 4 mark the ends of the mortise. The plate 11 by reason of its resiliency does not interfere in the least with the laying off of a mortise since it yields when exerting pressure upon the outer side of the frame.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention what is claimed as new, is:—

1. A device for laying off a mortise for receiving a hinge member, the same consisting of a frame, cutting blades secured to three edges of the frame, and a yieldable depth gage and a width gage applied to the side of the frame from which the cutting blades project.

2. A device for laying off a mortise for the reception of a hinge member, the same consisting of a frame, cutting blades secured to three edges of the frame and pro-

jecting from a side thereof, depth and width gages applied to the side of the frame from which the cutting blades project and adjustable toward and from the end cutting blade, and means for securing said gages in an adjusted position.

3. A gage comprising a frame having a cutting blade, and a second gage having adjustable connection with the frame and comprising a portion which normally projects beyond the edge of the cutting blade and is yieldable toward the frame, said yieldable portion being adapted to cooperate with the cutting blade to regulate the distance of its cut from a given surface.

4. A gage comprising a frame, cutting blades projecting from a side of the frame and inclosing a space, and a second gage adjustable upon the frame of the main gage and comprising a yieldable blade which normally projects beyond the plane of the cutting edges of the blades and is adapted to yield when pressure is applied to cause the cutting blades of the main gage to outline a mortise.

5. A gage comprising a frame, cutting blades projecting from three edges of the frame, a width gage adjustable upon the frame, and a depth gage likewise adjustable upon the frame and comprising a spring plate having a portion deflected and projecting beyond the plane of the cutting edges of the blades.

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

RALPH J. SIZER.

Witnesses:

A. C. HOPPMANN,
GINA PETERSON.