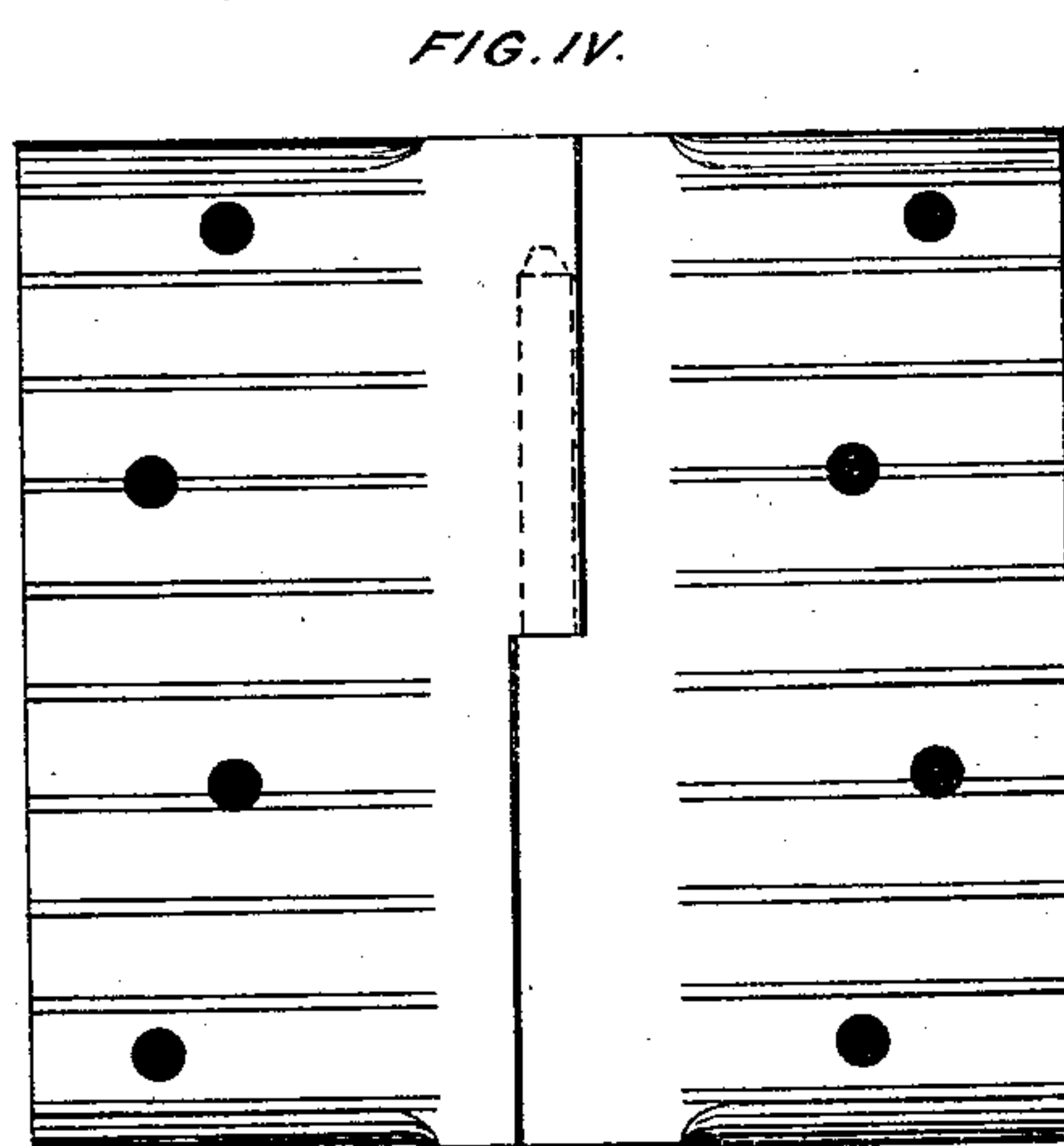
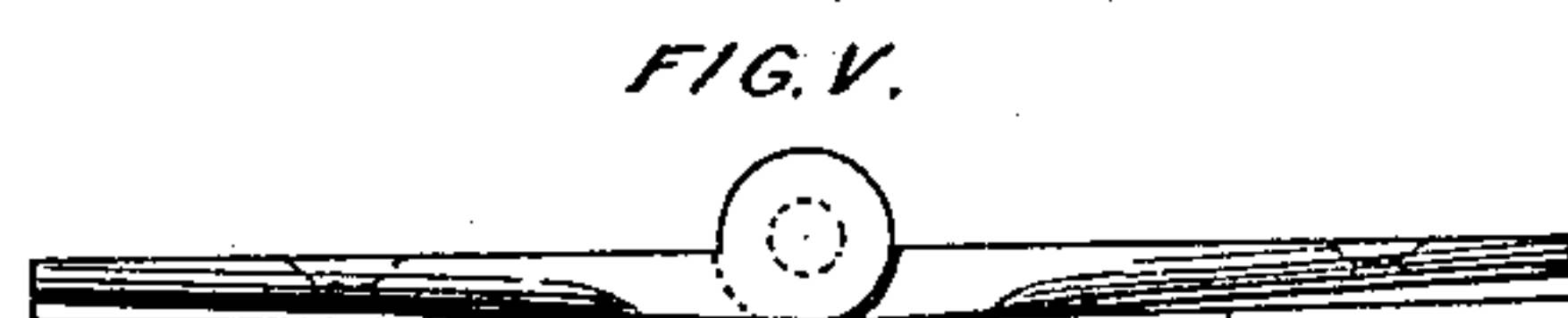
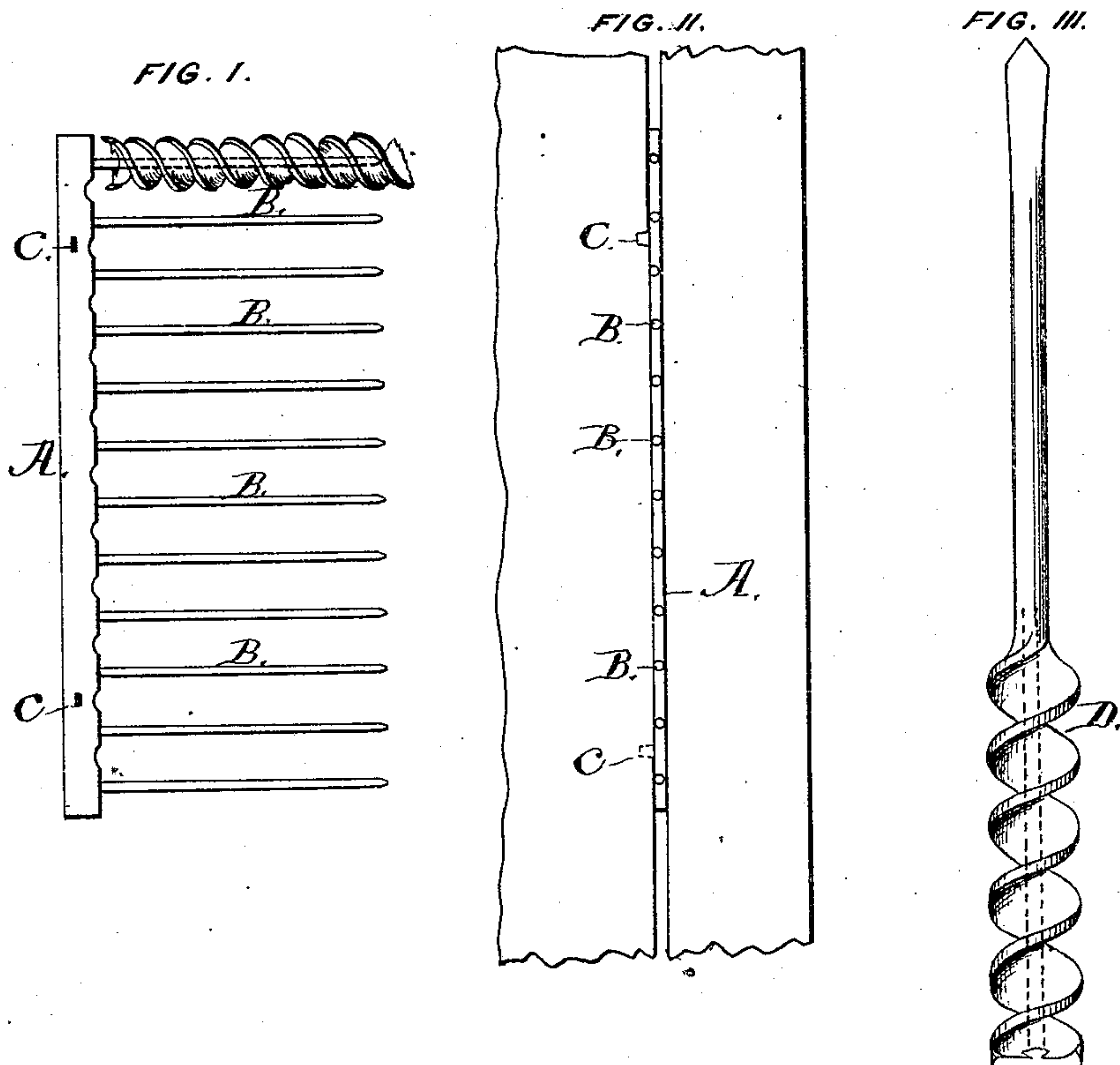


W. I. LUDLOW.  
Mortising-Machine.

No. 160,340.

Patented March 2, 1875.



WITNESSES:

A. H. Norris  
H. H. Phillips

INVENTOR:

W. I. Ludlow  
By Jas. L. Norris  
att'y

# UNITED STATES PATENT OFFICE.

WASHINGTON IRVING LUDLOW, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN MORTISING-MACHINES.

Specification forming part of Letters Patent No. **160,340**, dated March 2, 1875; application filed August 7, 1874.

*To all whom it may concern:*

Be it known that I, WASHINGTON IRVING LUDLOW, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Mortising-Machines, of which the following is a specification:

My invention relates to a new and improved device for forming the mortises or recesses in doors, window-blinds, and the like, and their sashes and frames, for the reception of the hinges; and its object is to provide a means by which such mortises or recesses may be accurately cut both in the door and sash at one and the same operation, as will be hereinafter described, without previous marking and matching.

My invention consists of a narrow metallic plate, provided with a series of guide-rods, which may be set between the door and frame at the point where the mortise is to be formed, the rods projecting from between the door and sash, and forming a series of center guides for a rotary cutting-tool, or an auger bored centrally, so as to fit over the guide-bars, as hereinafter set forth and described.

In the drawings, Figure 1 represents an elevation of my device, and Fig. 2 is a view of the same attached to the door and ready for use. Fig. 3 is a view of the boring-tool; and Figs. 4 and 5, views of the hinges which the device is designed to specially apply.

A represents a flat metal plate or narrow strip of metal, provided with a series of any number of pins or bars, B B, which project from one edge of the plate, as shown. From one side of said plate project two or more chisel-shaped pins, C, the object of which is to confine the plate A to its place when in position between the door and sash, and prevent it from slipping or dropping down between the two. D represents the rotary boring-tool, which may consist of an ordinary auger, with a central longitudinal bore of such a size as to fit over the pins or bars B, and allow said tool to revolve freely thereon. The edge of the plate A between the bars B B is cut away, as shown, so that the cutters or the end of the revolving

tool or auger will revolve clear of the said plate, when said augers have penetrated to the same. The guide bars or pins may be arranged at any convenient distance apart; but I prefer to arrange them at distances slightly less than the diameter of the auger or cutting-tool, so that the same will make a continuous mortise when used, and said rods or pins may be made of any desired length, which will depend upon the size and character of the work for which the device is to be used.

The rod A may be made of any desired length, and the bars or pins may be of any desired number to suit hinges of different styles or sizes. The auger or boring-tool is of such diameter as to make the mortise of proper depth in the door and frame, so that the hinge will fit neatly therein, and will vary, of course, with the character and size of the hinge to be used.

The operation of my device is as follows: I secure the plate to the edge of the door or sash at the place where the hinge is to be attached, and then place the door in the sash in the position of an ordinary door when shut. The pins or guide-bars will project from between the door and frame, forming center guides for the hollow auger. By slipping the hollow auger over the first of these pins or bars, and turning it in the proper direction, the upper portion of the mortise will be formed, and by boring successively at each of the pins the mortise will be completed. The mortise may be finished, however, by means of a chisel after the boring, if desired.

What I claim is—

The device for forming hinge-mortises herein described, consisting of a plate with guide-pins, which may be secured between the door and sash, and a hollow cutting-tool working upon said guide-pins, substantially as herein set forth and specified.

In testimony that I claim the foregoing I have hereunto set my hand.

WASHINGTON I. LUDLOW.

Witnesses:

ALBERT H. NORRIS,  
HARRY M. PHILLIPS.