H. L. McCLAIN.

MITER-BOX.

No. 187,293. Patented Feb. 13, 1877.

Fig. 1.

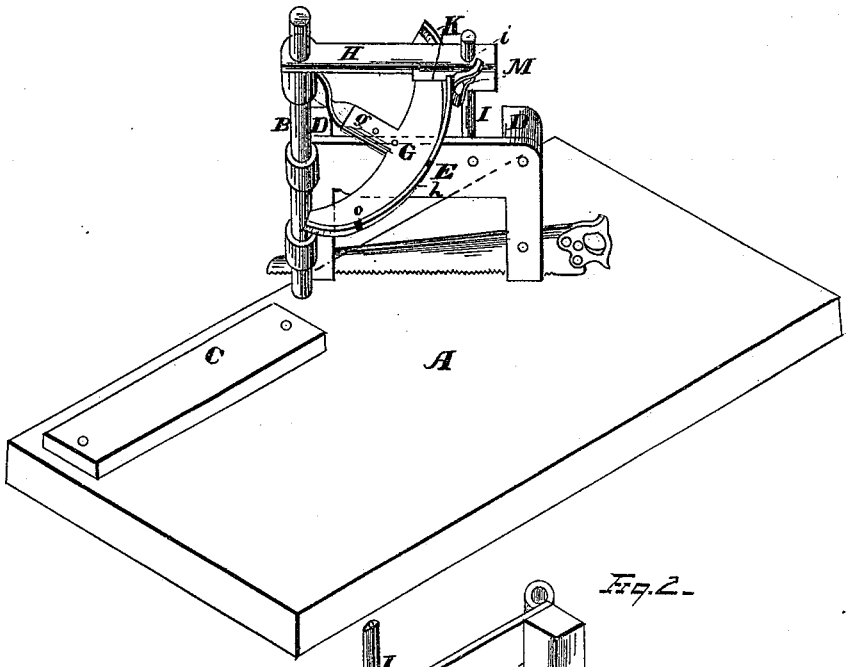
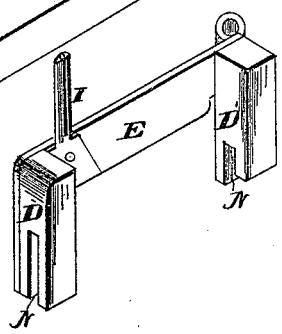


Fig. 2.



WITNESSES

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HENRY L. McCLAIN, OF AVON, OHIO.

IMPROVEMENT IN MITER-BOXES.

Specification forming part of Letters Patent No. **187,293**, dated February 13, 1877; application filed September 12, 1876.

To all whom it may concern:

Be it known that I, HENRY L. McCLAIN, of Avon, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Miter-Boxes; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to miter-boxes; and consists in a laterally as well as vertically moving saw-guide, which permits material of any width or thickness to be operated upon, and which, by the varying depth of its slots, bears equally upon both ends of the back of the saw.

In the drawing, Figure 1 shows a perspective view of a device embodying my invention. Fig. 2 is a detached view of the saw-guide frame and its guide-posts.

A represents the bed or bottom of the box, to which the upright post B is firmly secured. C is a guide-piece fixed to the bed, against which the article to be cut is held. E is the saw-guide frame, so attached to the upright post B as to permit it to move vertically as well as laterally. D D′ are slotted posts, constructed, preferably, of wood, secured to the movable frame E. The slot of post D′ is not cut as deep as the slot of post D, in order to accommodate the decreased width of the saw at its free end. G is a semicircular guide-bar, having a flange, *h*, provided with notches *o*. It is rigidly connected to the upright post B by the arm *g*. H is an adjusting or regulating arm, which swings or moves laterally, being attached to post B above the arm *g*. It is provided with the flange *k*, which engages with the notches of the semicircular guide-bar G. It also carries on its side a spring, M, which, when passed under the bar G, retains the adjusting-arm H in place. I is a guide-rod, attached to the frame E, which passes through the opening *i* of the adjusting-arm H, and moves freely, vertically, in the same.

The operation of the device is as follows: The article to be operated upon is laid against the guide-piece C, on the bed of the miter-box, and the saw guide frame is moved upward, vertically, to the height required by the thickness of the material.

It will readily be seen that articles of any thickness may be cut, or that the limit of thickness is only measured by the height of the post B, the length of the guide-rod I, and the place of attachment of the guide-bar G.

A clamping-screw might be employed to secure the bar G to the post, which arrangement would permit its adjustment at any point thereon. The adjusting-arm H is then moved to the desired position on the guide-bar G, which latter may be provided with a graduated scale. The flange *k* is caused to engage with a notch thereof, and the retaining-spring M drops into place and holds the arm H, and, by consequence of the guide-rod I, the saw-guide frame, in the desired position. The slots of the saw-guides D D′ are cut to such a depth that the teeth of the saw do not enter the same.

I prefer to make the saw-guide post D D′ of wood, without lining the slots therein with any other material.

It will also be further observed that articles of any width may be cut by this machine, limited, of course, only by the length of the saw, as there are no posts or other obstacles that serve to interfere.

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

In a miter-box, the vertically-movable saw-guides D D′, guide-rod I, and upright post B, in combination with the adjusting-arm H, flanged guide-bar G, and retaining-spring M, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY L. McCLAIN.

Witnesses:

R. WILFORD,

D. E. MOORE.