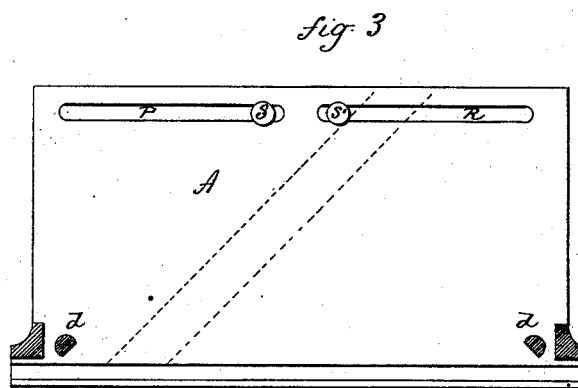
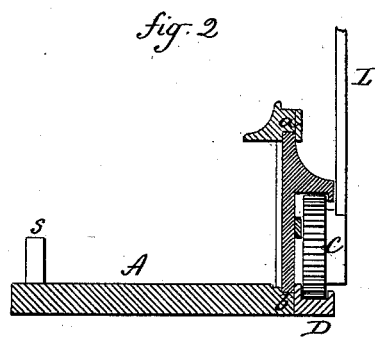
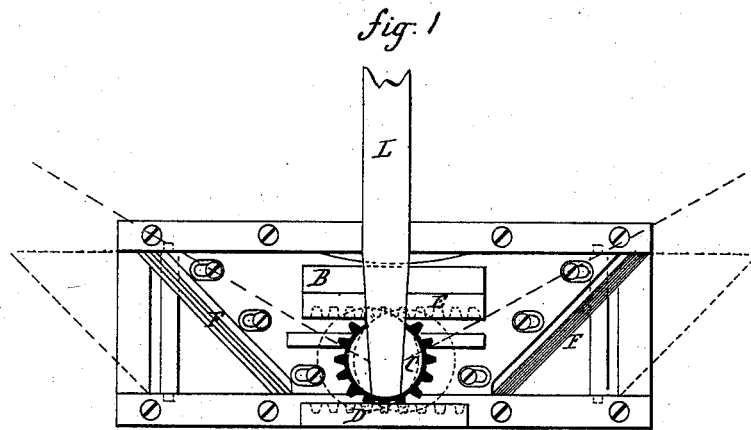


W. R. FOX.
Miter-Cutter.

No. 216,608.

Patented June 17, 1879.



Witness.
J. H. Channing
Jos. C. Earle

Wm. R. Fox
By atty. *John Paul* Inventor.

UNITED STATES PATENT OFFICE.

WILLIAM R. FOX, OF MIDDLETOWN, CONNECTICUT.

IMPROVEMENT IN MITER-CUTTERS.

Specification forming part of Letters Patent No. **216,608**, dated June 17, 1879; application filed April 25, 1879.

To all whom it may concern:

Be it known that I, Wm. R. Fox, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new Improvement in Miter-Cutters; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view; Fig. 2, a transverse section; Fig. 3, a sectional plan view.

This invention relates to an improvement in devices used by joiners and others for cutting miters, the object being to produce a simple, cheap, and accurately-working machine; and it consists in the construction as hereinafter described, and particularly recited in the claims.

A is the bed of the machine, which consists of a flat plate. At its front edge there is a vertical frame forming a longitudinal guide, *a*, above, and a corresponding guide, *b*, below, in which guides a carriage, B, is arranged to be moved longitudinally, and to the carriage such longitudinal movement is imparted through a free pinion, C, working in a stationary rack, D, below, and a corresponding one, E, on the carriage above, and so that by turning the pinion to the right or left it will traverse the stationary rack, and also impart a corresponding movement to the carriage in the direction that the pinion is turned. The carriage carries at each end cutters F, the edge of which is inclined, as seen in Fig. 1.

Near each end of the bed is a self-adjusting post, *d*, arranged so that its outer surface will lie close to the plane in which the cutters move. One side of each of these posts is flat, and so that when the material to be cut is placed against that flat side the posts will be turned until this flat side corresponds to the angle at which the material to be cut is introduced—as, for instance, suppose the angle to be forty-five degrees, or a miter, the carriage is moved to the end opposite to that where the cut is to be made, which leaves the latter open.

The material or piece to be cut is then introduced as indicated in broken lines, Fig. 3, and firmly against the flat side of the post D. The

post, being free to turn in its bearings at top and bottom, will adjust itself by the pressure against it until it lies flat upon the work and supports the material at the back close to the path of the cutter. In this condition the cutter is forced against the material and cuts away the portion of it which extends outside the path of the cutter. The cut may be more or less, according to the nature of the material.

For the easy working of the pinion, a lever, L, is applied thereto, and which for convenience is made so as to be easily removed should occasion require.

To define the angle to be cut and to make that angle variable according to circumstances, slots P R are made at the rear of the bed, or may be a single slot, and into these adjustable studs S S', more or less in number, are introduced, and so as to be moved along said slots, and set at any desirable point, and so that one of the said studs with one of the posts form a guide for the proper position for the material to be cut—as, for instance, in Fig. 3 the stud S' and the post *d* at the left form the guide.

By adjusting the studs to different positions, it will be seen that the angle at which the work will be presented will be correspondingly changed.

The cutters are attached to the carriage so as to be easily removed or set as occasion may require.

The posts *d* are cylindrical in form, the flat side being produced by cutting away a portion of the cylinder, so that a bearing is obtained on the work close up to the cutter, which will prevent chipping or breaking away of the material as the cutter passes from it.

It will be understood that one of the cutters may be dispensed with; but the two are desirable, as for cutting opposite angles.

I do not wish to be understood as broadly claiming a bed with guides thereon to locate the work, and a sliding cutter to cut the work upon the angle indicated by said guides, as such, I am aware, is not new; but

What I do claim as my invention is—

1. The combination of a carriage arranged on a bed in longitudinal guides, carrying one or more cutters, with a stationary rack on the bed, a corresponding rack on the carriage, and

pinion between the two said racks, through which longitudinal movement is imparted to said carriage, and with guides on said bed to locate the material to be cut, substantially as described.

2. The combination of a carriage arranged to move longitudinally on a bed, and carrying cutter, with the self-adjusting flat-sided post, substantially as described.

3. The combination of a carriage arranged to move longitudinally on a bed, and carrying cutter, with the self-adjusting flat-sided post and adjustable stud or studs S, substantially as described.

WM. R. FOX.

Witnesses:

W. S. WHITNEY,

JOS. S. NOXON.