J. P. TIERNEY.

Miter-Boxes.

No. 142,878. Patented September 16, 1873.

Fig. 1.

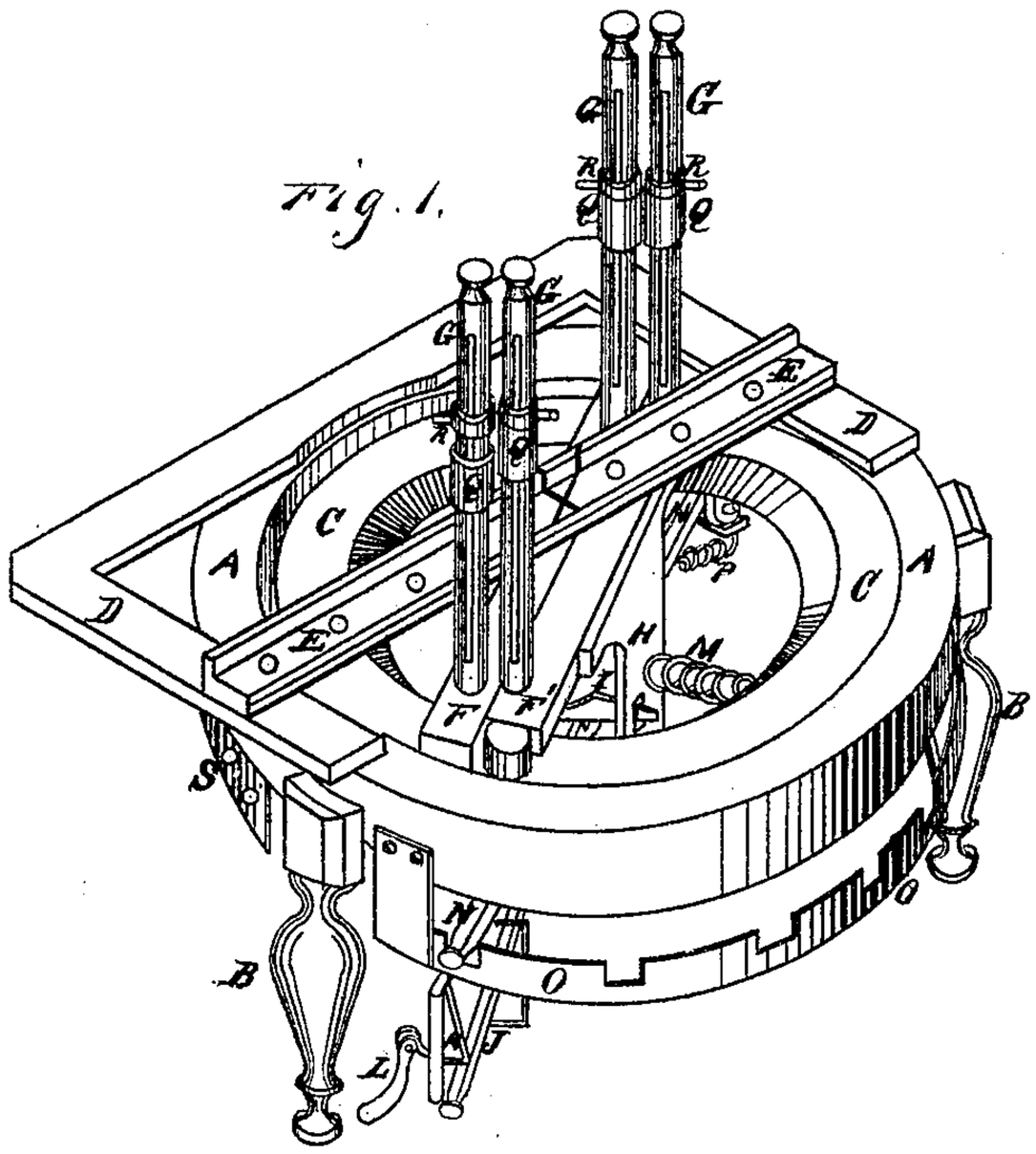


Fig. 4.

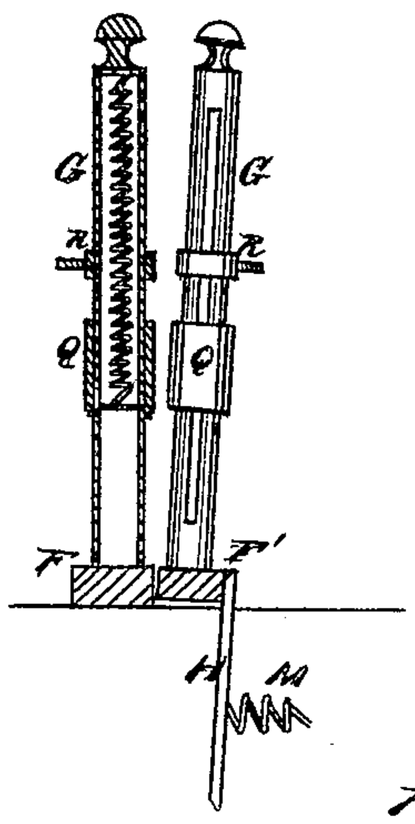


Fig. 2.

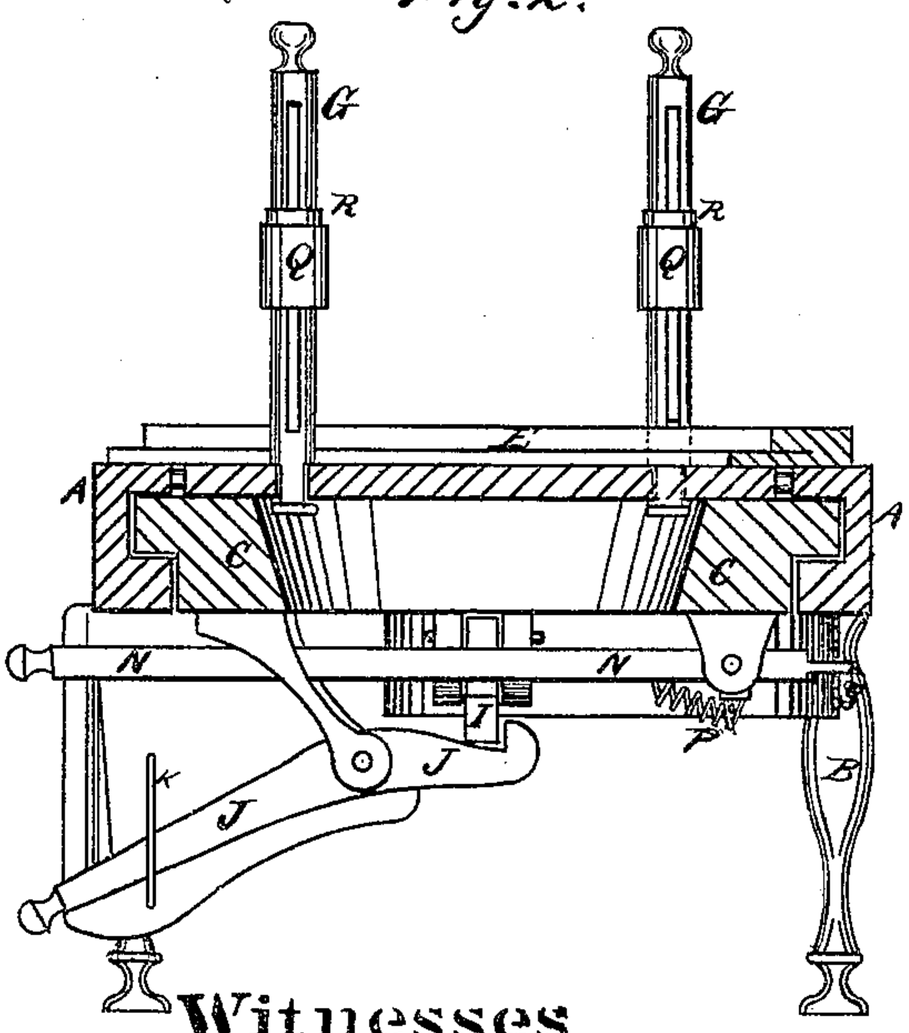
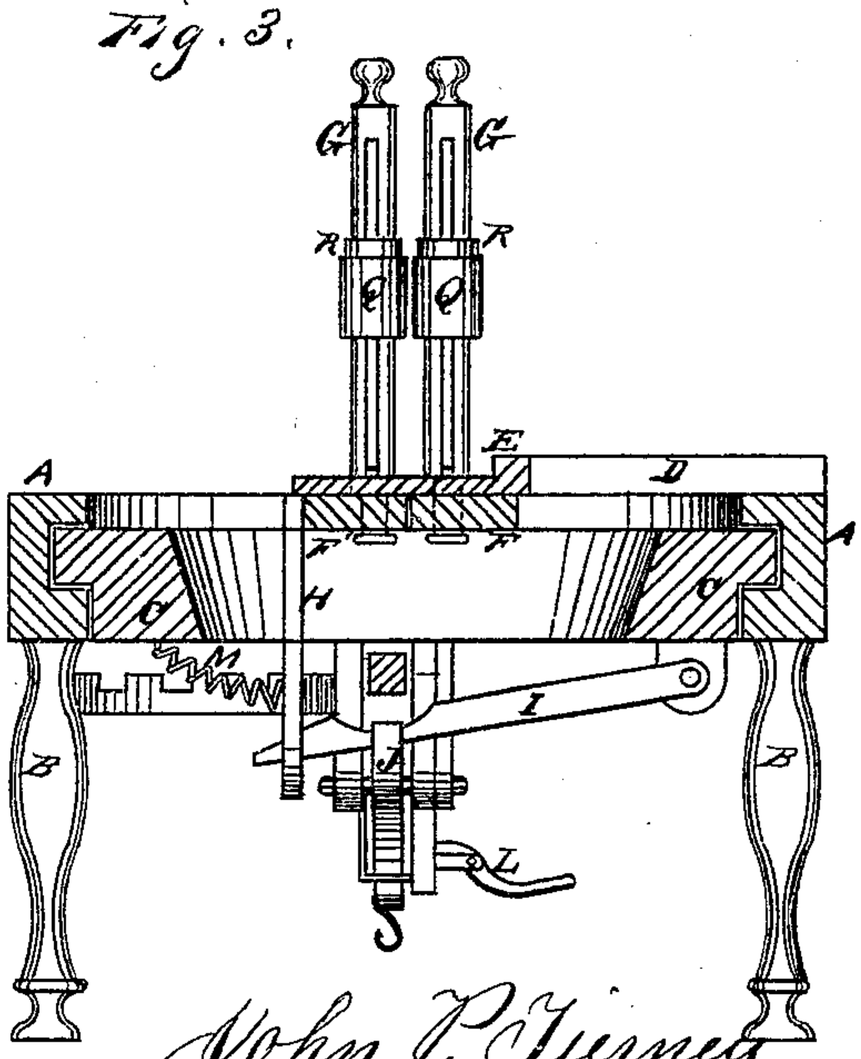


Fig. 3.



Witnesses

Geo. H. Strong.

C. W. Richardson

John P. Tierney
By his Atty's
Dewey & Co.

UNITED STATES PATENT OFFICE.

JOHN P. TIERNEY, OF SACRAMENTO, CALIFORNIA.

IMPROVEMENT IN MITER-BOXES.

Specification forming part of Letters Patent No. **142,878**, dated September 16, 1873; application filed August 1, 1873.

To all whom it may concern:

Be it known that I, JOHN P. TIERNEY, of Sacramento city and county, State of California, have invented a Miter-Box; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to certain improvements in adjustable miter-boxes; and it consists principally of a novel application of certain mechanism for operating the rotating table which carries the miter-box, turning it upon the stationary frame, and locking it securely at any desired point. My invention further consists in the employment of a novel device for opening and closing the saw-guides, for the purpose of introducing or releasing the saw. These guides consist of four vertical hollow posts, having loosely-turning sleeves surrounding them, between which the saw moves. These sleeves have also a vertical motion, and are caused to rise by springs within the posts, the saw depressing them when it is used. The posts are mounted upon two bars, one bar being stationary, while the other bar is pivoted, so that, by means of certain levers, it can be slightly turned, and thus allow two of the posts to swing outward to admit the saw.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my machine. Fig. 2 is a sectional elevation, showing a side view of the guiding-posts. Fig. 3 is a sectional elevation, showing a front view of the guiding-post. Fig. 4 shows the manner of operating the guides.

A is a circular frame, mounted upon legs B, and this frame supports the rotating table C. This table is nicely fitted into grooves in the inner edge of the frame, so that it will move closely, and it is made open in the center, so as to admit of the escape of the sawdust. Upon the top of the frame A is secured a rectangular frame, D, and across this the miter-box E is made fast, as shown. Two bars, F F′, extend across the table C, and one of them is made fast, the other one, F′, being pivoted so as to turn slightly upon a longitudinal axis. Upon these two bars four posts, G, are secured in pairs at a sufficient distance apart to serve as guides for the saw. One of each pair of these posts is secured to the stationary bar, while the others are made fast to the movable bar, so that when the bar is turned a little these two posts will be separated from the stationary ones to admit or release the saw. In order to operate the movable bar an arm, H, is secured to and extends downward from it, having a slot in the lower end. A lever-arm, I, is hinged to the opposite side of the rotating table and extends through this slot. The upper edge of this lever is so beveled that when it is raised it will act in the slot so as to force the arm H back, and thus swing the bar F′, and move the posts G G close together. The lever I is operated by another lever, J, which extends outside of the frame, so as to be convenient to be operated by hand or foot. When the posts are closed this lever is held down by a spring-catch, K; but when it is desired to release the saw this catch can be disengaged by a lever, L. A spring, M, acts upon the arm H to force the posts apart.

In order to move the table C, and secure it at any angle desired, I employ a lever, N, which is hinged at the rear of the table, and extends across to the front, so as to be within easy reach. A circular segmental rack, O, is secured to the front of the frame A, and into the different notches the lever N will fall, according as the table is made to stand at any angle for different cuts.

In order to still further steady the table, I employ another circle or segment, S, at the back of the frame A, and this segment is pierced with holes corresponding with the notches in the front segment, and into these holes the rear end of the lever will be forced by a spring, P, when the front end falls into the rack.

The guiding-posts G have each a roller or loose sleeve, Q, surrounding them, and a collar, R, serves to prevent the rollers from being drawn up too far. The rollers are held up by springs within the posts, and these springs yield so as to allow the rollers to move down and guide the saw as it cuts. Suitable gage-marks are made upon the frame, correspond-

ing with the different cuts which are to be made, and by means of these it is easy to set the machine instantly for the desired cut.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with the frame A and adjustable rotating table C, the operating-lever N, with its spring P, the rack O, and the perforated segment S, substantially as and for the purpose herein described.

2. The four posts G, with their adjustable guiding-rollers Q, the posts being mounted upon the stationary and movable bars F F′ in pairs, so as to be opened and closed to admit and hold the saw, substantially as herein described.

3. In combination with the pivoted bar F′, for separating the posts G, the slotted arm H, with the operating lever-arms I and J, and the holding spring-catch K, with its disengaging-lever L, substantially as and for the purpose herein described.

In witness whereof I hereunto set my hand and seal.

JOHN P. TIERNEY. [L. S.]

Witnesses:

LEWELLYN TOZER,

J. STEFFENS.