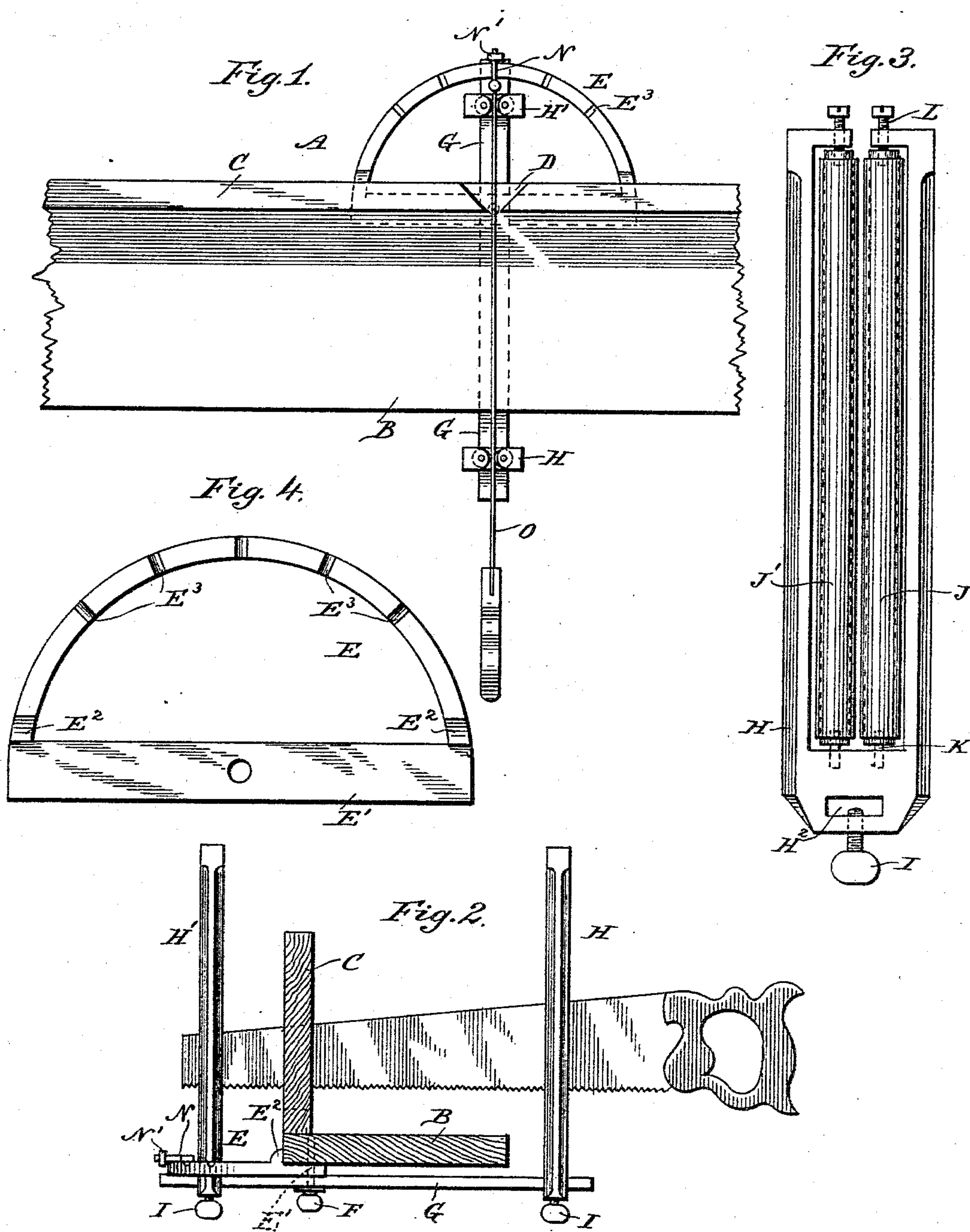


(No Model.)

W. S. HERRINGTON.  
MITER BOX.

No. 414,412.

Patented Nov. 5, 1889.



WITNESSES:

D. C. Reusch.  
C. Sedgwick

INVENTOR

W. S. Herrington  
BY *[Signature]*

ATTORNEY



# UNITED STATES PATENT OFFICE.

WILLIAM S. HERRINGTON, OF SAN FRANCISCO, CALIFORNIA.

## MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 414,412, dated November 5, 1889.

Application filed April 26, 1889. Serial No. 308,690. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. HERRINGTON, of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Miter-Box, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved miter-box which is simple and durable in construction, very effective in operation, quickly taken apart for convenience in carrying or packing, and adjustable to admit any-sized stick, molding, or board to be operated on.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is an end elevation of the same. Fig. 3 is an enlarged elevation of one of the roller-frames, and Fig. 4 is an enlarged plan view of the notched segment.

The improved miter-box A is provided with a bottom board B, on one edge of which is secured at right angles a board C, provided with a vertically-extending V-shaped notch D, the sides of which are at right angles to each other. Directly below the board C, on the under side of the board B, is held the base E' of a segment E by means of a bolt F, also passing through a bar G and screwing into the bottom board B. The bar G extends transversely across the bottom B and under the segment E, as is plainly shown in the drawings.

In order to hold the segment E in place on the board B, I provide it with offsets E<sup>2</sup>, fitting against the edge of the board B, thus holding the segment conveniently in place. The bolt F is centrally below the inner edge of the vertical board C—that is, in line with the apex of the vertically-extending notch D. On top of the segment E are arranged a number of notches E<sup>3</sup>, formed at suitable angles, indicating the miter to be cut.

On the bar G are held to slide the roller-frames H and H', of which the roller-frame

H is in front of the board C, while the other is in the rear of the same. Each roller-frame H and H' is provided near its lower end with an aperture H<sup>2</sup>, through which passes the bar G, and each roller-frame is adapted to be secured in place on the bar G by a set-screw I, screwing in the bottom of the respective roller-frame and against the bar G. In each roller-frame H or H' are held to turn the rollers J and J', extending parallel and vertically, as shown in Fig. 3. Each roller J J' is preferably covered with a flexible material—such as rubber—and the lower ends of the rollers are mounted to turn on the studs K, secured in the roller-frames. The upper end of each roller J J' is held to turn on the lower reduced end of a screw L, screwing in the top of the roller-frames. When the screws L are screwed outward, the rollers J and J' can easily be detached from their respective roller-frames, in order to be repaired whenever necessary.

Near the rear end of the bar G is pivoted a spring-arm N, adapted to pass into one of the notches E<sup>3</sup> in the segment E. A nut N' screws on the outer end of the spring-arm N to secure the latter on the segment E at points where notches are not provided.

The operation is as follows: When the several parts of the miter-box are in place, as illustrated in Figs. 1 and 2, the spaces between the rollers J J' of the roller-frames H and H' are in line with the apex of the notch D in the board C. When the operator now inserts the saw-blade between the rollers J J' of the roller-frames H H', the saw passes through the apex of the notch D, and when the bar G is held at right angles to the bottom board B, as shown in the drawings, the stick, molding, or board held on the said bottom board is cut square when the saw is operated. When the operator now desires to cut a stick, molding, board, or other article at any desired angle, he disengages the spring-lever N from the central notch E<sup>3</sup>, and then swings the bar G to the right or left, according to the angle desired, or until the spring-lever N drops into a corresponding notch E<sup>3</sup> in the segment E. The bar G then stands at such an angle as it is desired to cut the article held in the bottom of the miter-box.

It is to be understood that the roller-frames



H and H' are open at the top, so as to conveniently insert the saw-blade. It will further be understood that the entire miter-box can be easily and conveniently taken apart  
 5 by simply removing the bolt F from the bottom board B and loosening the set-screws I, so as to detach the roller-frames H and H' from the bar G, that it may be conveniently carried or packed in a tool-chest. It will be  
 10 further seen that the roller-frames H and H' can be moved in or out on the bar G, so as to make room for articles of different diameters. It will also be seen that the roller-frames H and H' can be adjusted close up to the sides  
 15 of the bottom board B, that may be of any desired width, so that considerable stroke can be given to the saw.

Any ordinary saw can be used in this miter-box, thus doing away with the necessity  
 20 of keeping a special saw for the miter-box.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a miter-box, the combination, with the  
 25 segment E, notched on its upper surface, of the bar G, pivoted to the under side of the base of the segment, the spring-lever N, projecting from the bar G across the notched face of the segment and provided on its outer  
 30 end with a nut to clamp against the curved

edge of the segment, and the saw-guides adjustable on the bar G, substantially as set forth.

2. The combination, with the segment E, having notches E<sup>3</sup>, a base E', and abutments  
 35 E<sup>2</sup> E<sup>2</sup> at the juncture of the ends of the segment with the base, and the bottom board B, secured on the base E', with its inner edge against said abutments and having the vertical  
 40 board C flush with its inner edge and provided with a vertical V-shaped slot, of the bar G, pivoted at F' to the base E', and provided at the outer end of its short arm with a locking device engaging said notches, and the  
 45 saw-guides adjustable on said bar, substantially as set forth.

3. The combination, with the segment and the arm G pivoted thereto, of the frames H  
 H', having slots H<sup>2</sup> in their lower closed ends  
 50 and inwardly-projecting bearings at their upper ends, the parallel rollers J J' in said frames, and the vertical pivots K L between the ends of the rollers and the bottom of the said frames and said inwardly-extending  
 lugs, substantially as set forth.

WILLIAM S. HERRINGTON.

Witnesses:

F. E. JONES,

JAMES M. STEWART.