

(No Model.)

F. V. CARMAN.
MITER BOX.

No. 420,530.

Patented Feb. 4, 1890.

Fig. 1.

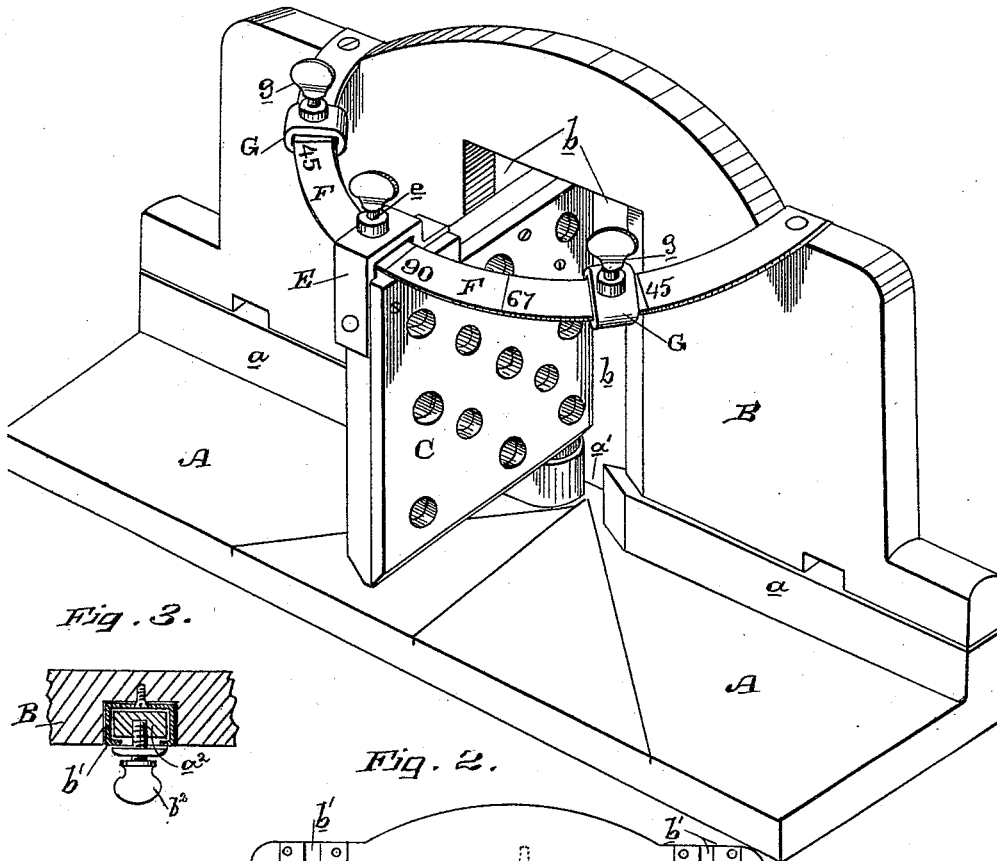


Fig. 3.

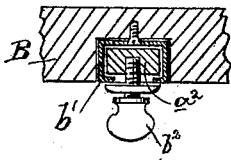
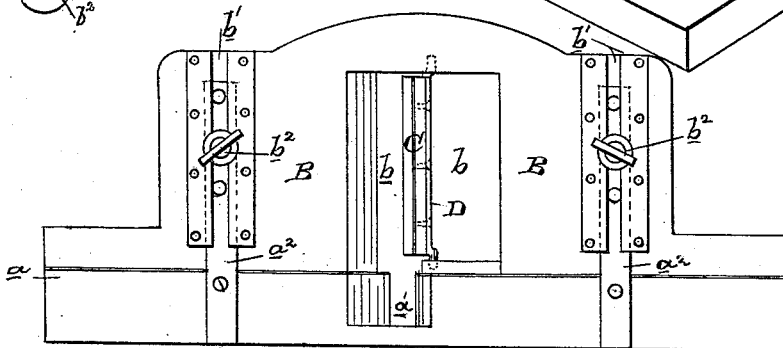


Fig. 2.



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UNITED STATES PATENT OFFICE.

FRANK V. CARMAN, OF OAKLAND, CALIFORNIA.

.MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 420,530, dated February 4, 1890.

Application filed October 18, 1889. Serial No. 327,426. (No model.)

To all whom it may concern:

Be it known that I, FRANK V. CARMAN, a citizen of the United States, residing at the city of Oakland, in the county of Alameda and State of California, have invented an Improvement in Miter-Boxes; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to that class of miter-boxes in which a swinging leaf adapted to receive and guide the saw is employed, said leaf being vertically adjustable to receive different thicknesses of work, and adapted to be fixed at any suitable angle to make the cut desired.

My invention consists in the peculiar construction and combination of parts herein-after fully described, and specifically pointed out in the claims.

The object of my invention is to provide a simple and effective miter-box which can be constructed at small cost and is yet durable and accurate.

Referring to the accompanying drawings, Figure 1 is a perspective view of my miter-box. Fig. 2 is a rear elevation. Fig. 3 is a detail section of groove b' in the back of the plate B, standard a^2 , and set-screw b^2 .

A is the bed-plate of the box, having an upright flange or strip a at its back, through which is made the beveled-sided opening a' for the passage of the saw. On top of the flange or strip a is the back plate B, which is adapted to be moved up and down by means of flanged grooves b' made in its back, which fit over the upright standards a^2 , rising from the flange a of the bed-plate. Thumb-screws b^2 , carried by the standards, are adapted to bind against the flanges of the grooves of the back plate, so as to hold said back plate firmly in the vertical position to which it is adjusted. There is one standard near each end of the back plate, so that said plate rises and falls with accuracy, and the center portion is left free, the main opening b being made in this portion to receive the hinged or swinging saw-guide leaf C. This leaf is a slotted or two-part one, and is preferably made of two separate plates, which are screwed together and are set up by the screws to leave a proper and sufficient space between the two plates for the insertion and working of the

back of the saw. These plates are perforated, as shown, to reduce their binding-surface as much as possible, without, however, detracting from the perfect guiding qualities of the leaf, as is the case where the leaf is entirely cut out, leaving two slotted lugs at each end. This leaf is pivoted vertically in the opening b of the back plate by any suitable means—here shown by the ends of the strip D screwed to its side, said ends being journaled in suitable bearing-plates above and below.

To the top front of the leaf is screwed the socket-guide E, which fits over a fixed semi-circular guide or rack F, the two ends of which are screwed to the top of the back plate. A set-screw e passes through the socket-guide E and binds upon the rack, whereby the leaf may be held in any position to which it is turned, this position being defined by suitable graduations or marks upon the rack.

G are movable stops which are fitted upon the rack and adapted to slide back and forth thereon, said stops having set-screws g for holding them in position. There is one stop on each side of the leaf, and they are adapted to be set in corresponding positions, whereby the leaf may be quickly thrown to either side and arrested by the stops.

I am aware that in miter-boxes a swinging leaf serving as a saw-guide is not new, and also that said leaf has been attached to a vertically-adjustable back, whereby it can be raised to receive the different thicknesses of work. I do not therefore claim these features broadly; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. A miter-box consisting of the combination of the bed-plate having fixed standards rising from its back near each end, the back-plate having grooves in its back surface near each end and fitting over the standards of the bed-plate, the set-screws for holding the back plate in the position to which it is adjusted, said back plate having the central opening, a slotted or two-part leaf to receive the saw, hinged vertically by its back edge within the central opening of the back plate, and a semi-circular rack for guiding the leaf and set-screws for fixing it in position, substantially as described.

2. A miter-box consisting of the combina-

tion of the bed-plate having the back flange with central opening *a'*, the back plate fitted on the back flange and having a central opening, the standards on the back flange, the flanged grooves in the back of the back plate, and the set-screws in the standards, whereby the back plate may be raised and adjusted in position, the slotted or two-part leaf hinged vertically in the central opening of the back plate, the semicircular rack secured to the top of the back plate, and the socket-guide and set-screw secured to the leaf and fitted on the rack, substantially as described.

3. In a miter-box, the combination of the bed-plate, the vertically-adjustable back plate having a central opening, the saw-guide leaf hinged vertically in the central opening of the back plate, and consisting of two plates screwed together and having a series of perforations made through them, as shown, the semicircular rack fixed to the top of the back plate, and the socket-guide and set-screw secured to the leaf and fitted on the rack, substantially as described.

4. A miter-box consisting of the combination of the bed-plate having a back flange with central opening, a back plate on the back flange and having a central opening, the standards on the flange, grooved in the back plate, whereby the latter is vertically movable, and the set-screws for adjusting it in position, the slotted or two-part leaf hinged in the central opening of the back plate, the semicircular rack fixed to the top of the back plate, the socket-guide and set-screw secured to the leaf and fitted on the rack, and the movable stops *G* and set-screws carried thereby fitted on said rack for limiting and defining the movement of the leaf, substantially as described.

In witness whereof I have hereunto set my hand.

FRANK V. CARMAN.

Witnesses:

S. H. NOURSE,
H. C. LEE.