

(No Model.)

P. CASHIN.  
MITERING MACHINE.

No. 308,134.

Patented Nov. 18, 1884.

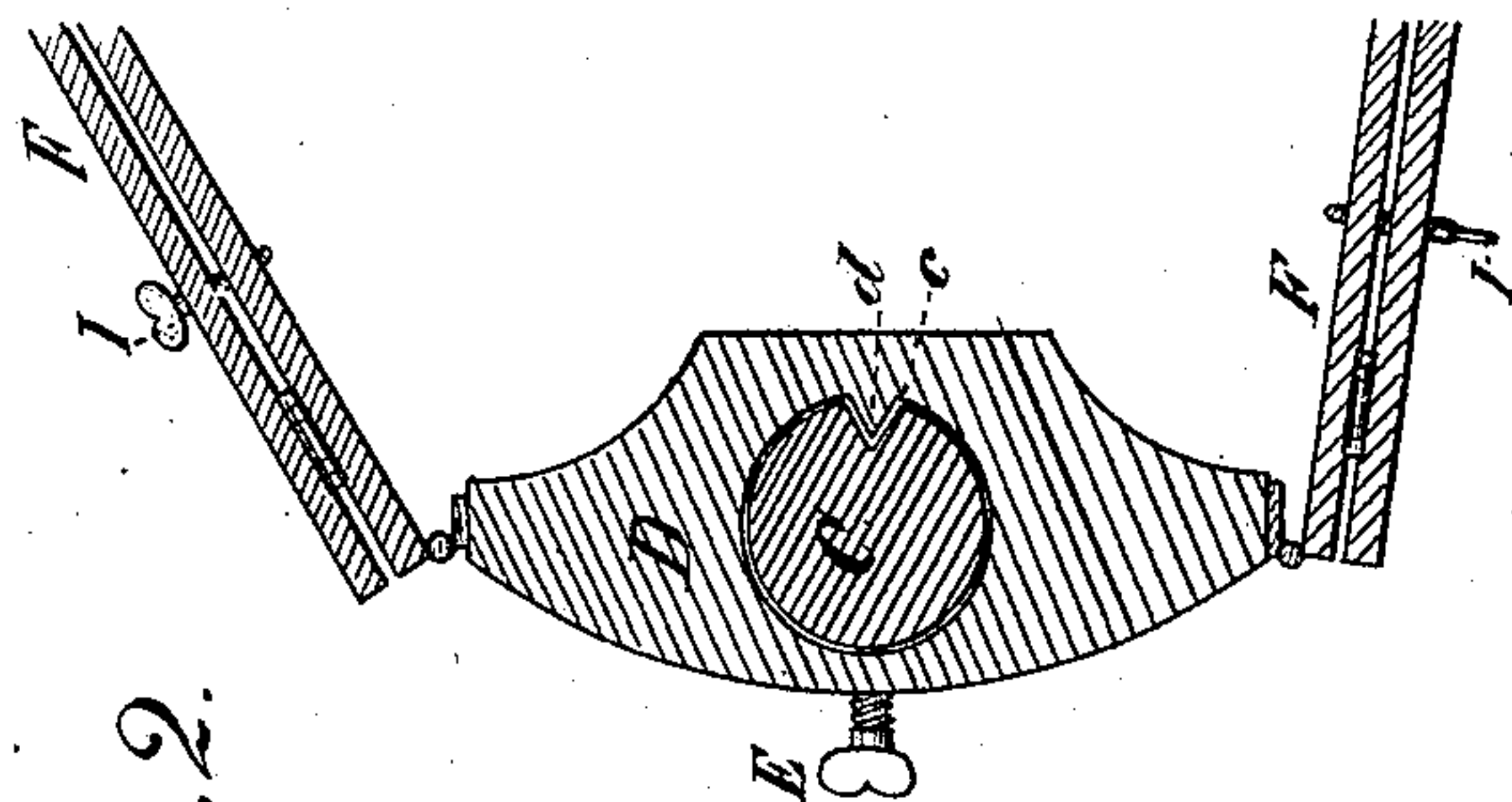


Fig. 2.

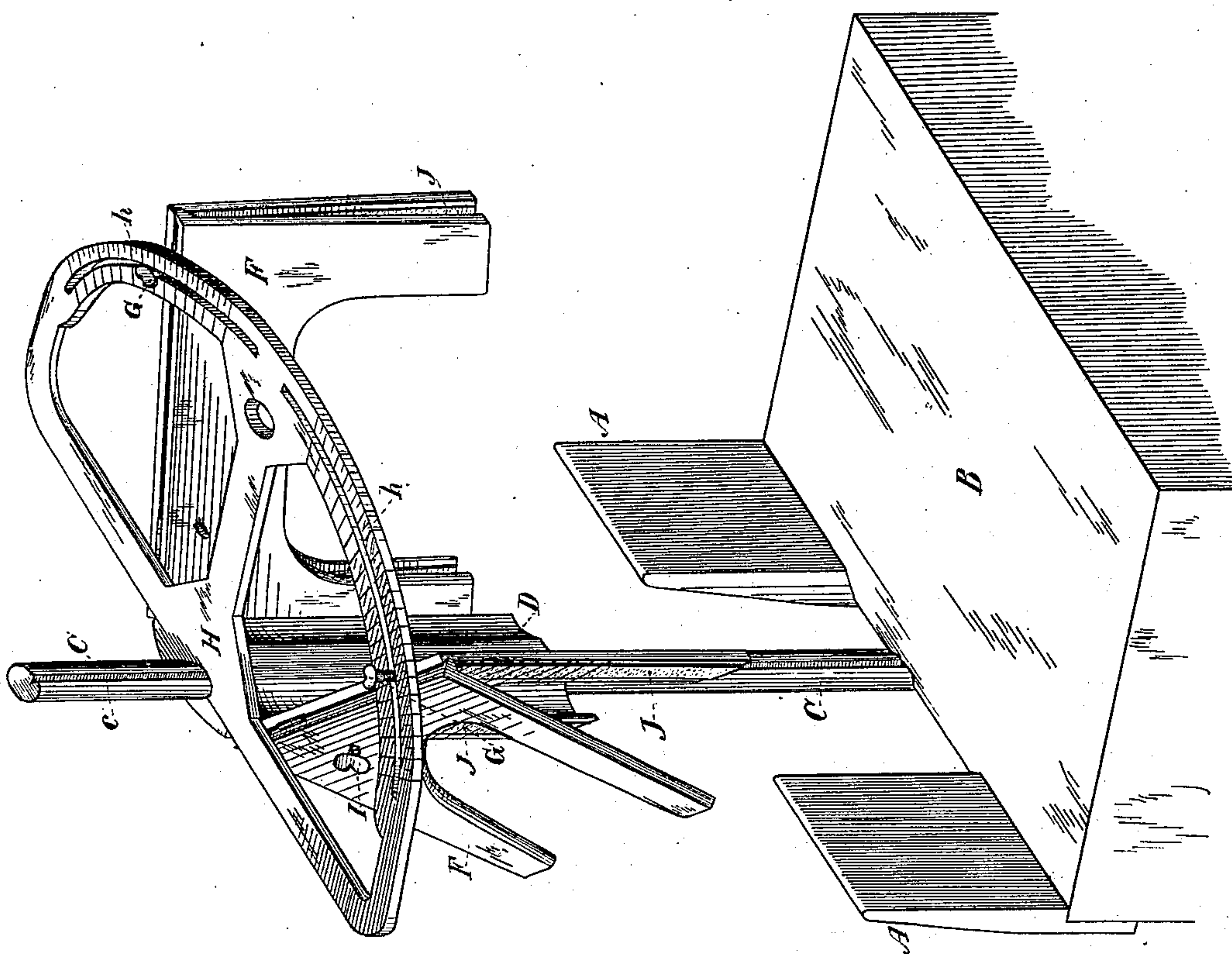


Fig. 1.

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# UNITED STATES PATENT OFFICE.

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## MITERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 308,134, dated November 18, 1884.

Application filed June 9, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL CASHIN, of the city and county of San Francisco, 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 devices, machines, or tools used by carpenters for properly guiding a saw to make a given bevel or miter in the work, and known as "miter-boxes;" and my invention consists in a frame-plate adapted to be secured to bench or bed-block, a standard rising from said plate, a vertically-adjustable sleeve or carrier on the standard, swinging saw-guides hinged to the sleeve and adapted to receive the back of the saw-blade and guide it, and suitable graduated arcs to determine and fix the angle of inclination to which the guides are turned, together with certain details of construction, all of which I shall hereinafter fully explain.

The object of my invention is to provide a simple, economical, and effective miter-box.

Referring to the accompanying drawings, Figure 1 is a perspective view of my miter-box, one of the saw-guides F being spread to show the elastic strips J on its inner surfaces. Fig. 2 is a horizontal cross-section through sleeve D, standard C, and saw-guides F.

A is a plate forming the frame of the device. A suitable rabbet or shoulder is made along its lower portion to adapt it to fit against the edge of the table or bed-block B, to which it is secured by suitable screws. The center of the frame-plate is cut out, and in the open space thus formed rises a standard, C, the base of which is firmly secured to the base of the plate. Upon this standard is fitted to slide up and down a sleeve or carrier, D, which in front is provided with a dovetail tongue or tenon, *d*, fitted in a corresponding groove or mortise, *c*, made in the standard, Fig. 2. A screw, E, through the back of the sleeve impinges against the back of the standard, and thus draws the tongue tightly into its groove and sets or fixes the sleeve to any suitable vertical adjustment. I prefer this engagement of the sleeve with the standard, as it enables the adjustment of the former to be made with ease and certainty.

F F are the saw-guides. These consist each

of two flat parallel plates, which are hinged together at their upper edges to allow them to separate to form the slot or groove for the back of the saw to enter. The guides are hinged at their rear, one to each side of the vertically-adjustable sleeve, so that each is enabled to swing to any angle with the sleeve and frame-plate, Fig. 2. Secured to the top of the sleeve is an open plate, H, in a horizontal position lying just over the upper edges of the guides F. The outer edge of this plate is curved and graduated to a scale of angles, as indicated by lines and figures thereon. This graduated portion is divided into two arcs, *h*, each of which is slotted to receive a set-screw, G, which passes down into the top of the saw-guide to set it at any desired angle. The two plates of each of the guides are separated or brought closer together by means of screws I, whereby the guides can be adapted to receive various thicknesses of saw-blades. Upon or into the inner or adjacent surfaces of the plates of the guides are let oppositely-placed cushions J, preferably narrow bands of rubber, which steady the saw in its reciprocating movement.

The use of the device is as follows: The material to be beveled or mitered is placed upon the bed-block, and the sleeve D is vertically adjusted to the suitable height. If the miter is to be one of forty-five degrees, one of the saw-guides is loosened and turned to that angle, as indicated on the graduated arc above, and is there set by its screw G. The back of the saw-blade is inserted in the guide between the two plates, and it plays back and forth through the open back of the frame-plate and cuts the proper bevel or miter in the material. Once set, all the work may be cut with precision. The other saw-guide enables me to make a corresponding bevel or another one of a different angle. By moving the guides any required bevel may be made.

The device is simple in construction, effective in operation, and can be made at small cost. It is also adapted to be readily taken apart and packed conveniently. The standard is secured to the frame-plate by screws *m*, and graduated plate is likewise secured to the sleeve, thus permitting an easy separation of parts when necessary.

Having thus described my invention, what



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

1. In a miter-box, a guide-plate above the work, consisting of two plates hinged at their upper ends and adapted to receive the back of the saw-blade and guide said saw, substantially as herein described.
2. In a miter-box, a swinging guide-plate above the work, consisting of plates hinged at their upper ends, and adapted to be turned to and set at various angles with said work, said plate receiving the back of the saw and guiding it, and screws for opening and closing the plates, substantially as herein described.
3. In a miter-box, a vertically-adjustable guide-plate above the work, said guide-plate consisting of two flat plates hinged at their upper ends, and adapted to be turned to and set at various angles with said work, said plate receiving the back of the saw and guiding it, substantially as herein described.
4. In a miter-box, a swinging saw-guide adapted to be vertically adjusted and set at various angles with and over the work by means of a standard, C, as described, said guide consisting of two parallel plates hinged at their tops, and adapted to be separated and set to admit the back of the saw between them, substantially as herein described.
5. In a miter-box, a standard and vertically-adjustable sleeve or carrier thereon, in combination with a saw guide or plate, consisting of two flat plates hinged together, as described,

and hinged to said sleeve and adapted to be turned to and set at various angles therewith, and slotted, grooved, or spaced to receive the saw-blade, and a graduated arc secured to said sleeve, and under which said guide swings to determine its angle of inclination, substantially as herein described.

6. In a miter-box, the frame-plate A, standard C, and vertically-adjustable sleeve or carrier D thereon, in combination with the saw-guides F F, hinged to said sleeve and adapted to receive the back of the saw and guide it, and the graduated slotted arcs *h*, secured to said sleeve, and under which the guides swing and are set by screws G, substantially as herein described.

7. In a miter-box, the frame-plate A, standard C, and vertically-adjustable sleeve or carrier D thereon, in combination with the saw-guides F F, hinged to said sleeve, and consisting of parallel plates hinged together at their tops and adjusted by screws I, whereby they are adapted to receive and guide the saw, and the graduated slotted arcs *h*, secured to said sleeve, and under which the guides swing and are set by screws G, substantially as herein described.

In witness whereof I have hereunto set my hand.

PAUL CASHIN.

Witnesses:

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JOHN C. McCLELLAN.