L. W. LANGDON.

Miter-Boxes.

No. 151,139. Patented May 19, 1874.

Fig. 1.

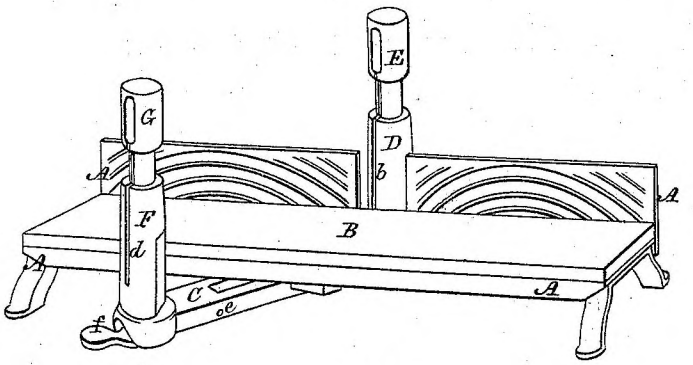


Fig. 2.

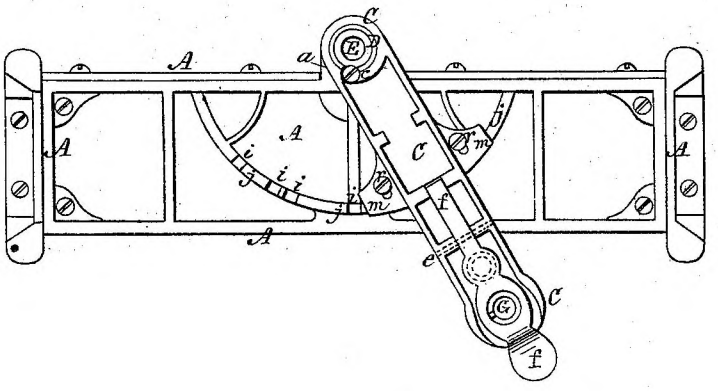


Fig. 3.

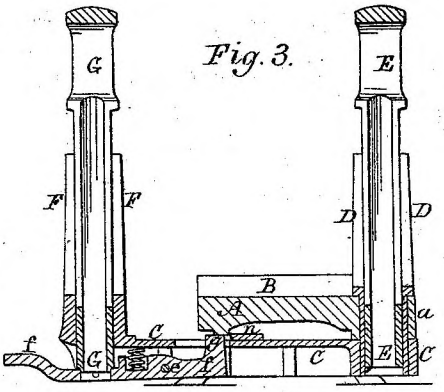
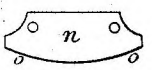


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

LEANDER W. LANGDON, OF NORTHAMPTON, MASSACHUSETTS.

IMPROVEMENT IN MITER-BOXES.

Specification forming part of Letters Patent No. **151,139**, dated May 19, 1874; application filed February 16, 1874.

To all whom it may concern:

Be it known that I, LEANDER W. LANGDON, of Northampton, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Miter-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents in perspective the miter-box complete. Fig. 2 represents a plan of the bottom of the miter-box as it appears when turned bottom upward. Fig. 3 represents a vertical cross-section, taken centrally through the saw-guides. Fig. 4 represents a wearing-plate, which will be hereinafter more particularly referred to.

My invention relates to certain devices or mechanisms, connected with a miter-box, which simplify and lessen the cost of the miter-box, whilst its efficiency and accuracy are at least not impaired, if they are not increased, by my improved construction of its parts.

To enable those skilled in the art to make and use my invention I will proceed to describe the same with reference to the drawings.

A represents a bed-frame or stand, made wholly or in part of cast-iron, with a support, B, of wood, thereon, upon which the material to be sawed rests, and which wood protects the teeth of the saw from metal. On the back or rear side of the iron bed-piece A there is cast a support, *a*, which serves as a pivotal point for the bar C to move around as its center of motion, as a firm support for the saw-guide tube or cylinder D, which passes through it, and as the fixed point for determining the angle or miter-joints to be cut. The tube or cylinder D, in which the saw-guide E is placed, is shouldered and reduced at its lower end, so as to pass through the solid support *a*, and into or through the bar or lever C, in which it is fastened by a set-screw, *c*, or other device, so as to move with said bar or lever. The saw-guide E is mortised and slotted, in the usual well-known way, to admit the back, blade, and teeth of the saw to freely and snugly pass through it, and the tube, cylinder, or socket D, which contains said saw-guide, is also slotted, as at *b*, for the blade of the saw to pass through. At the front end of the bar or lever C there is another tube, cylinder, or socket, F, which may be cast on or with said lever; and this socket is also slotted, as at *d*, for the admission and free passage of the saw-blade through it. In this tube or socket F is supported and carried the second saw-guide G, which is mortised and slotted in a manner similar to that of its mate or fellow E, and for a similar purpose. The bar or lever C is cast hollow on its under side, and in such recessed portion, as at *e*, Fig. 2 and 3, there is pivoted a spring thumb-latch, *f*, having a bolt, *g*, upon it, which, when unrestrained, will take into any one of the notches *i* in the segment-bar *j* attached, or cast with the bed-piece A, and upon its under side, as shown in Fig. 2. These notches *i* are formed so as to hold the saw-guides and the saw at the desired angle which is to be cut. The saw-guide G rests upon the thumb-lever *f*, so that when said lever *f* is raised up, preparatory to shifting it and the saw-guides to the proper angle for the cut, it raises also the saw a slight distance above the bed or rest B, so that its teeth are clear of said bed, and free to move without obstruction or injury to the teeth of the saw. When the thumb-lever is released its spring will hold the bolt *g* against the segment *j* until the bolt arrives at the first one of the notches *i* in the direction in which the bar or lever C is moved, and it will shoot into said notch and hold the saw-guides and bar or lever firmly at that point. Where the bar or lever C moves against the segment *j* there will necessarily be some wear, and this wear will, if allowed to go on, make the lever and the saw-guide unsteady, and cause imperfect sawing. To avoid this I connect with the plate *m*, on the lever C, a wear-plate, *n*, Fig. 4, the edge *o* of which bears against the inner perimeter of the segment *j*, and this wear-plate *n* being connected to the permanent plate *m*, by adjusting-screws passing through slots, as at *r*, Fig. 2. Said wear-plate can be set up against the segment as the surfaces become worn, and thus the lever and saw-guides be always kept in true working position.

Having thus fully described my invention, what I claim therein as new is—

1. The combination of the lug, ear, or projection *a* on the back of the frame, with the socket D passing therethrough and fastened to the lever C, and the saw-guide E passing through the socket D, and resting and turning upon the head of the screw *c*, as described and represented.

2. In combination with the lever C and spring-thumb latch *f* connected thereto, the saw-guide G, resting upon said thumb-latch or lever, so that in raising the lever or latch to release its bolt from the segment the saw-guide G and that end of the saw in it shall also be raised up, as and for the purpose described.

3. In combination with the lever C, and its plate *m*, moving on or against the face of the segment *j*, the wear-plate *n*, adjustably connected to the lever or its plate, and bearing against the inner perimeter of said segment, as and for the purpose described and represented.

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Witnesses:

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