T. C. LAWRENCE.

Miter-Box.

No. 161,690. Patented April 6, 1875.

Fig: 1.

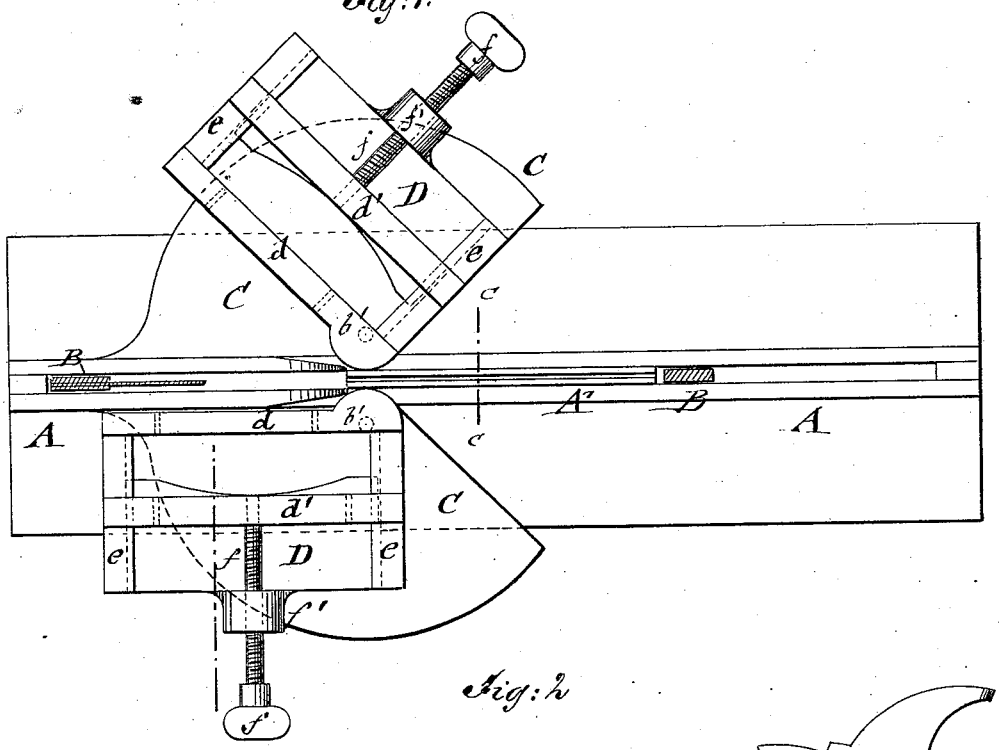


Fig: 2.

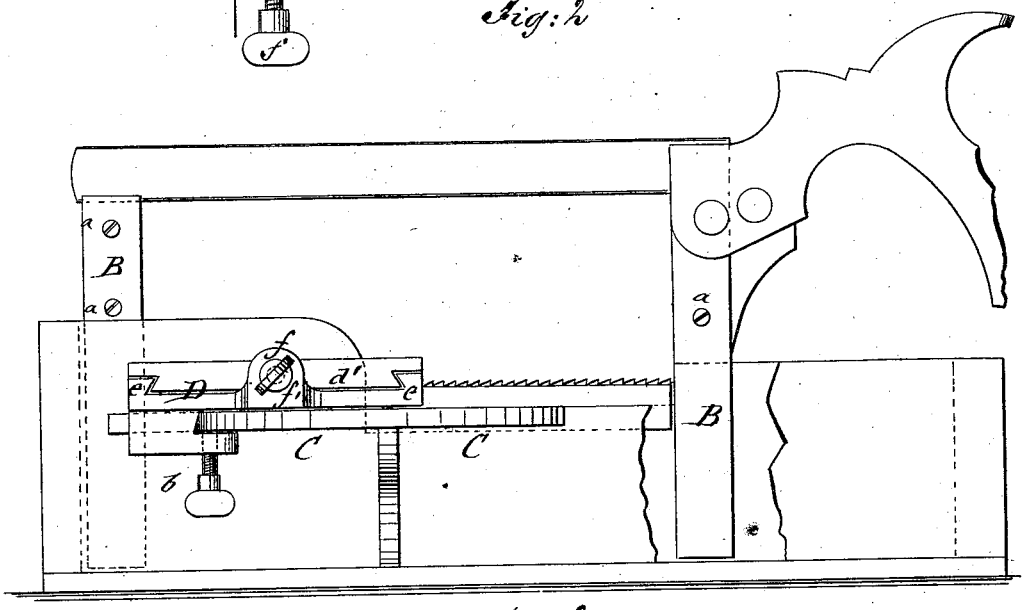
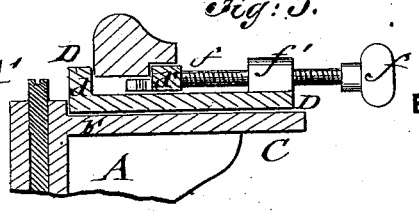


Fig: 3.



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UNITED STATES PATENT OFFICE.

THEODORE C. LAWRENCE, OF LADOGA, INDIANA.

IMPROVEMENT IN MITER-BOXES.

Specification forming part of Letters Patent No. **161,690**, dated April 6, 1875; application filed December 28 1874.

To all whom it may concern:

Be it known that I, THEODORE C. LAWRENCE, of Ladoga, in the county of Montgomery and State of Indiana, have invented a new and Improved Miter-Box, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, Fig. 2 a side elevation, and Fig. 3 a vertical transverse section on the line *c c*, Fig. 1, of my improved miter-box.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish a miter-box which is constructed entirely of metal, thereby preventing the annoying inaccuracy occasioned by the warping, or shrinking, or setting of the same when made partly or wholly of wood. The miter-box admits the ready sawing of the molding under any angle, and the exact joining of the corners in a quickly-adjusted and convenient manner.

My invention consists of a metallic recessed guide-casing, in which the saw runs by means of detachable clamped extension-strips, a central wooden strip preventing the getting dull of the teeth. Wing-shaped side plates of the casing bear pivoted clamp-plates, which may be set to any angle on the supporting wing-plates. The clamp-plates are provided with sliding and guided strips for fastening the molding securely by strong clamping-screws, to expose it to the saw or connect the corners.

In the drawing, A represents a guide-casing having broad supporting base and central vertical part suitably recessed at the end parts for guiding the saw; extension-strips B, which are attached, by fastening-screws *a*, to both extremities of the saw, to extend to a distance corresponding to the depth of the recesses of the casing downward below the saw-teeth.

The saw is moved to and fro in the guide-casing and prevented from getting dull by a central wooden strip, A′, which is securely, but replaceably, set into a recess of lesser depth at the middle part of the casing, intermediately between the guide-recesses. The saw-guide strips B may be readily attached or detached, to allow the use of the saw for mitering and other purposes.

The guide-casing A is made of suitable metal, with symmetrically-extending wing-plates C at both sides, which serve for the support of the pivoted clamping-plates D. The wing-plates C may be graduated for setting the clamping-plates to any desired angle, and secured firmly by suitable set-screws *b* thereto. The pivot-pins *b′* are arranged at one corner of the clamp-plates, near the guide-casing, while the set-screws *b* are applied at the diagonally-opposite corner. The clamping-plates D have a stationary raised end piece, *d*, and a movable piece, *d′*, sliding parallel thereto in grooved or dovetailed side strips *e*, of less height, which hold the movable piece *d′* securely in position for binding rigidly the molding between the same and the end piece *d* without any chance of bulging or other detaching of the same. The movable fastening-strip *d* is adjusted to the size of the molding by a set-screw, *f*, which turns in a central nut part, *f′*, of the clamping-plate. After the molding is firmly attached to the clamping-plate, and the latter adjusted exactly to the mitering angle, the saw is placed into the guide-casing, and the molding then cut through in the usual manner in mitering-boxes.

For joining the corners of moldings, one part is clamped to one plate and the other to the opposite plate, the plates having first been set to the required angle. The molding-strips can then be readily nailed and glued to an accurately-fitting joint, and a frame connected in very convenient and rapid manner.

The solid metallic construction of the miter-box produces the permanent and accurate working of the same without the inaccuracies of the variable wooden boxes, and furnishes thereby a durable, economical, and quickly-adjusted miter-box.

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

1. The combination of the recessed guide-

casing A, horizontal wing-plates C, and pivoted adjustable clamping-plates or work-holders D, substantially as herein described, for the purpose set forth.

2. The combination of the recessed guide-casing A, central wooden strip A′, and pivoted work-holders D, with a saw having pendent guide-strips B, substantially as herein described.

THEODORE C. LAWRENCE.

Witnesses:
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