2 Sheets—Sheet 1.

D. C. ROGERS & A. D. GOODELL.
Miter-Box.

No. 220,732. **Patented Oct. 21, 1879.**

Fig. 1.

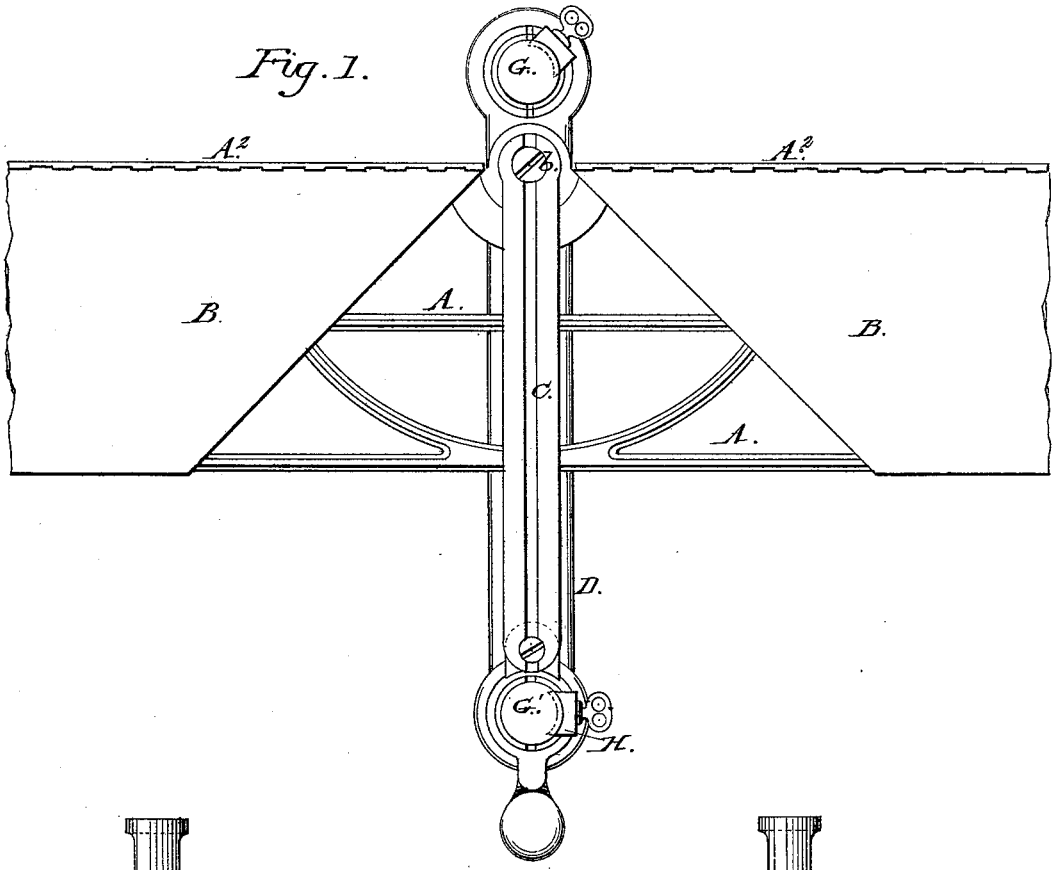
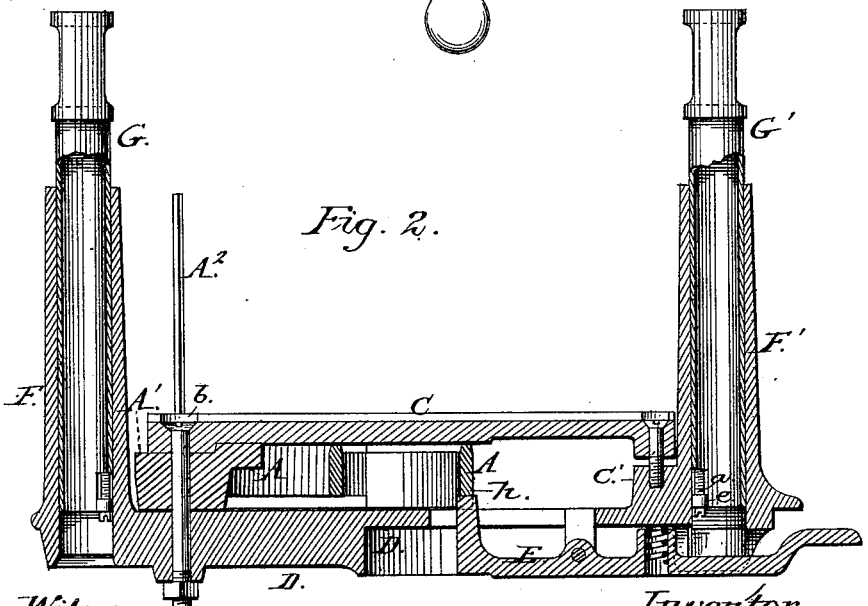


Fig. 2.



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2 Sheets—Sheet 2.

D. C. ROGERS & A. D. GOODELL.

Miter-Box.

No. 220,732. **Patented Oct. 21, 1879.**

Fig. 3.

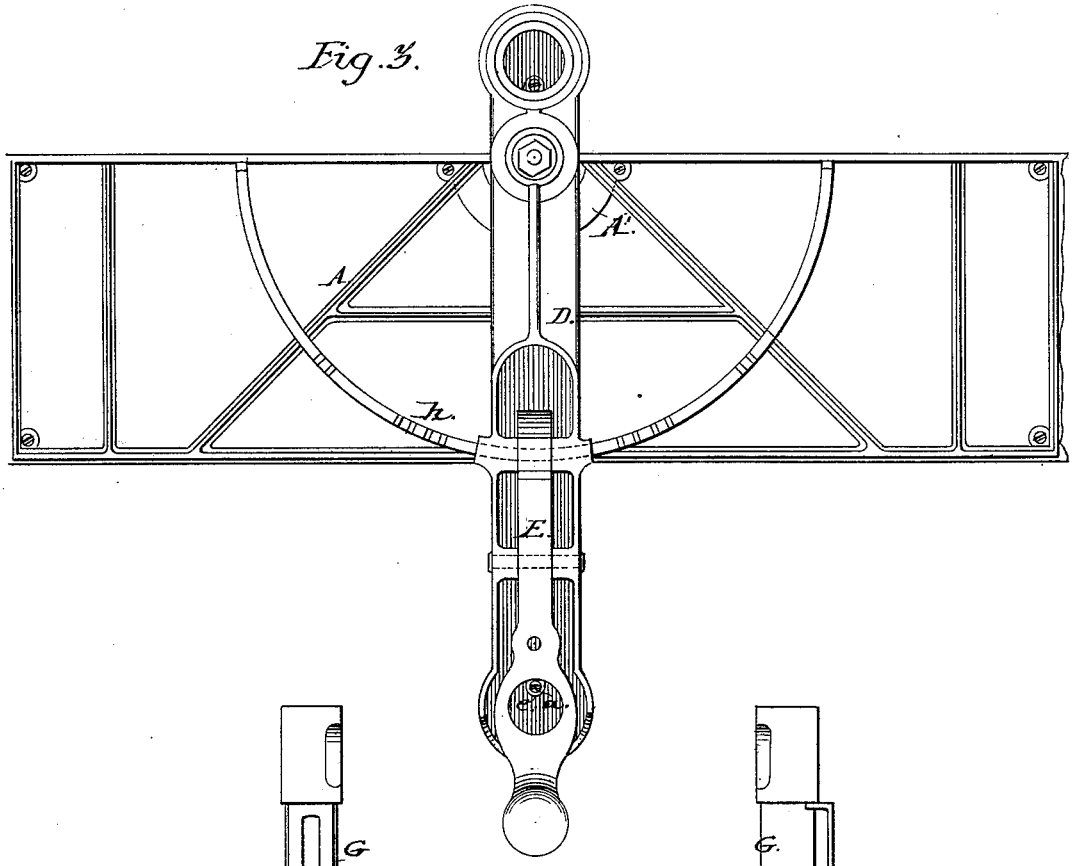


Fig. 4

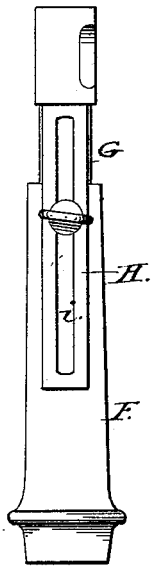
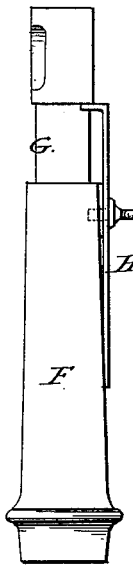


Fig. 5.



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UNITED STATES PATENT OFFICE.

DAVID C. ROGERS, OF GREENFIELD, AND ALBERT D. GOODELL, OF ERVING, ASSIGNORS TO LANGDON MITRE BOX COMPANY, OF MILLER'S FALLS, MASSACHUSETTS.

IMPROVEMENT IN MITER-BOXES.

Specification forming part of Letters Patent No. **220,732**, dated October 21, 1879; application filed July 30, 1879.

To all whom it may concern:

Be it known that we, DAVID C. ROGERS, of Greenfield, and ALBERT D. GOODELL, of Erving, both in the county of Franklin and Commonwealth of Massachusetts, have invented a new and useful Improvement in Miter-Boxes, of which the following, accompanied with the drawings, is a true and full specification.

Our invention relates to certain devices in a miter-box, which will lessen the cost of manufacture and render it easier in operation, and will be found in all respects an improvement on those now made for common use; and while to a considerable extent we employ in our invention devices previously used, such as that for holding the saw firmly in position while in use, so that it will always make a clean and uniform cut, in guiding the saw, holding the material to be worked, turning the saw at any angle, and keeping the saw from cutting the sides or the bottom of the box, yet in several points, especially the latter ones, we have simplified and improved the mechanism of the miter-box.

In the drawings, Figure 1 is a plan or top view of my miter-box. Fig. 2 is a vertical transverse section of same. Fig. 3 is a plan or bottom view of the miter-box. Figs. 4 and 5 are elevations, showing the application of the temporary supports for the saw-guides.

Similar reference-letters indicate like parts in all of the figures.

A is the bed-frame, made of iron, having a back, A^2, of the same material, and having on it a support of wood, B, upon which the material to be worked rests, which is roughened to prevent the work from slipping on the frame. This wooden support, however, does not extend over the whole length of the frame, but is cut away in the middle on each side from a point in the middle of the back to the front, at an angle of forty-five degrees, to admit the swinging of the rest C, which is secured at each end by bolts to the swinging lever D.

The rest C is a third longer than the width of the wooden support B, thereby furnishing a rest for the material to be worked to the full width between the guides.

On the under side of the bed-frame A is cast a boss, A^1, of sufficient strength to hold the swinging lever D under the bed-plate. On the extreme ends of said swinging lever, and forming a part of it, are the cylinders F F′, fashioned to receive the saw-guides G G′.

The rest C at its rear end is secured to the swinging lever by a bolt, *b*, through it and through the boss and the lever. The center of the bolt which forms the pivot on which the lever and rest turn is in an exact line with the back or upright part, A^2, of the bed-plate A.

The upper face of the rest C is grooved its whole length, to receive and protect the saw-teeth, and is flush with the surface of the wood-support B. It is, as before stated, secured at its rear end by a bolt, and at its front end is screwed to a lug, C′, which is cast for the purpose on rear of the cylinder F′, holding the front guide, and on the lever, thereby forming a gib to assist in holding the swinging lever in position.

The cast-iron cylinders F F′ are hollowed and slotted for receiving the saw-guides G G′, which are mortised and slotted in the usual way, as in Langdon's and Strong's patents, which we hold, and upon which our improvements are made after years of manufacturing.

The under side of the lever D is cast with a slot or recess toward its front end, into which there is pivoted a spring thumb-latch, E, having upon its end a bolt, which, when released, takes into any one of the notches in the segment *h* on the under side of the bed-plate. By pressing up the thumb-piece the lever may be swung round, carrying the rest, guides, and saw to any desired angle, when the bolt, being released, falls into another notch and holds the saw in place.

It will be observed that by this arrangement we are enabled to turn the saw to any angle without lifting it or incurring the risk of scraping the points of the saw-teeth on the roughened surface.

On the under and inner side of the cylinders which hold the saw-guides is cast a lug, *e*, through which passes up a screw, *a*, on the end of which the saw-guide rests. By turning this screw up or down a fine adjustment

is given to raise or lower the saw-guide as required.

On the outside of the cylinders F F′, which receive the saw-guides, are supports H, turned at right angles at their upper ends, and provided with vertical slots *i* and clamp-screws, which fasten into said cylinders to hold said supports at given points. These supports are vertically adjustable, and are used for temporary purposes in lifting and lowering the saw-guides under the heads of which they shoulder, whereby the descent of the saw is so adjusted as to barely pass through the material sawed without coming in contact with the bottom of the groove in the rest C.

We are aware of the patent to Strong and Garretson, No. 198,472, in which is shown an angle-plate, adjustable vertically, and which is capable of being fixed at different points by a thumb-screw, which moves up and down in a groove in the sleeves to adjust the saw-guides of a miter-box, and to such we make no claim.

What we claim, and desire to secure by Letters Patent, in a miter-box, is—

1. The grooved rest C, secured to the cylinder F′ by a bolt, and pivoted to the frame A and swinging lever D by bolt *b*, which forms its axis, said rest being adapted to form a solid bearing to the material being cut, while its groove serves as a recess for the teeth of the saw after said saw has passed through said material, as specified.

2. In combination with the saw-guides G G′, the screw *a*, fixed in lug *e*, attached to swinging lever D, which is capable of adjustment to support said guides at given heights, as set forth.

3. In combination with cylinder F F′ and saw-guides G G′, the supports H, provided with vertical slots, adjustable to suitable heights by a thumb-screw, as set forth.

4. The frame A, having an upright back, A^2, and notched segment *h*, attached to and forming a part of it, the swinging lever D, pivoted to said frame, and having at its ends the cylinders F F′, adapted to receive guides G G′, and spring thumb-latch E, pivoted to said lever, the grooved rest C, the adjusting-screw *a*, fixed in lug *e* of said swinging lever D, and supports H, capable of being clamped to said cylinders F F′ at given heights, all combined and arranged substantially as and for the purpose set forth.

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ALBERT D. GOODELL.

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