J. REID.
Miter-Box.

No. 219,521. Patented Sept. 9, 1879.

Fig. 1

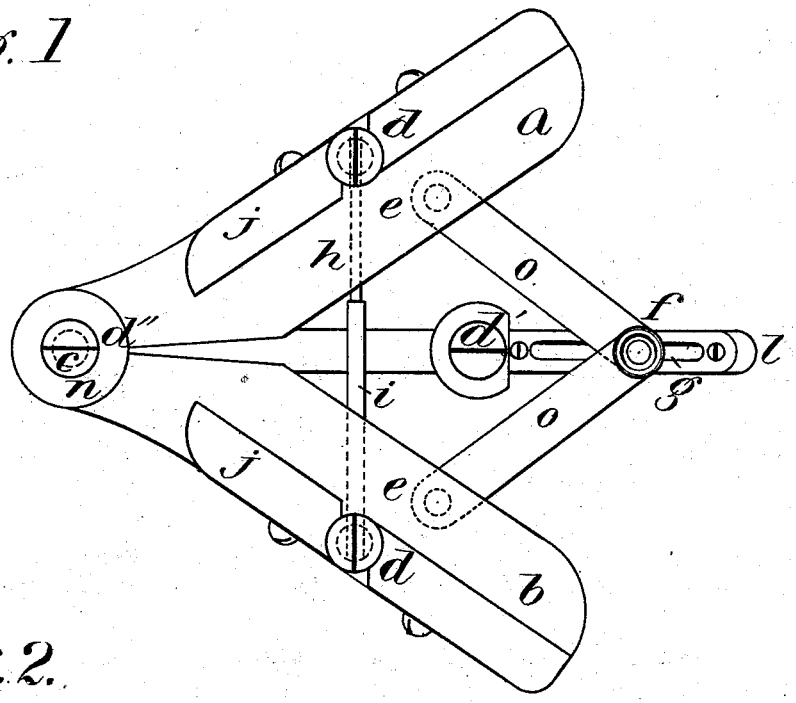
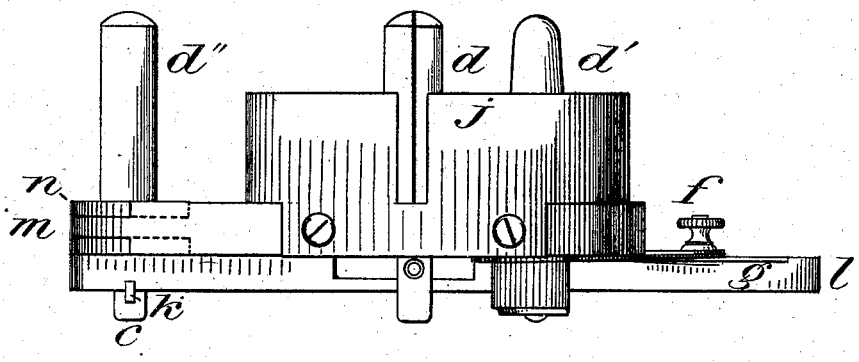


Fig. 2.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MITER-BOXES.

Specification forming part of Letters Patent No. **219,521**, dated September 9, 1879; application filed March 31, 1879.

To all whom it may concern:

Be it known that I, JAMES REID, of Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Miter-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of a miter-box embodying the improvements in my invention, and Fig. 2 is a side elevation of the same.

This invention has relation to miter-boxes; and it consists in the improvements in the construction of the same hereinafter fully described, and particularly pointed out in the claim.

Referring to the drawings, *a* and *b* designate the adjustable sides of the miter-box, hinged at their front ends by having the lower decreased end, *c*, of the guide *d''* passed through their eyes *m*, and keyed by the key *k* to the beam *l*. The beam *l* is provided with a recess at its rear end, covered by a slotted metallic plate, *g*. Links or arms *o o* are pivoted to the sides *a b* at *e*, and are joined together at their other ends by a set-screw, *f*, which slides in the slot in the plate *g*, and by which the sides *a b* may be set at different angles.

d' designates a saw-guide, which is mortised upon the beam *l*, and held rigidly in place by a pin or screw. The sides *a* and *b* are provided with molding-rests *j j*, removably secured thereto in any suitable manner. Saw-guides *d d*, pivoted in the sides *a* and *b*, pass up through openings in the molding-rests *j j*, and are connected by a rod, *h*, telescoped within a tube, *i*, as shown, so that when the sides *a* and *b* are adjusted the guides *d d* will always turn to keep the kerfs in them in line. A wooden washer, *n*, is provided around the guide *d''*, so that it may be renewed as frequently as it is worn away by the saw.

The molding-rests *j j* are on their insides exactly tangent to the guide *d''*, and serve the same purpose as the sides of the ordinary miter-box.

The saw-guides *d'' d' d d* are made of hard wood, and may be renewed as frequently as they are worn out.

When it becomes necessary to bisect any angle contained between any two intersecting lines, the three pins *d'' d d* are applied thereto, *d''* being placed in the intersection, and the others, *d d*, opened out or in until their faces will coincide with the lines of the panel or stile to be bisected. The lines may be acute or obtuse angled, as required. The beam *l* will be kept exactly on the bisecting line by means of the links *o o*, one end being at *c* and the other at *l*, and between are the pins *d'' d'*, having saw-cuts or guides in them, in which the saw runs in the usual manner. A piece of molding being placed on *b* is sawed from *d'* to *d''*, the waste end resting against *d''*, and the opposite or counter member is similarly placed and sawed on the part *a*. If the angle between is a right angle, then the cuts will be for a common square miter; but if the angle is acute and the panel-moldings are a rhombus in form, then from *d'* to *d''* will represent the right and left cuts of the acute angle, and from *d* to *d'* the cuts of the bisection of the obtuse angle.

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

In a miter-box, the sides *a b*, provided with the molding-rests *j j*, and the saw-guides *d d*, connected by the rod *h* and tube *i*, in combination with the beam *l*, having the sides *a b* hinged thereto by the saw-guide *d'' c* and key *k*, and provided with the saw-guide *d'* and the links *o o*, working in the slotted plate *g*, and regulated by the set-screw *f*, substantially as and for the purposes set forth.

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