

N. P. LITHANDER.
MITER BOX.

APPLICATION FILED MAY 28, 1909.

Patented Oct. 26, 1909.
2 SHEETS—SHEET 1.

937,946.

Fig. 2.

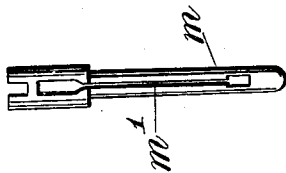
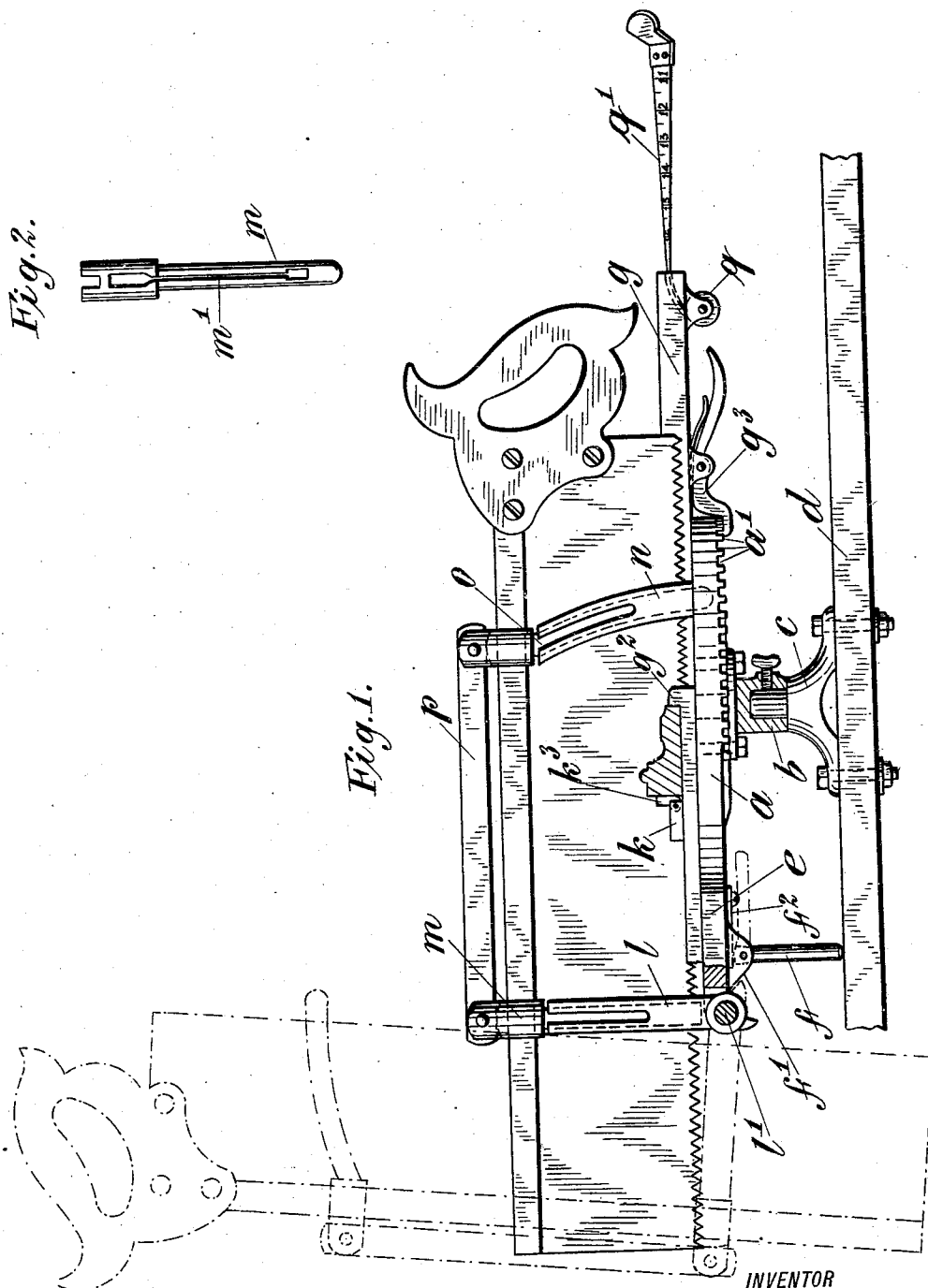


Fig. 1.



WITNESSES:

E. C. Kuger
Genl. Wm. L.

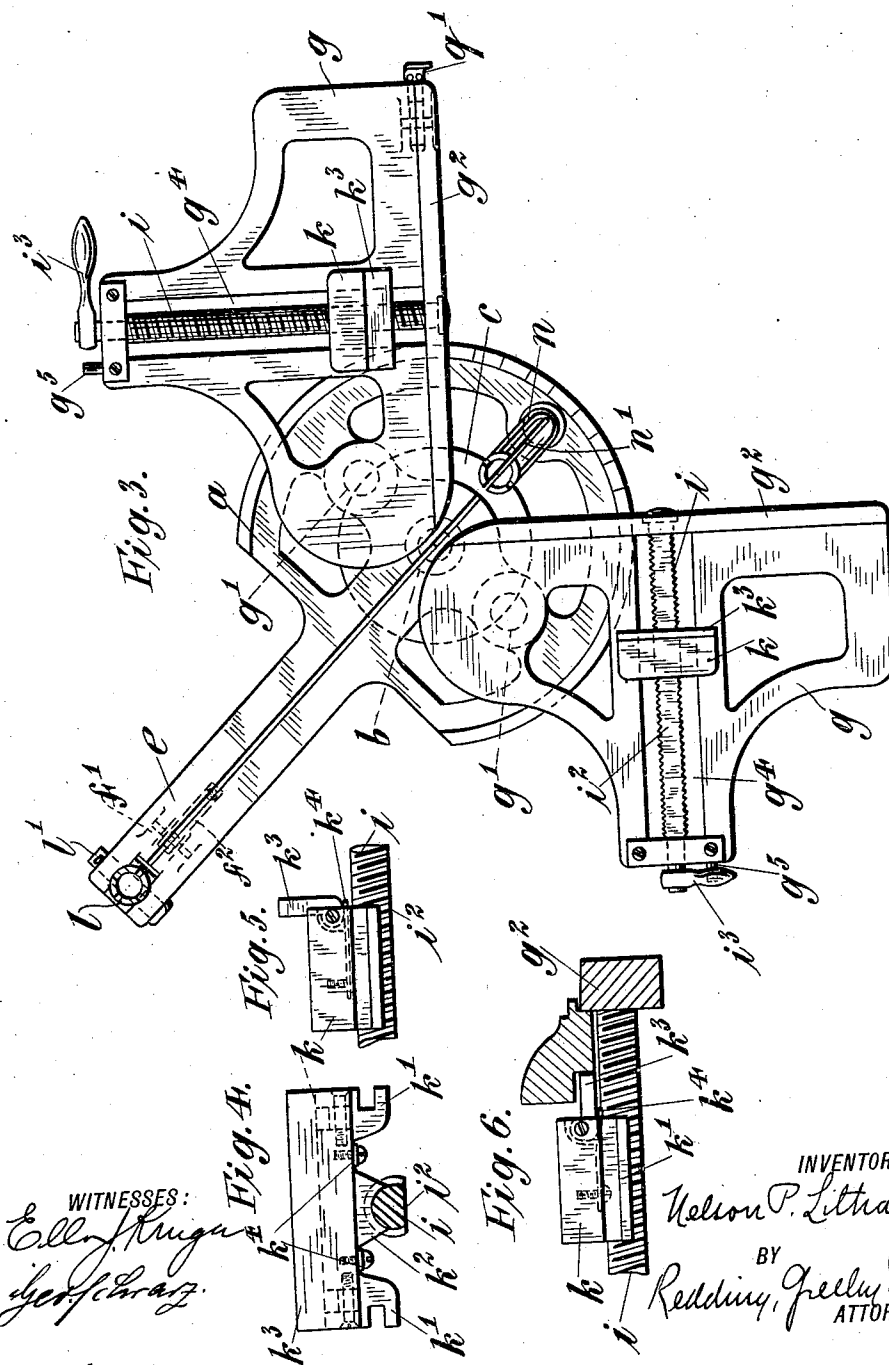
INVENTOR

Nelson P. Lithander
BY
Redding, Geely & Austin
ATTORNEYS

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WITNESSES:
E. J. Kruger
J. H. Schwarz

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Nelson P. Lithander
BY
Redding, Geely & Austin
ATTORNEYS

UNITED STATES PATENT OFFICE.

NELSON P. LITHANDER, OF HALLOCK, MINNESOTA.

MITER-BOX.

937,946.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, NELSON P. LITHANDER, a citizen of the United States, residing in Hallock, in the State of Minnesota, have invented certain new and useful Improvements in Miter-Boxes, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

10 This invention has for its object to improve the construction of miter boxes so as to make them more convenient in use.

15 The invention is concerned particularly with the means for supporting the saw, and with the means for holding the work in position, and will be more fully explained hereinafter with reference to the accompanying drawings, in which it is illustrated, and in which—

20 Figure 1 is a view of the improved miter box in side elevation, partly in section, the saw being shown by full lines in working position and by dotted lines in its operative position. Fig. 2 is a detail view of one of the saw guides. Fig. 3 is a top view of the miter box with the saw guides removed. Figs. 4, 5 and 6 are detail views of the means for clamping the work in place on the table.

30 In the embodiment of the invention represented in the drawings the main table *a* of the improved miter box is shown as supported by a swivel *b* upon a base or pedestal *c* which may be bolted to the bench *d* or other support.

35 As shown clearly in Fig. 3, the table *a* has a forward extension *e* to support the forward saw guide and to properly support the table *a* upon the bench *d*. This forward extension *e* is provided near its outer end with a folding leg *f*, which, when the miter box is in use, rests upon the surface of the bench *d* and so supports the outer end of the extension. When the miter box is to be moved or is to be swung upon its swivel joint *b*, the leg *f*, which is pivoted between the plates *f'*, may be folded up against the underside of the extension *e*. The upper end of the leg bears against a flat spring *f''* which serves to hold the leg in either position.

50 On the main table *a* the swing tables or plates *g* are pivoted, as indicated at *g'*, in Fig. 3, each of such swing tables being provided with a lip or ledge *g''* against which the molding to be cut is clamped, as hereinafter described. On the underside of each

swing table is a spring pressed latch *g'''* which is adapted to engage a rack *a'*, so that the swing table may be held in its proper angular position with respect to the saw. 60

For the purpose of clamping the molding each swing table is provided with a clamping screw *i* which is mounted in suitable bearings in the table so as to turn freely and to be held from longitudinal movement. The clamp *k* is arranged to travel in a slot *g''* of the swing table, having ears *k'* which engage the edges of the swing table and hold the clamp from lifting from the screw *i*, the clamp having on its underside a half-nut *k''* which engages but does not encircle the screw *i*. The latter is mutilated, having a flattened or otherwise smooth surface *i''* extending along one side thereof. This arrangement makes it unnecessary to give the screw successive rotations in order to press the clamp firmly against the molding, for when the screw is turned to the position shown at the lower or left hand portion of Fig. 3, with its smooth surface *i''* uppermost, the clamp can be moved by hand in either direction without requiring the screw to be rotated, and when the clamp has been pressed by the hand against the molding, a partial rotation of the screw causes the clamp to be pressed more firmly and to hold it securely in position. A stop *g''* may be supported by the swing table *g* to stand in the path of the handle *i''* of the screw and prevent it from receiving a full rotation in either direction. 80

The clamp *k* is so formed as to adapt it to have a firm bearing against moldings of different forms, having at its front edge a hinged plate *k'''* which may be turned down, as shown in Fig. 6, to cooperate with a molding of one form, or may be turned up, as shown in Figs. 1 and 5, to cooperate with a molding of another form. Flat springs *k''''* cooperate with the hinged plate to hold it in either position. 100

The saw is so supported as to be guided properly when in use and as to be capable of being swung out of the way. For this purpose a tubular guide pillar *l*, slotted vertically to permit the saw to travel through it, is pivoted at the extremity of the extension *e* of the main table *a* and in the tubular pillar is telescoped a guide post *m*, which is suitably slotted, as shown at *m'* in Fig. 2, to receive and guide the saw. Fixed immovably upon the table *a* is a tubular guide pillar *n*, slotted at *n'* to permit the travel of 110

the saw through it, this tubular pillar being curved upon the arm of a circle of which the pivot l' is the center. Telescoping into this tubular guide pillar is a second slotted post o , adapted to receive and guide the saw and also curved similarly to the pillar n . The two posts m and o are preferably loosely connected, above the saw, as by a bar p to which both are pivoted freely. The looseness of fit of the posts in the tubular pillars and the looseness of connection of the posts are such as to permit both to rise or fall with the saw as required by the conditions of the work to be done. Furthermore, when the saw is to be thrown back out of the way to permit a piece of molding to be placed in position, it is swung back upon the pivot l' , as indicated by dotted lines in Fig. 1. When it is to be restored to working position it is again swung downward and, if held in proper line, the post will enter the tubular pillar n without further attention on the part of the operator.

Mounted on the underside of one of the swing tables g is a spool q , carrying a steel tape measure q' for the convenience of the operator.

I claim as my invention:

1. In a miter box, the combination of a

main table, of guides mounted thereon, a swing table pivoted upon the main table and having a work supporting lip, a clamp adapted to hold the work against the lip and having at its forward edge a hinged plate to coöperate in one position or another with moldings of one form or another, and means to press the clamp firmly against the work.

2. In a miter box, the combination of a main table, a tubular slotted pillar pivoted thereon, a tubular slotted and curved pillar pivoted thereon, a slotted saw guiding post telescoping in the pivoted pillar and a slotted curved saw guiding post telescoping in the curved pillar.

3. In a miter box, the combination of a main table, a tubular slotted pillar pivoted thereon, a tubular slotted and curved pillar pivoted thereon, a slotted saw guiding post telescoping in the pivoted pillar, a slotted curved saw guiding post telescoping in the curved pillar, and a bar to which said posts are pivoted above the saw.

This specification signed and witnessed this 24th day of May, A. D. 1909.

NELSON P. LITHANDER.

In the presence of—

ELLEN J. KRUGER,

AMBROSE L. O'SHEA.