J. J. GREGORY.

MITER BOX.

APPLICATION FILED MAR. 21, 1910.

970,327.

Patented Sept. 13, 1910.

2 SHEETS—SHEET 1.

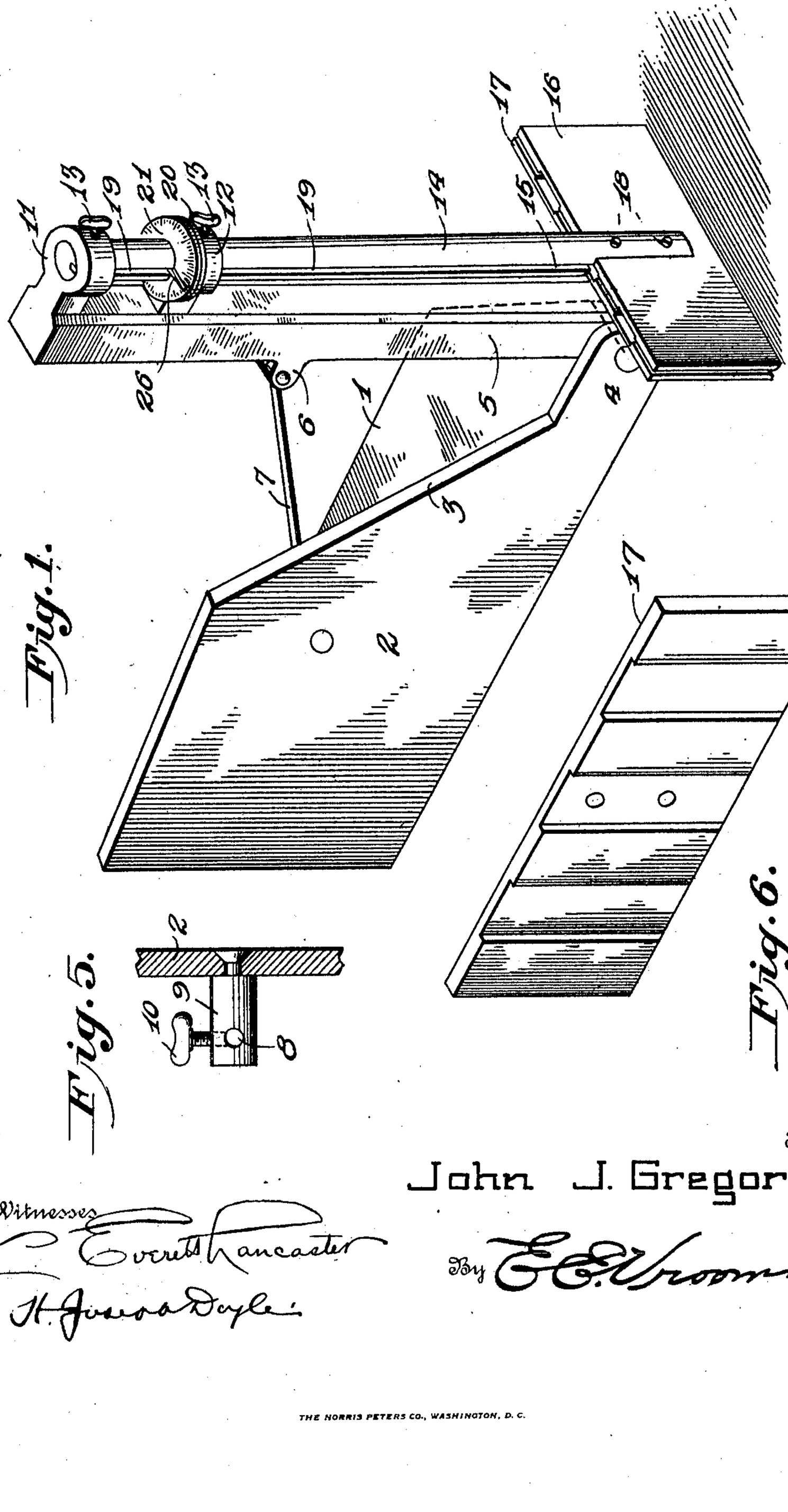

Fig. 1.

Fig. 5.

Fig. 6.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

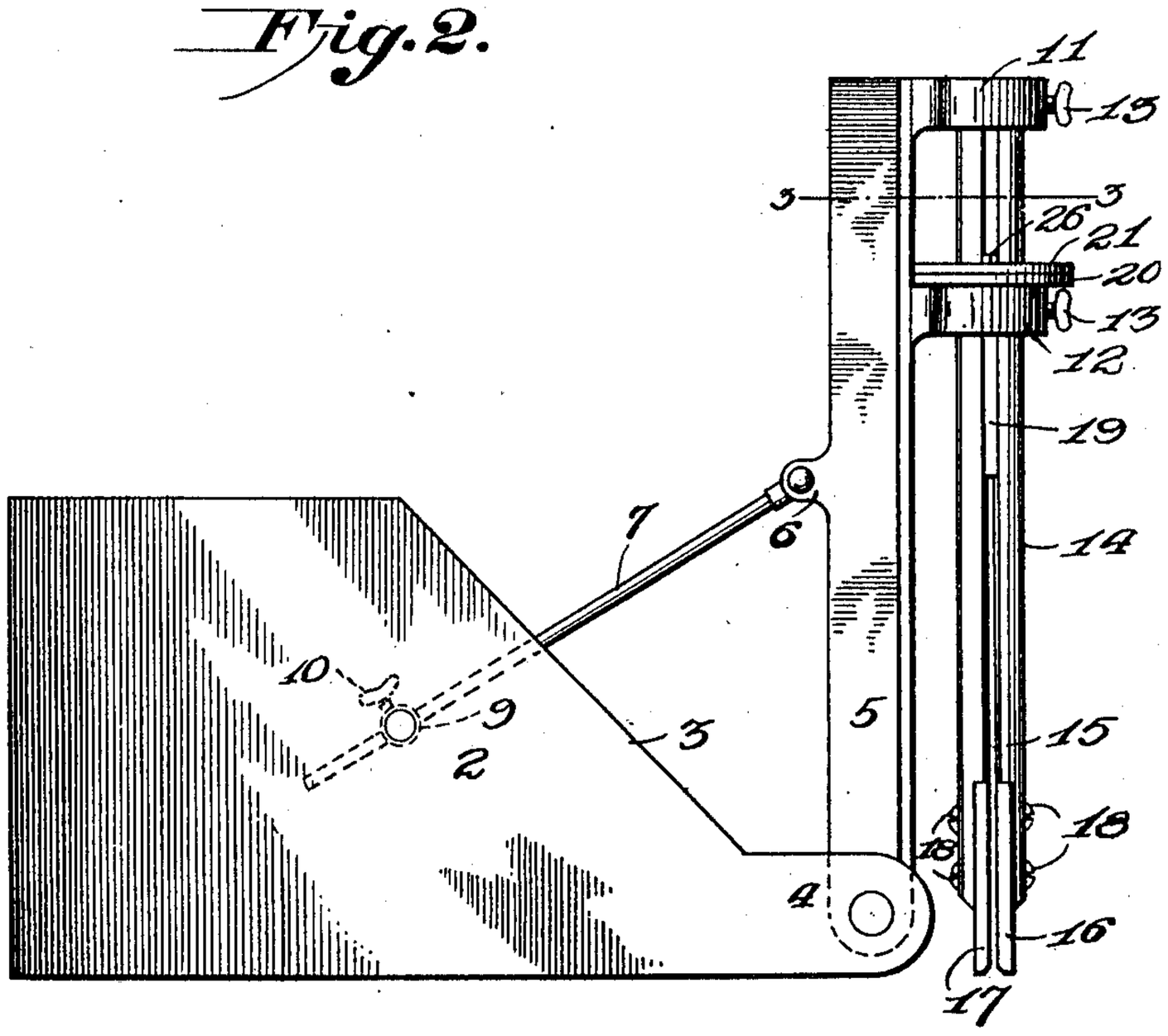


Fig. 3.

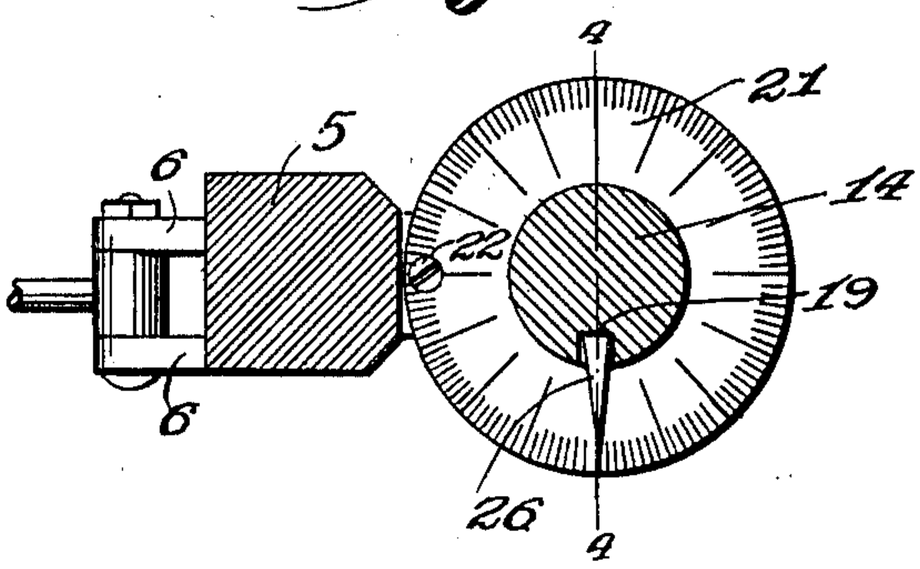
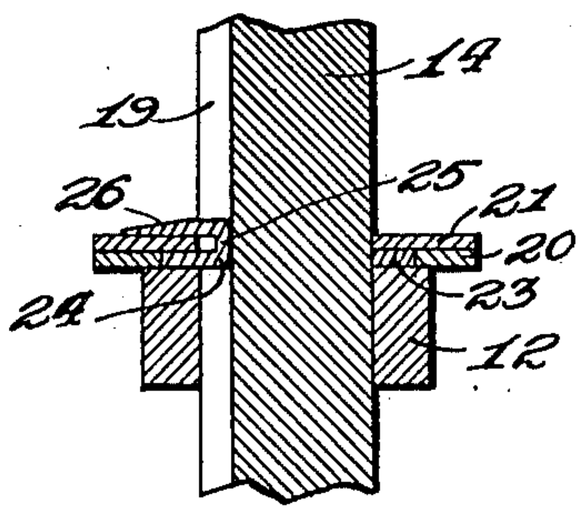


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN JOSEPH GREGORY, OF HAZLETON, PENNSYLVANIA.

MITER-BOX.

970,327. Specification of Letters Patent. **Patented Sept. 13, 1910.**

Application filed March 21, 1910. Serial No. 550,679.

To all whom it may concern:

Be it known that I, JOHN JOSEPH GREGORY, a citizen of the United States of America, residing at Hazleton, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Miter-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to miter boxes, and the principal object of the same is to provide novel means whereby the saw guide may be readily set to the angle of the cut to be made, said guide being adapted for both vertical and horizontal adjustments, gage means being provided so that the guide may be set at a proper angle, means also being provided whereby the saw guide and its support may be folded onto the miter box to minimize storage space.

In carrying out the objects of the invention generally stated above it will be understood, of course, that the essential features thereof, are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:—

Figure 1 is a perspective view of the improved miter box. Fig. 2 is a view in front elevation. Fig. 3 is a horizontal sectional view taken on the line 3—3, Fig. 2. Fig. 4 is a similar view taken on the line 4—4, Fig. 3. Fig. 5 is a fragmentary sectional view of the box showing a guiding and holding lug projecting therefrom. Fig. 6 is a detail perspective view of one of the saw-guiding plates.

Referring to the accompanying drawings by numerals it will be seen that the improved miter box comprises a flat bottom 1 and an upright front plate 2. One end of the plate is beveled as indicated at 3 and terminates in a reduced extension forming a pivot ear 4. Said ear 4 projects beyond the bottom 1 and has the lower end of a post 5 pivoted thereto. Pivot ears 6 project from the rear longitudinal surface of post 5 and have one end of a supporting arm 7 pivotally fastened thereto. Said arm 7 projects through a transverse opening 8 formed through a lug 9 that projects laterally from plate 2. A set screw 10 holds arm 7 in adjustable engagement with said lug 9. Post 5 on its longitudinal surface opposite the surface from which pivot ears 6 project, is provided with horizontally arranged laterally projecting guiding and holding collars 11—12, said collars being arranged in spaced relation and each equipped with a set screw 13. A saw guide-supporting shaft 14 is held in rotatable and longitudinal adjustable relation to said collars 11—12 by the set screws 13. Said shaft has its lower portion provided with a longitudinal slot 15 in which the saw-guiding plates 16—17 are held in spaced parallel relation by the screws 18, or equivalent detachable fasteners. The upper portion of shaft 14 is provided with a longitudinal groove 19 which is a continuation of slot 15. A washer 20 is seated on collar 12 and loosely surrounds shaft 14 and a flat washer shaped dial 21 is seated on washer 20, said dial and washer being rigidly fastened to said collar 12 by the screw 22 or other convenient detachable fasteners. The upper surface of the dial 21 is provided with graduation indicating angular degrees. The washer 20 surrounds the shaft 14 in spaced relation, and the inner edge of the dial 21 overhangs the central opening of said washer. An indicator is provided which coöperates with said dial 21, said indicator comprising a flat washer-shaped body 23 that is loosely seated on collar 12 within washer 20 and is retained therein by the overhanging edge of dial 21. Said body 23 is provided with an inwardly projecting lug 24 that enters groove 19 of shaft 14 so that said body will rotate with said shaft. The inner end of lug 24 is provided with an upstanding neck 25 that fits within groove 19, said neck having a pointer 26 projecting outwardly therefrom at right angles that overlaps dial 21. As will be obvious, body 23, lug 24, neck 25 and pointer 26 may be integral.

In use the box is supported upon a work bench or other convenient place and the work rested on the bottom 1 and against plate 2. Shaft 14 is adjusted to the desired vertical position in collars 11—12 and also rotated to the angular position causing pointer 26 to travel with it and by means of dial 21, the desired angular position is readily ascertained. The saw is then placed between guide plates 16—17 which have obviously swung with shaft 14 to the proper angle relative to the work. Should a side cut be desired, post 5 may be rocked to the desired position by adjusting arm 7 through lug 9.

It will be seen from the foregoing that the improved miter box provides simple means whereby the saw guides may be readily swung to the desired angular position, and also through the described arm connection 7 between post 5 and lug 9, said post may be folded onto the box when not in use, so that storage space is minimized.

What I claim as my invention is:—

1. A miter box comprising a work holder, a post carried thereby, guiding and holding collars projecting from said post in spaced relation, a shaft rotatably and adjustably mounted in said collars, said shaft provided with a lower slot and an upper groove, saw-guiding means mounted in said slot, an indicator seated on one of said collars and engaging said groove, and a dial fastened to said collar and coöperating with said indicator to indicate the angular position of said saw-guiding means.

2. A miter box comprising a work-holder, a post carried thereby, a guide collar carried by said post, a shaft rotatably and longitudinally adjustable in said collar, a pointer mounted on said shaft and rotating therewith, a degree scale carried by said collar and preventing longitudinal movement of said pointer, and saw guiding means carried by said shaft.

3. A miter box comprising a work-holder, a post carried thereby, a guide collar carried by said post, a shaft rotatably and longitudinally adjustable in said collar, a washer loosely surrounding said shaft, a dial also surrounding said shaft and overhanging the center of said washer, means for detachably fastening said washer and dial to said collar, a pointer overlapping said dial and having a body portion inclosed by said washer and retained therein by said dial, said body portion engaging said shaft, and saw guiding means carried by said shaft.

4. A miter box comprising a work-holder, a post hinged thereto, guide collars projecting from said post, a shaft rotatably and longitudinally mounted in said collars, said shaft provided with a longitudinal groove, a pointer having a washer-shaped body seated on one of said collars, said body having a lug engaging said groove, a washer seated on said collar and surrounding the body of the pointer, a dial seated in said washer and overlapping said pointer body, means for fastening said dial and washer to said collar, and saw guiding means carried by said shaft.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN JOSEPH GREGORY.

Witnesses:

Jos. H. Jones,

Adrian H. Jones.