

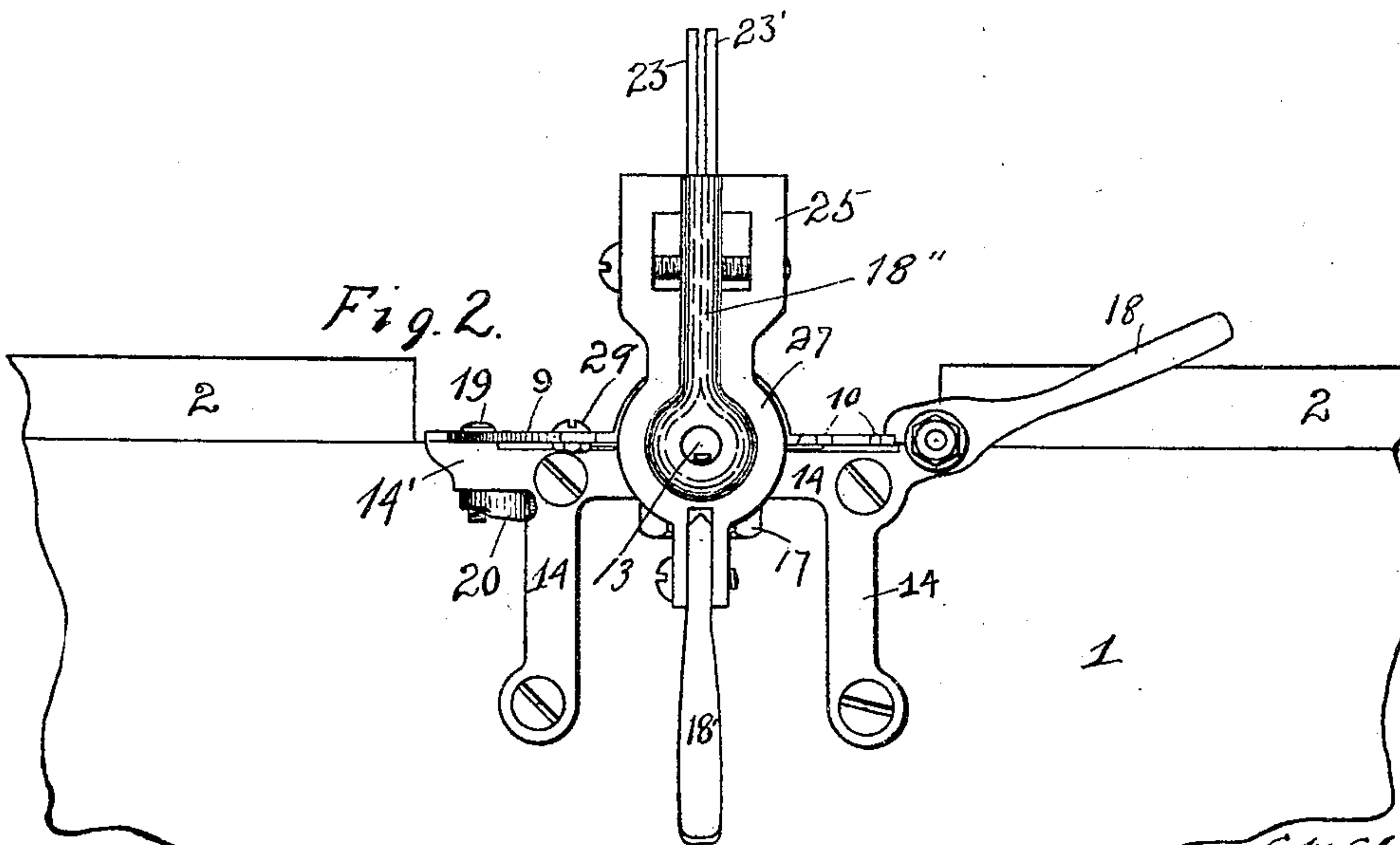
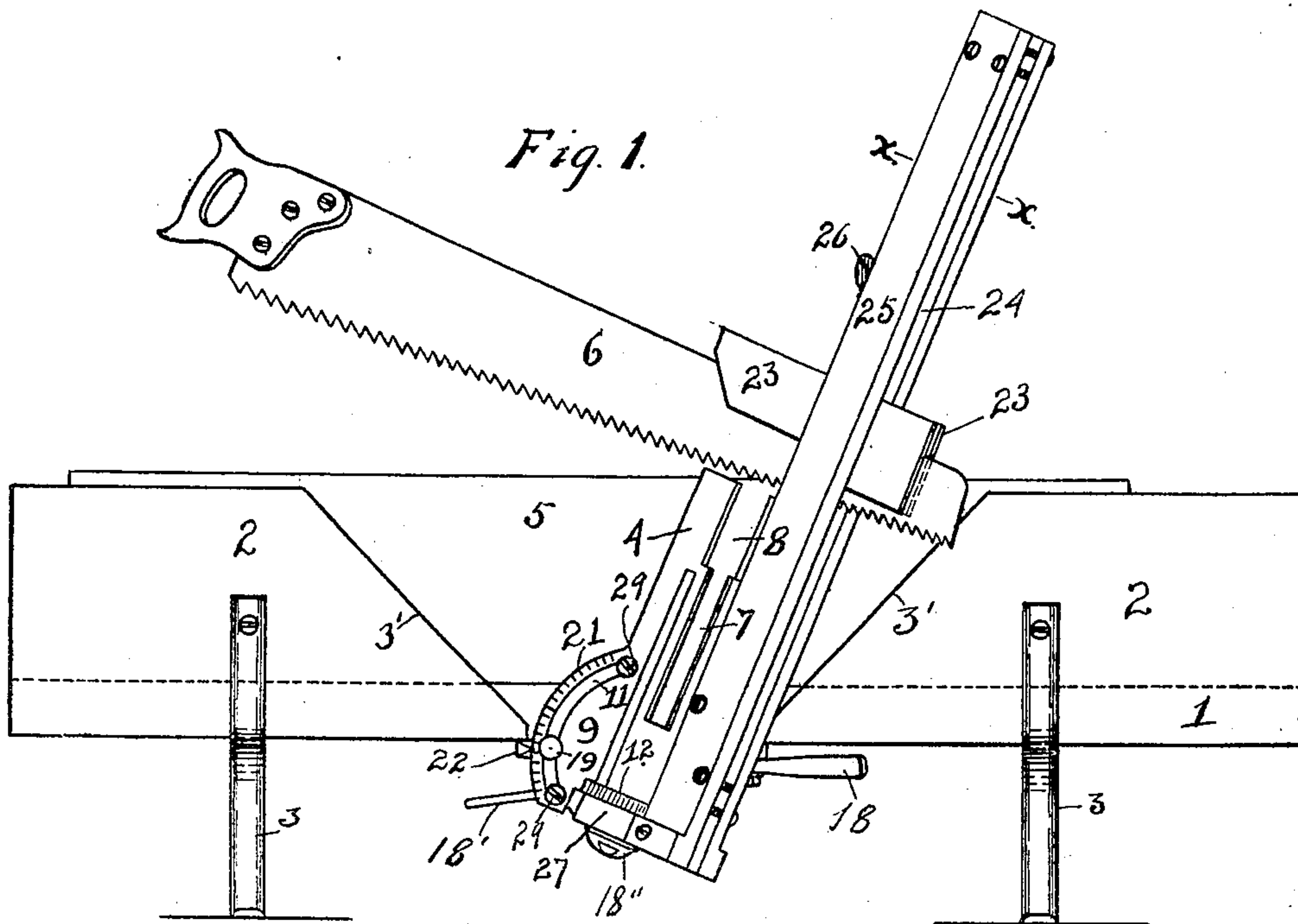
No. 795,371.

PATENTED JULY 25, 1905.

S. W. SHUE.
MITER BOX.

APPLICATION FILED MAY 12, 1904.

3 SHEETS—SHEET 1.



Witnesses.

Geo. R. Mumma.

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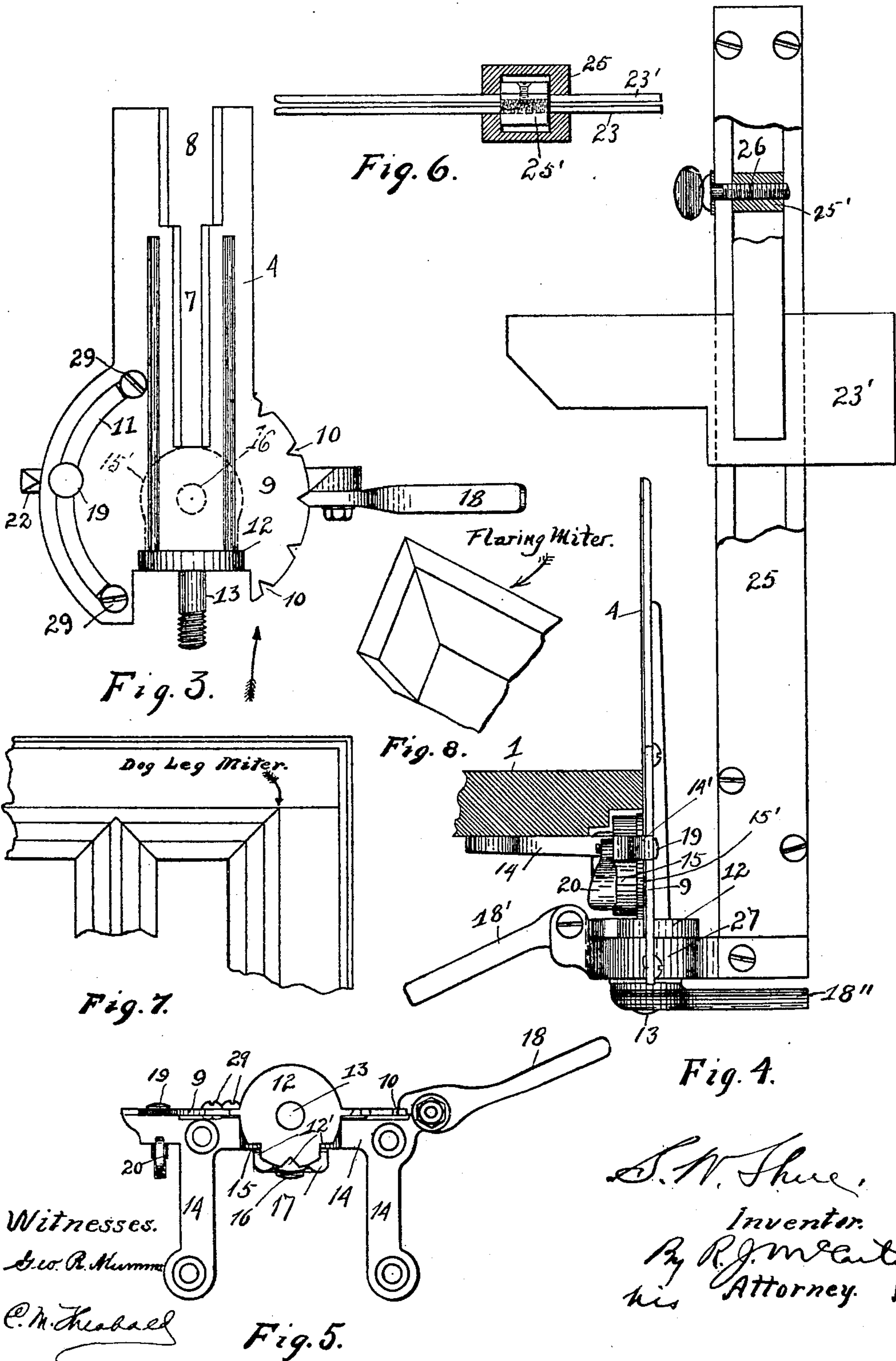
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3 SHEETS—SHEET 2.



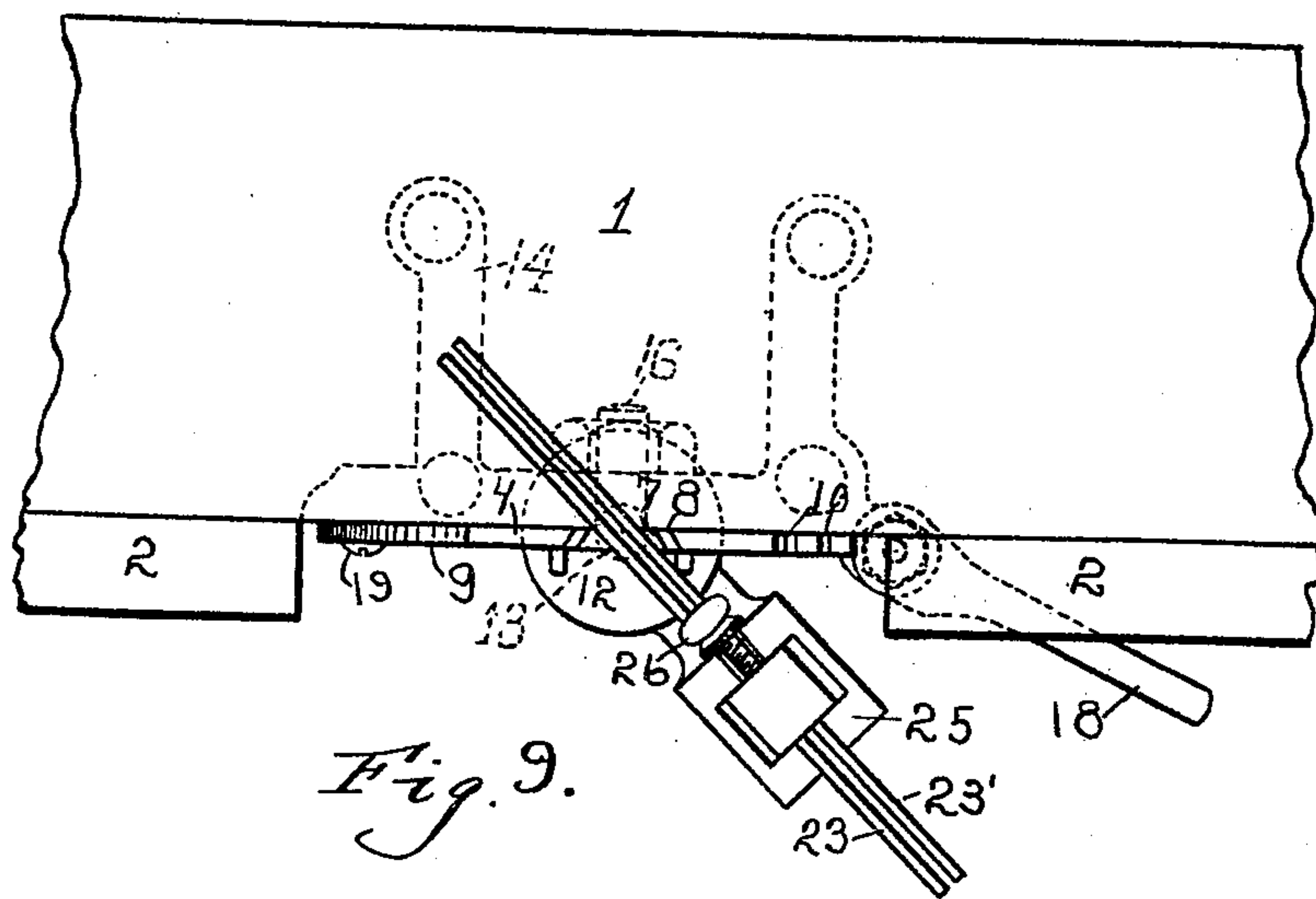
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3 SHEETS—SHEET 3.



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MITER-BOX.

No. 795,371.

Specification of Letters Patent.

Patented July 25, 1905.

Application filed May 12, 1904. Serial No. 207,516.

To all whom it may concern:

Be it known that I, SAMUEL W. SHUE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Miter-Boxes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in miter-boxes.

The object of the invention is to provide a miter-box which enables the cutting of very short returns or pieces.

To this end the essential features of the invention consist in assembling the saw-guide arm and the back-rest in close proximity to each other and in placing the vertical pivot of the saw-guide arm below and in line with the back-rest. For example, many of the cuts necessary in stair-casings and in other wood-work are short returns or pieces, such as the cut known as "dog-leg miter," which is a two-angle cut, one cut being a miter and the other a right-angle cut extending from the angle cut, and a flaring miter, an example of which are the corners of a vehicle-seat, the back end panels of the seat inclining rearwardly from bottom to top and joining by a miter.

Preceding a detail description of the invention, reference is made to the accompanying drawings, of which—

Figure 1 is an elevation of a work table or support, with the movable rest and saw-guide arm in a position on one side of a perpendicular position. Fig. 2 is a bottom plan view of the miter-box, showing the movable rest, saw-guide arm, and adjunctive devices in a perpendicular position. Fig. 3 is an elevation of the movable rest detached from the work-table and the supporting-arm of the saw-guide. Fig. 4 is a side elevation of the saw-guide, its supporting-arm, and the movable rest. Fig. 5 is a view of Fig. 3 looking in the direction of the arrow in said figure. Fig. 6 is a section on line *x x* of Fig. 1. Fig. 7 is a view showing a form of cut known as a "dog-leg" miter and other miters; Fig. 8, a view illustrative of a flaring miter. Fig. 9 is a top plan view of the miter-box and table, showing the saw-guide on an angle.

In a detail description of the invention similar reference characters indicate corresponding parts.

1 and 2 designate, respectively, bottom and rest portions of a work-table which is mounted upon legs 3, the rest or rear portion 2 of said work-table having a portion removed from its center by angle-cuts 3' 3'. 4 designates a movable back-rest, which in conjunction with the upright parts 2 2 of said table forms an abutment or rest for the stock or material 5, which is operated upon by the saw 6. This movable rest 4 has a saw-slot 7 cut therein, the edges of which are beveled and the upper portion 8 of which is of greater width than the lower portion. The saw enters the slots 7 and 8 as it penetrates into the stock 5. The lower portion of the movable rest 4 terminates in a plate 9, one of the rounded edges of which has a suitable number of lock-notches 10 and the other or opposite edge of which has a segment-slot 11, to be again referred to. The extreme lower end of said rest terminates in a right-angled boss 12, from which projects a rigid screw 13, which forms a vertical pivot below and in line with the back-rest 4, to be again referred to.

14 designates integral parts constituting a rigid frame which is attachable to the under side of the work-table and has an apertured boss 15, which fits against a boss 15' on the face of plate 9 and which receives a screw 16, projecting from said boss 15'. The end of the screw 16 projects through said boss 15 and receives a nut 17, and said screw forms a pivot upon which the back-rest 4 is moved from a perpendicular position to any position across the open space in the work-table and parallel with the edges 3' 3'. (See Fig. 1.)

18 is a dog which is fulcrumed to a projecting portion of the frame 14 and has its engaging end pointed to enter any of the notches 10 and to thus lock the movable rest 4 in any of the various angles on either side of the perpendicular position. In any desired movement of the said rest 4 that would not bring one of the notches 10 in a position to be locked by the dog 18 other means are provided for locking said rest, said means coöperating with the segment-slot 11 and consisting of a headed screw 19, which passes through said segment-slot 11 and also through an apertured portion 14' of the stationary frame 14 and is engaged by a handle-clamp nut 20. The portion of the plate 9 lying on the outer side of the segment-slot 11 is pro-

vided with a scale 21 to indicate the various angles of movement imparted to the rest 4. The graduation-marks on said scale are indicated by a pointer 22, which has a fixed position on the frame 14.

23 and 23' designate two plates constituting a saw-guide which is supported at any point within the longitudinal slot 24 of an arm 25 and is secured in any position by a clamp-screw 26, which passes through the slot in said guide-arm 25 and enters an opening in an extended portion 25' of the saw-guide.

The saw-guide arm 25, it will be seen in Fig. 4, occupies a position in close proximity to the back-rest 4, and, owing to this close relation of the two parts, various short returns or pieces may be cut—for example, down to one-eighth of an inch. The base of the arm 25 extends at a right angle and terminates in an apertured boss 27, upon or against which the boss 12 rests. As before stated, the boss 12 is an integral part of the movable rest 4. The screw 13, projecting from said boss 12 and occupying a position below and in line with the back-rest, passes through an opening in said boss 27 and receives a handle-nut 18'', which clamps the saw-guide arm 25 and the movable rest 4 together. The screw 13 forms a pivot in line with the slots 7 8 in the rest 4, and upon this pivot the arm 25 may be turned independent of any movement of the rest 4. The screw 16 forms a pivot at right angles to pivot 13 and upon which the rest 4, together with the guide-arm 25, are moved to inclined positions on either side of a perpendicular position. The dog 18' engages teeth 12' on the boss 12 and locks the arm 25 in position after it has been turned upon its pivot 13.

As the arm 25 is shown in Fig. 1 it is turned upon the pivot 13 and is afterward locked in such position by the handle or clamp-nut 18''. In such position it will be observed the slot 24 in said arm does not face the slots 7 and 8 in the rest 4. This is the relative position of said arm when "sprung" or "flaring" miters are cut. It will be understood that in sawing such miters the saw enters the slot 7 8 in the rest 4 on an angle coinciding with the angle of the slot 24 in the arm 25. This is due to the pivot 13 of said arm being in line with

the slot 7 8. It will also be observed that the arm 25 and the rest 4 are on the same angles with relation to the work-table. This will be the case at all times when cutting any miter, owing to the fact that the pin 16 forms a common pivot upon which said rest 4 and arm 25 are moved to any angle on either side of a perpendicular line. The position of the device, as shown in Fig. 1, is, as before stated, that in which it is adapted to cut a sprung miter or a flaring miter, the term "sprung" miter being applied to molding or cornice joints in which the miter is a flaring cut. In the ordinary miters it is not necessary to turn the saw-guide arm 25 on the pivot 13. 29 designates stops which are movable to various positions in the slot 11 to limit the inclinations of the rest 4 and the guide 25 to the same angles on both sides of the perpendicular position, so that opposite miters of the same angle may be accurately cut. Said stops 11 are secured by means of nuts when moved to the desired positions.

Having described my invention, I claim—

1. In a miter-box, a slotted back-rest having a circular plate projected from the lower portion thereof, said back-rest being movable on a horizontal pivot, a saw-guide arm mounted parallel and adjacent to said back-rest by a pivot which projects from the right-angled boss, said pivot being approximately in line with the back-rest, substantially as set forth.

2. In a miter-box, a slotted back-rest movable on a horizontal pivot and having a circular plate projected from the lower portion thereof, a vertical pivot-pin projecting downwardly from said boss in alinement with the back-rest, a saw-guide arm parallel with and adjacent to said back-rest, said arm having a right-angled extension which receives the vertical pivot-pin and whereby said saw-guide arm is enabled to have independent movement on a pivot in alinement with the back-rest, substantially as set forth.

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

SAMUEL W. SHUE.

Witnesses:

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THOS. B. HERRMAN.