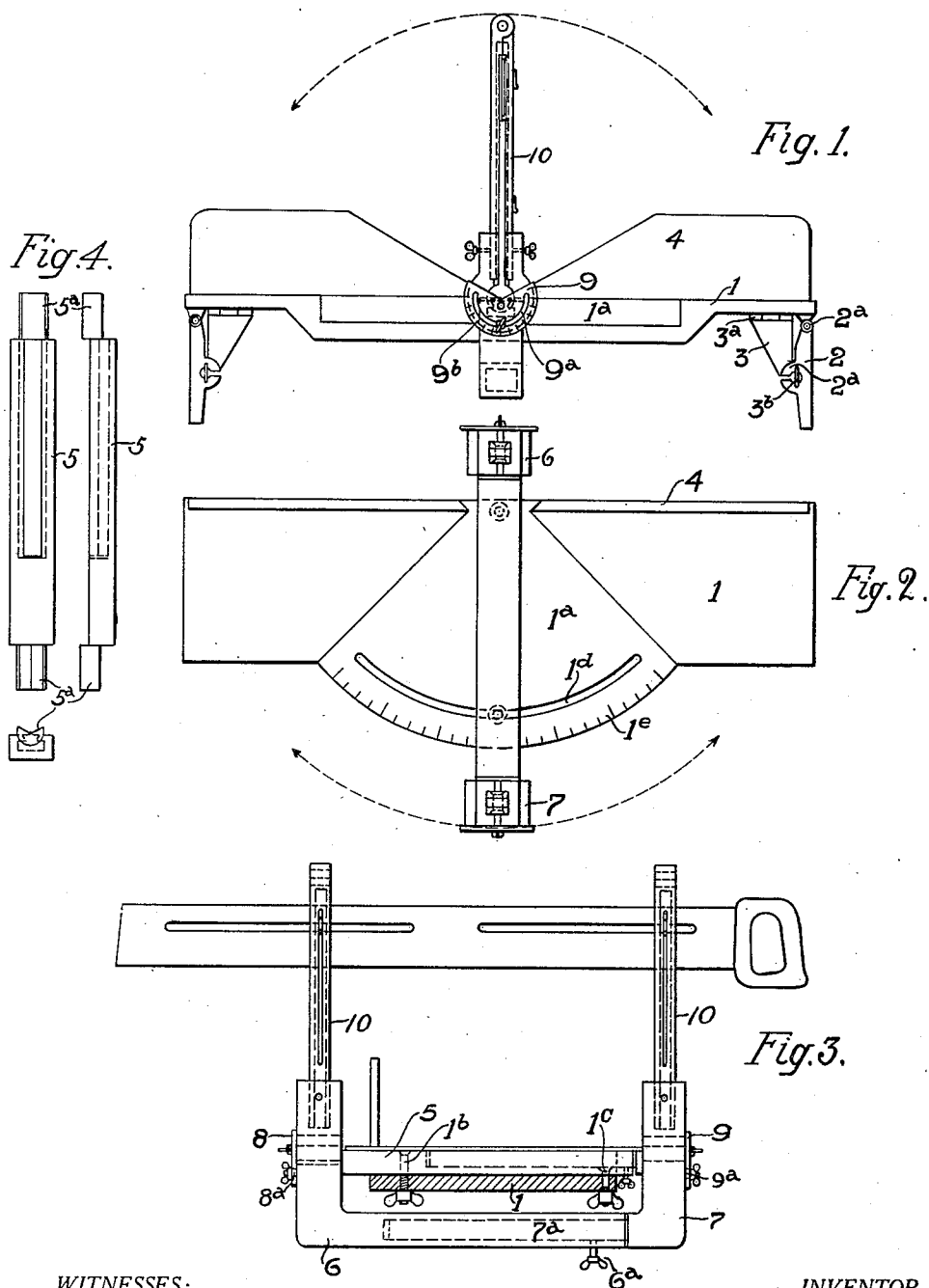


H. S. MILLER.
MITER BOX.
APPLICATION FILED JAN. 5, 1911.

1,017,640.

Patented Feb. 13, 1912.



WITNESSES:

Anders Hagelbaum
Elmer C. Postavaugh

INVENTOR.

HENRY S. MILLER

BY

A. B. Bowman
ATTORNEY.

UNITED STATES PATENT OFFICE.

HENRY S. MILLER, OF SAN DIEGO, CALIFORNIA.

MITER-BOX.

1,017,640.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed January 5, 1911. Serial No. 600,949.

To all whom it may concern:

Be it known that I, HENRY S. MILLER, a citizen of the United States, and a resident of San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Miter-Boxes, of which the following is a specification.

My invention relates to miter boxes of that class in which the saw frame is adapted to swing about a vertical axis and is also adapted to tilt about a horizontal axis which permits the saw to be adjusted so as to cut miters at certain degrees from the horizontal plane, and also from a vertical plane, and the objects are, first, to provide a miter box which will permit the saw to cut to the central point of the horizontal axis, thus making that angle accurate, second, to provide a saw frame that will permit the sawing of wide material or strips, third, to provide a miter box which may be folded into a compact form, and fourth, to provide a miter box of the class described that is simple, easily operated and produces accurate results.

With these and other objects in view, as will appear hereinafter, my invention consists of certain novel features of construction, combination and arrangement of parts, as are hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a front elevational view of my miter box complete, Fig. 2 is a plan view thereof, Fig. 3 is a transverse sectional view, Fig. 4 is a top side and end view of the horizontal axis in detail.

Similar characters of reference refer to similar parts throughout the several views.

The bed 1 is suitably supported upon legs 2 which are hinged at 2^a and adapted to be folded up against the bed frame when not in use, and are held in their extended positions by means of hinged braces 3 hinged at 3^a, and fastened in their extended positions as shown best in Fig. 1 by means of thumb screws 3^b, passing through lugs 2^a on the inner sides of legs 2. The bed 1 is provided with a back 4, placed at an angle of ninety degrees and mitered to an angle of forty-five degrees. The bed is provided with a

recess 1^a in its top surface, which allows the horizontal axis of the saw frame to drop down even with the top surface of the bed. The axis piece 5 which is pivoted vertically on the bed frame 1 by means of screw 1^b, is extensible, being composed of two parts and is adapted to be swung on said pivot and guided by means of screw 1^c which is adapted to slide in groove 1^d placed in the recess in bed 1 for that purpose.

On the upper surface of the recess 1^a in bed 1, is provided a scale 1^e adapted to aid in determining the number of degrees that the saw is set to cut, from the ninety degree angle, in either direction, when sawing an angle from a horizontal plane. Each end of this axis 5 is offset at 5^a, upon which is pivotally mounted a frame composed of two members, 6 and 7 in their certain relative positions. This provides an adjustable frame adapted to be extended some distance in case it is desired to saw wide timbers. Upon these members 6 and 7 are substantially mounted plates 8 and 9 which are provided with radial slots 8^a and 9^a. On the outer surface of this plate 9 is provided a scale 9^b which is adapted to aid in determining the number of degrees from the vertical desired to saw.

In the upwardly extending ends of members 6 and 7 are hinged posts 10, hinged at their tops. These posts are composed of two members hinged together at their top ends, and their lower ends are adapted to set into recesses in the members 6 and 7. Said members 6 and 7 are provided with thumb screws adapted to hold said posts in their proper positions. Between the two members of the posts is left a slot of sufficient width for the saw. Said members are grooved in their inner surfaces, thus forming a recess in which is placed a casting adapted to hold a slotted saw, allowing it to reciprocate therein, but being held in said grooves so as to prevent the saw from being withdrawn longitudinally. Upon each of these posts are also provided catches adapted for holding the saw up, at its top position when desired.

It will be readily seen that with this construction there is provided a miter box that will saw material at any angle from both the horizontal and vertical planes; that the saw is adapted to cut to the central point of the horizontal axis, thus permitting accuracy in the angles; that it may be used for cutting

wide materials; and that it can be folded into a compact form when desired.

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

1. The combination in a miter box of a base portion provided with a drop therein, an extensible axis piece pivotally mounted on said base, and a longitudinally extensible frame pivotally mounted on the ends of said axis piece below the top surface of said base portion, all substantially as set forth.

2. The combination in a miter box, of a base portion provided with a drop therein, an extensible axis piece pivotally mounted on said base portion in said drop, a longitudinally extensible frame pivotally mounted on the ends of said axis piece and provided with upwardly extended means for holding a slotted saw, two plates each provided with a degree scale rigidly mounted, one on each end of said axis piece, all substantially as set forth.

3. The combination in a miter box of two two-piece hinged vertical arms detachably mounted in a frame on said miter box, a guide piece mounted in said hinged arms adapted to guide a slotted saw both ver-

30
tically and longitudinally, all substantially as set forth.

4. In a miter box, the combination of a base portion provided with a drop therein and a degree scale in said drop, an extensible axis piece pivotally mounted near its one end in said base portion in said drop and provided with a degree scale on each of its ends, a longitudinally extensible frame pivotally mounted on the ends of said axis piece, and means on said longitudinally extensible frame for holding a saw, all substantially as set forth.

5. In a miter box, the combination of a slotted saw, two two-piece hinged vertical arms spaced apart adapted to fold over said slotted saw, and pins adapted to slide vertically in said hinged arms and to fit in the slots in said saw for guiding the same and preventing its removal, all substantially as set forth.

50
In witness whereof, I have hereunto subscribed my name in the presence of two subscribing witnesses.

HENRY S. MILLER.

Witnesses:

ELMER E. RODABAUGH,
ABRAM B. BOWMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."