

No. 709,251.

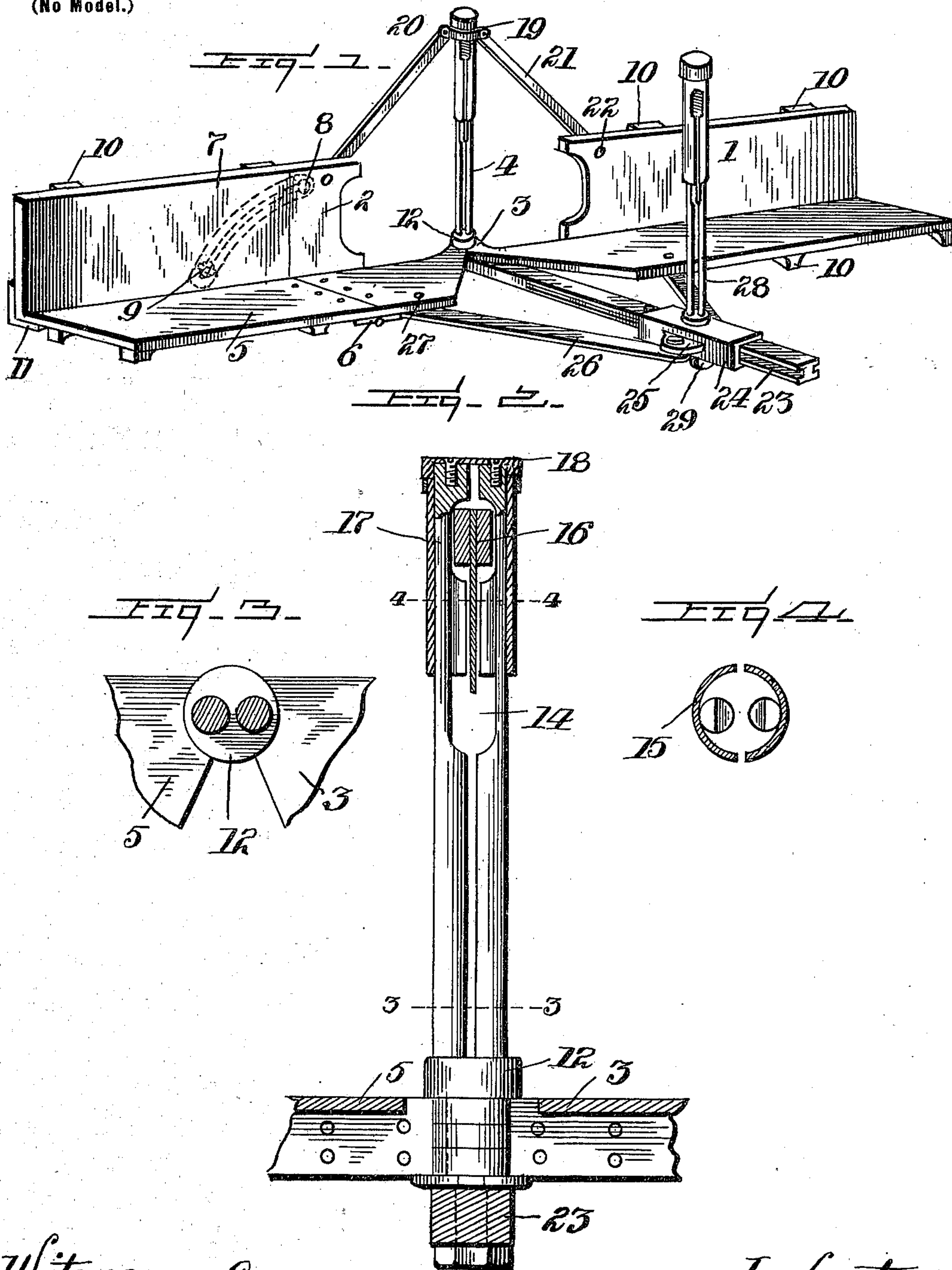
Patented Sept. 16, 1902.

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MITER BOX.

(Application filed Mar. 8, 1902.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK E. ABBOTT AND BLEMUS H. RANDEL, OF PITTSBURG,
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MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 709,251, dated September 16, 1902.

Application filed March 8, 1902. Serial No. 97,242. (No model.)

To all whom it may concern

Be it known that we, FRANK E. ABBOTT and BLEMUS H. RANDEL, citizens of the United States of America, residing at Pittsburg, in the county of Allegheny 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 certain new and useful improvements in miter-boxes, and has for its object the provision of novel means whereby any desired angle may be accurately obtained and the wood then sawed accordingly.

Our present invention further contemplates to provide a device of the above-described character that may be easily placed in position to obtain any angle and then set or locked to accurately retain the measurement and angle that is desired to be cut.

Our invention also aims to provide a device wherein several independent movements are obtained in order to obtain angles of corners, moldings, and the like.

Our invention still further contemplates to provide a device of this character that will be extremely simple in construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its use.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts, to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a perspective view of our improved miter-box. Fig. 2 is an enlarged front view, partly in section, of the central standard. Figs. 3 and 4 are longitudinal sections taken on the lines 3-3 and 4-4, respectively, of Fig. 2.

In the drawings the reference-numerals 1 and 2 indicate the sections of the miter-box, which are preferably constructed of angle-iron. These sections are centrally hinged to-

gether at 3 upon the central standard 4. The section 2 carries a hinged extension 5, which is hinged at 6 on the under sides of the sections 2 and 5 and are further connected on their rear faces by means of the segmental guide 7, pivotally connected at 8 to the section 2. Through said guide passes a thumb-screw 9, engaging the rear face of the section 5. The sections 1 and 5 are suitably braced upon their rear and under sides by braces 10, these sections being preferably reinforced at the corners by angle irons or braces 11.

The central standard 4 comprises two rods, which are secured in the collar 12. The central portion near the upper extension of the rods is slightly cut away, as shown at 14, in which is secured a guide 15 to receive the saw 16. A sleeve 17 is secured upon the upper portion of the central standard 4, and a cap 18, which is rigidly secured thereto, serves to retain the parts in position. Upon this sleeve 17 is secured a split collar 19, to which are pivotally secured at 20 arms 21, the lower ends of which are secured at 22 to sections 1 and 2.

Extending from the under side of the sections 1 and 2 and connected to the lower portion of the standard 4 is secured a guide 23, this guide being preferably formed in the shape of an I-beam and has slidably secured thereupon a slide 24, said slide carrying outwardly-extending lugs 25, to which are pivotally secured arms 26, which are attached at their other ends, as at 27, to the lower face of the sections 1 and 2. This slide 24 carries a standard 28, which is similar in construction to the central standard 4 and in alignment with and diametrically opposite the standard 4 and serves to receive the saw in a similar manner as standard 4. A set-screw 29 is secured to the under face of the slide 24 and engages under face of the guide 23, which serves to lock the device at any desired angle.

The operation of our improved miter-box will be readily apparent. By operating the slide 24 inwardly or outwardly the sections 1 and 2, carrying the section 5, will describe any desired angle, and by operating set-screw 29 will be locked in the desired position. It will also be noted that the section 5 is ca-

pable of being independently operated downwardly to any desired angle and locked in position by means of set-screw 9.

The many other advantages obtained by the use of our improved device will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of our invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a miter-box, the combination of two angle-iron sections hinged upon a central standard, a hinged extension connected to one of said sections, a segmental guide connecting said extension and said section, a guide carrying a slide and standard secured on said slide, arms pivotally connected to said slide and said sections, substantially as described.

2. In a miter-box, the combination of two angle-iron hinged sections, a central standard carrying a collar, arms connected to said collar and said sections, a hinged extension connected to one of said sections, an I-beam guide, a slide mounted thereon carrying a standard, and arms connected to said guide and said sections, substantially as described.

3. In a miter-box, the combination of two angle-iron sections hinged together, a hinged extension connected to one of said sections, means to lock said sections at any desired angle, a central standard, a guide extending therefrom, a slide mounted on said guide, a standard connected to said guide, all parts being arranged and operating substantially as described and for the purpose set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

FRANK E. ABBOTT.
BLEMUS H. RANDEL.

Witnesses:

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