

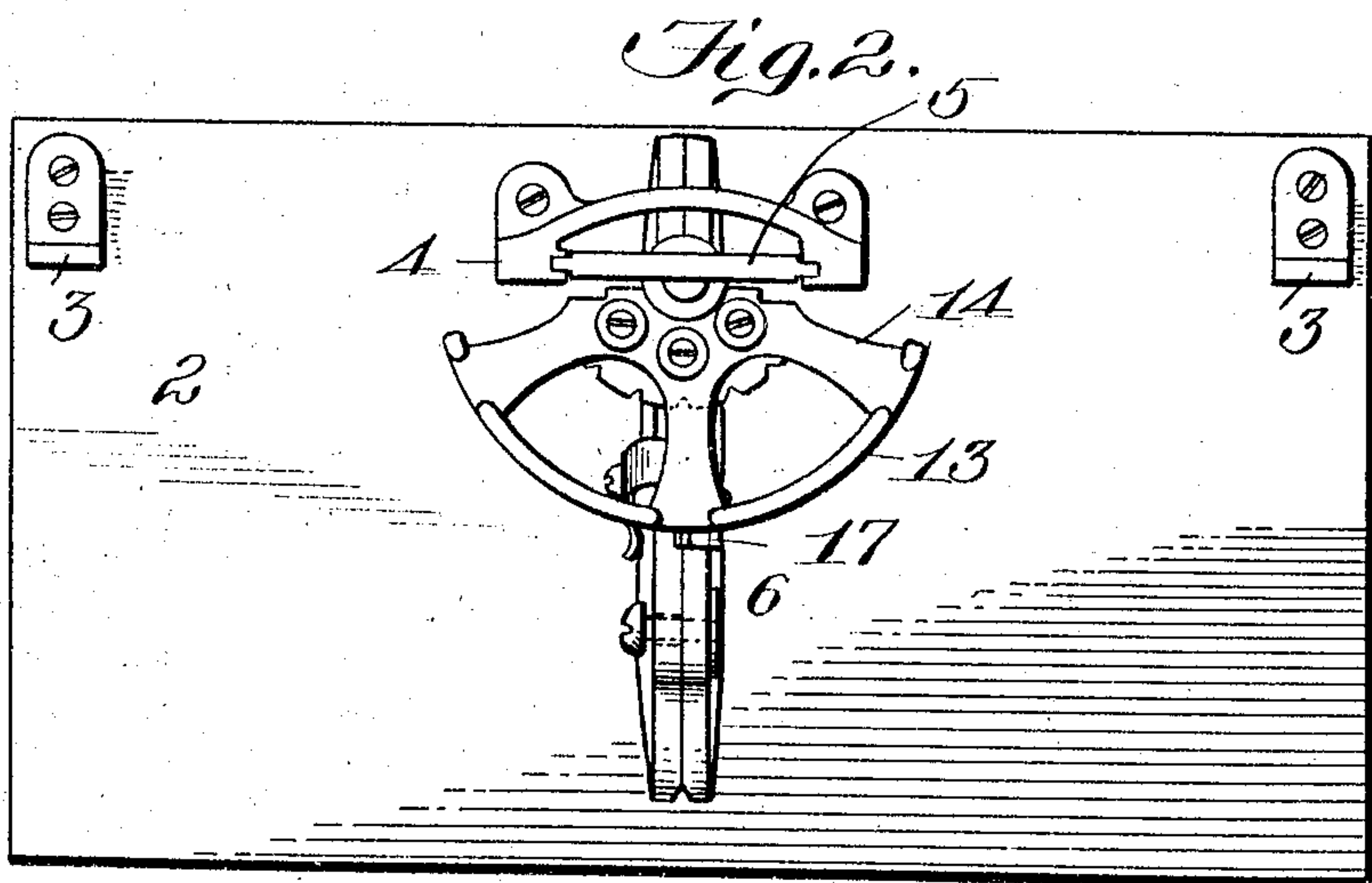
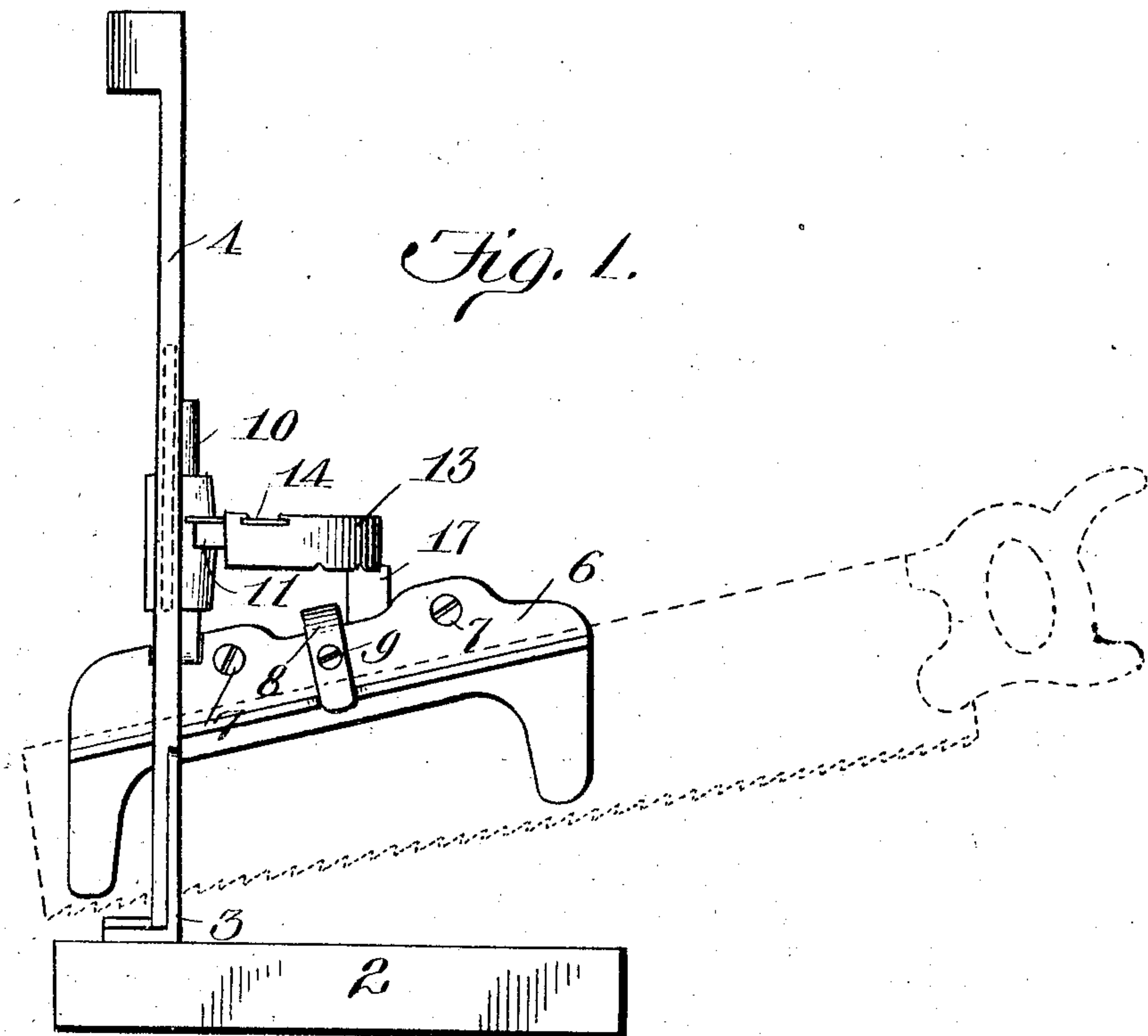
No. 768,457.

PATENTED AUG. 23, 1904.

S. D. HOY.  
MITER BOX.

APPLICATION FILED MAR. 24, 1904.

NO MODEL.

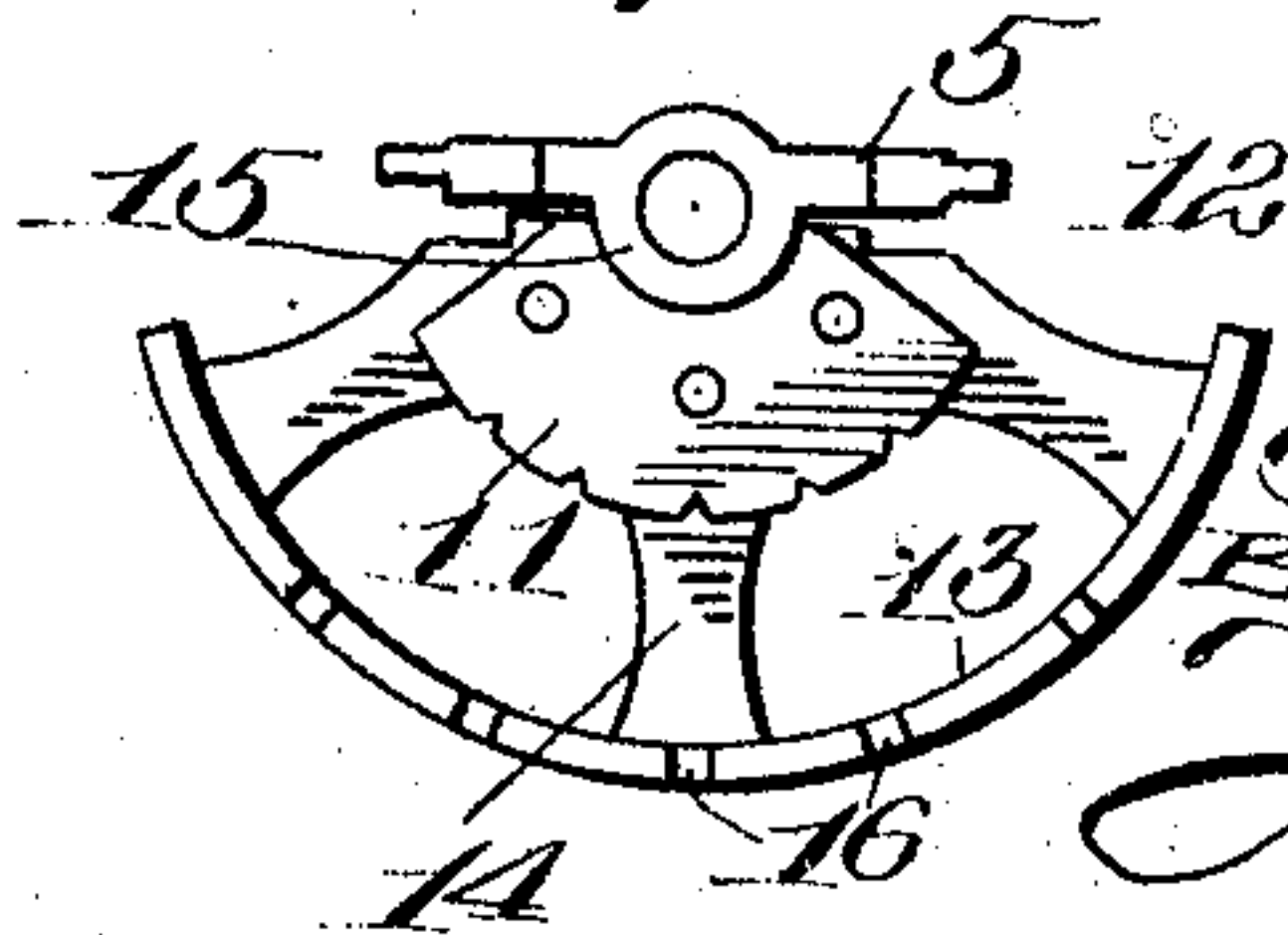


*Fig. 3.*

Witnesses  
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*Fig. 4.*



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att'y.



# UNITED STATES PATENT OFFICE.

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## MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 768,457, dated August 23, 1904.

Application filed March 24, 1904. Serial No. 199,824. (No model.)

*To all whom it may concern:*

Be it known that I, SIDNEY D. HOY, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented new and useful Improvements in Miter-Boxes, of which the following is a specification.

This invention relates to miter-boxes; and the object of the invention is to provide a simple and inexpensive article of this character which is thoroughly effective in operation.

In some respects the present invention is in the nature of an improvement upon the device disclosed by Letters Patent No. 752,978, granted to me February 23, 1904, and to which reference may be had.

The improved miter-box includes in its make-up a sector and a saw-guide, one of which is stationary and the other of which is adapted to swing relatively to its companion, one of the parts having a detent to engage the other, such engagement being a yieldable one. In that particular embodiment of the invention which I have selected for illustration in the accompanying drawings, forming a part of this specification, the sector is stationary, while the coöperating saw-guide is arranged for swinging movement and is equipped with a detent for engaging the sector, which is resilient. When the detent engages the working portion of the sector, the guide will be firmly held against motion, but can be released by the simple manipulation of the sector in the proper direction.

Referring to the drawings, Figure 1 is a side elevation or a miter-box including my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a sectional elevation of the saw-guide. Fig. 4 is a bottom plan view of the sector.

Like characters refer to like parts throughout the several views.

The miter-box involves in its make-up a base or bed, as 2, which may be made from wood or in the form of a casting or in any other desired way. At what might be considered the rear edge of the base and in longitudinal alinement with each other are the stops 3, two of which are represented as disposed near the opposite ends of said bed. These stops may

consist of vertical pins, or they may be of any other convenient form. The work during mitering abuts against the inner faces of these two stops or pins and also against the corresponding face of a standard or upright, as 4, rising from the rear edge of the base, substantially centrally between and in line with the two stops 3. The two stops and the standard in practice are usually made by casting, although of course this is not essential.

The standard 4 is represented as being of substantially inverted-U shape, although any other suitable form might be adopted for said standard. The sides or branches of the standard are grooved to receive a traveler or vertically-movable slide, as 5, which ordinarily is made in the form of a skeleton casting. The saw-guide hereinafter described is connected for swinging movement with the traveler or slide 5, and said saw-guide is denoted by 6 and is represented as consisting of substantially duplicate or similar plates or cheeks fitted face to face and adapted to receive between them a saw. The two plates constituting the saw-guide are represented as operatively assembled by means of screws, as 7, and they may be held in proper relation with the saw by means of a spring, as 8, secured to one of the plates. The spring is of the bow type and, as stated, is secured to one of the plates and is adapted to overhang and engage the other plate. A screw, as 9, is introduced through a perforation in the spring between its ends and its threaded portion is tapped into the adjacent plate, the screw serving to regulate the tension of the spring. One of the plates, or that at the right, looking toward the front of the device, is provided with a vertical stud or stub-shaft 10, generally made integral with said plate, which is mounted for rotation in a hub forming an integral part of the vertically-movable traveler or slide 5.

From the foregoing statement it will be apparent that the saw-guide is adapted to swing and that such swinging movement is about a vertical axis, whereby the angular position of the guide can be changed to make corresponding cuts in stock placed upon the bed or base 2 and resting against the end stops 3. The means illustrated for holding the saw-guide



in an angular position with respect to the bed or base will now be set forth.

Extending forward from the traveler or slide 5 and generally made integral therewith is a flange, as 11, illustrated as being of segmental form and to which a sector coöperative with the saw-guide is suitably attached, said sector being shown as consisting of what might be properly termed a "half-spider." The sector is denoted in a general way by 12, and it includes in its make-up a parti-annular portion 13, to the upper edge of which the arms 14, extending radially outward from a web or body portion 15, are suitably united. These arms 14, as well as the web or body portion, are made of spring metal, whereby the parti-annular portion of the sector will be vertically yieldable. The web or body portion of the sector is united in some suitable manner to the flange 11, screws being shown for this purpose. The under edge of the parti-annular portion 13 has notches 16 of any desirable number and separated from each other at predetermined distances.

To one of the plates of the saw-guide, or that furnished with the stud or stub-shaft 10, is fixed a suitable detent, as 17, the top of which is adapted to traverse the notched lower edge of the parti-annular portion of the sector. The detent is represented as consisting of a metallic strip suitably united, as by screws, to the plate which carries it, or, if desired, the two parts may be integral. When the upper end of the detent is seated in any one of the

notches 16 of the sector 12, the saw-guide will be effectually held against lateral movement and in a desired angular adjusted position with respect to the base or bed 2, and consequently to any work that may be resting thereon. To change the adjustment of the guide, it will be necessary only to lift the outer portion of the sector, which can be readily accomplished by reason of the fact that the latter is resilient, sufficiently far to carry the working portion of the sector out of engagement with the detent, after which the saw-guide can be readily swung either to the right or left.

The operation of the miter-box is the same as that disclosed by my Letters Patent hereinbefore referred to and need not, therefore, be repeated herein.

I claim—

In a mitering device, a base, a standard rising from the base, a traveler on the standard, having a forwardly-extending flange, a sector comprising a parti-annular notched portion and spring-arms connected with said notched portion and also with said flange, a swinging saw-guide connected with the traveler below said sector, and a detent on said saw-guide adapted to traverse said notched portion.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SIDNEY D. HOY.

Witnesses:

C. W. TAYLOR,  
C. S. PETERS.