No. 824,298. PATENTED JUNE 26, 1906.

J. N. HOUSE.

MITER BOX.

APPLICATION FILED JUNE 22, 1905.

Fig. 1.

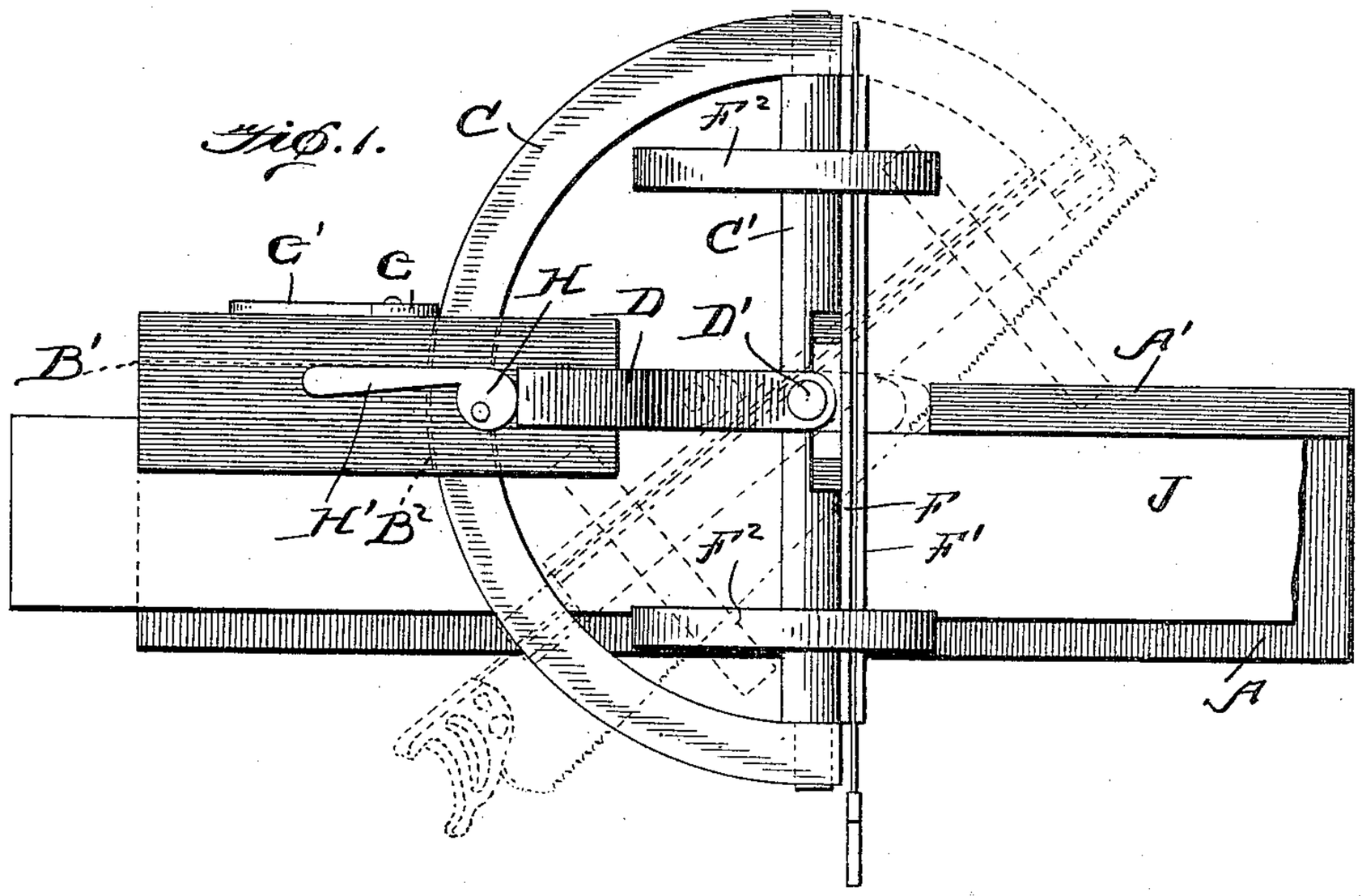
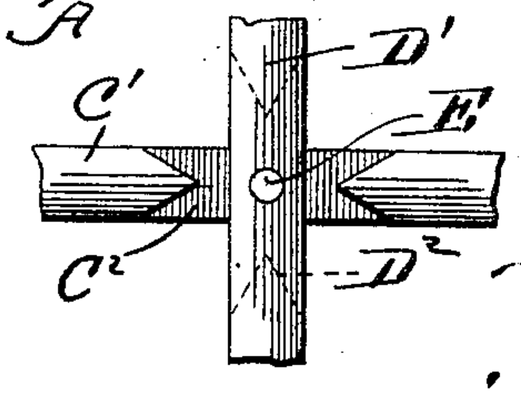


Fig. 2.

Fig. 3.



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MITER-BOX.

No. 824,298. Specification of Letters Patent. Patented June 26, 1906.

Application filed June 22, 1905. Serial No. 266,419.

To all whom it may concern:

Be it known that I, JAMES N. HOUSE, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented a new and useful Improvement in Miter-Boxes, of which the following is a specification.

This invention relates to a miter-box in which the saw-guide can be set at any desired angle both with respect to the length and thickness of the timber to be sawed and also in which the guide is carried by a block detachable from the miter-box proper, so that it can be used separate from the box.

The invention consists in the novel features of construction hereinafter fully described, pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation. Fig. 3 is a detail vertical elevation of the intersecting portions of two cross-pieces.

In the drawings, A represents a suitable base, which may rest upon a table or bench or which may be provided with suitable supporting-feet, as may be most convenient. The base A is provided adjacent one end with a flange A′, having an undercut inner edge A^2, and at the opposite end the base is provided with a vertical flange A^3, having a curved inner edge portion A^4, and the flange is slightly cut away at the upper end of said curved edge, as shown at A^5. The block B has a longitudinal groove on its under face, as shown in dotted lines at B′, whereby the block is adapted to fit over the vertical flange A^3, and to the right of the inner end of said groove B′ the block is slotted, as shown in dotted lines B^2 in Fig. 1, said slot being curved, and to the right of the slot B^2 is a curved vertical slot B^3. An arc C, forming a half-circle, slides in the slot B^2, and the ends of said arc are connected by a cross-piece C′, the ends of said cross-piece being rotatably journaled between the ends of the arc. A second arc D works through the slot B^3, and between the ends of the arc D is carried rotatably the cross-piece D′, which intersects at right angles the cross-piece C′, and at the point of intersection the cross-pieces are cut away on their adjacent faces, as shown at C^2 and D^2, and are pivoted together by a suitable pivot-pin E. The cross-piece C′ carries on its outer face a member F of the saw-guide, and a parallel member F′ is supported by curved spring-loops F^2, connected at one end to the guide member F′ and at their opposite ends to the inner face of the cross-piece C′.

Upon one side of the block B is pivoted an eccentric G, having a handle G′, by means of which the eccentric is rotated into and out of binding engagement with the arc C. On the upper face of the block is pivoted an eccentric H, having a handle H′, by which the eccentric H is moved into and out of engagement with the arc D, and by means of these eccentrics the arcs can be locked in an adjusted position.

It will be obvious from this description and from the drawings that the arc C will work in a horizontal position, and by moving the same back and forth through the slot B^2 the saw-guides can be thrown at any desired angle across the timber to be sawed, the said timber shown in Figs. 1 and 2 at J. It will also be obvious that by moving the arc D the saw can be thrown at an angle with respect to the upper surface of the timber and that by adjusting both of the arcs the saw will cut diagonally with respect to the width of the timber and also at an oblique angle with respect to the thickness of the timber, and it will further be noted that no matter what adjustment is given to the arc C and D, and consequently no matter what angle or angles the saw may be working at, the given center indicated by the pivotal pin E is substantially always in the same place. It will also be obvious that when it is desired to use the guide upon a piece of heavy timber where it would not be convenient to use the miter-box the block B, with the arc C and D and parts carried thereby, can be readily lifted from the vertical flange A^3 and used independently of the base A and the flanges carried by the base.

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

1. In a device of the kind described, a block having curved slots at substantially right angles to each other, arcs working through said slots, cross-pieces rotatably carried between the ends of the arcs, said cross-pieces being pivoted at their point of intersection and a saw-guide carried by one of said cross-pieces.

2. A device of the kind described comprising an arc, working in a horizontal plane, a second arc working within the first-mentioned arc and at right angles to the same, cross-pieces rotatably carried between the ends of said arcs, and pivoted together at their point of intersection, and a saw-guide carried by the cross-piece of the horizontal arc.

3. A miter-box, comprising a detachable block, a movable horizontal arc carried by the block, a rotatable cross-piece connecting the ends of the arc, a vertically-working arc carried by the block, a rotatable cross-piece connecting the ends of the last-mentioned arc, a pivot-pin connecting the cross-pieces at their point of intersection, and a saw-guide carried by a cross-piece connecting the ends of the horizontal arc.

4. A device of the kind described comprising a block having a curved horizontal slot formed therein and a curved vertical slot, arcs working through said slots, respectively, cross-pieces rotatably connected to the ends of the said arcs, and pivoted to each other at their point of intersection, means for locking the arcs in their adjusted positions, and a saw-guide consisting of the vertical member carried by the cross-piece connecting the ends of the horizontal arc, and a parallel member supported by spring-loops carried by the said cross-pieces, as and for the purpose set forth.

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