

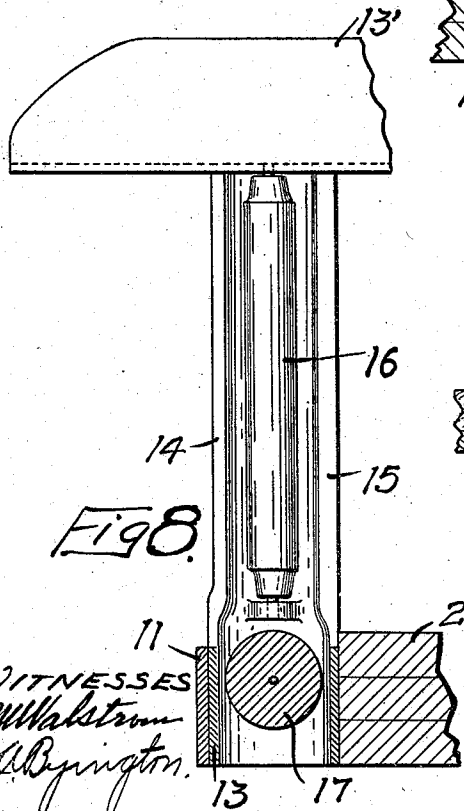
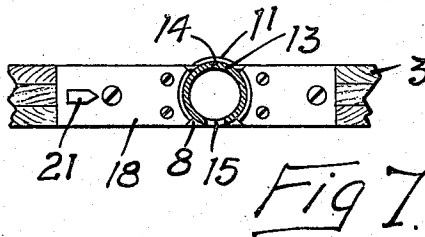
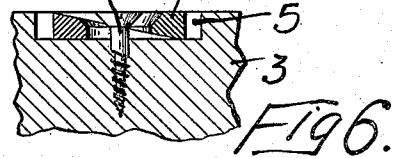
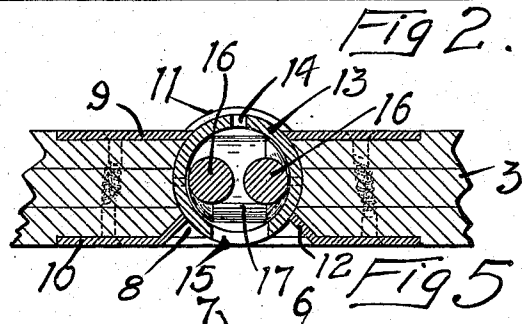
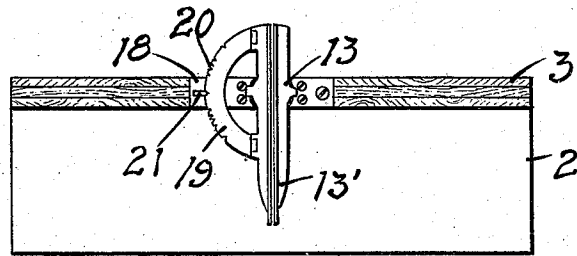
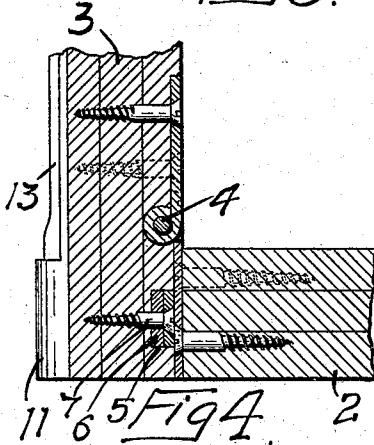
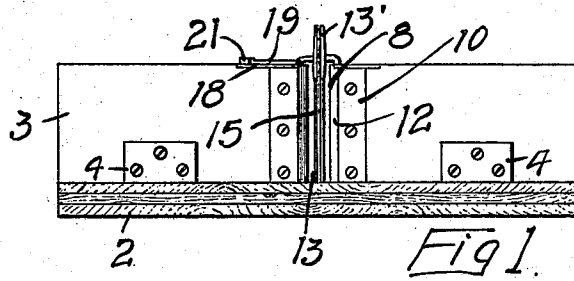
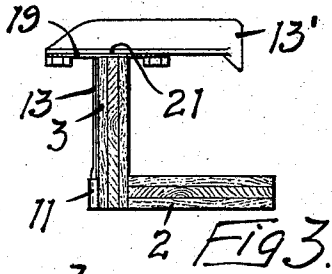
C. L. NYSTROM.

MITER BOX.

APPLICATION FILED NOV. 11, 1908.

Patented Aug. 10, 1909.

930,684.



WITNESSES
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UNITED STATES PATENT OFFICE.

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MITER-BOX.

No. 930,684.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed November 11, 1908. Serial No. 462,028.

To all whom it may concern:

Be it known that I, CARL L. NYSTROM, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Miter-Boxes, of which the following is a specification.

My invention relates to a carpenter's miter box and the object of the invention is to provide a folding box capable of being compactly collapsed and placed in a carpenter's chest and having means for adjustment whereby it can be readily adapted for forming any desired miter joint.

My invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1, is a side view of a miter box embodying my invention, Fig. 2, is a plan view of the same, Fig. 3, is an end view, Fig. 4, is a sectional view illustrating the means for adjusting the side wall and bottom of the box to obtain the desired angle between them, Fig. 5, is a transverse sectional view through the saw guide, Figs. 6, and 7 are detail views, Fig. 8 is an enlarged detail in section showing the roller guides for the saw.

In the drawing, 2 represents the bottom of the box and 3 the side wall both composed preferably of thin strips of wood glued or otherwise secured together with the grain running in opposite directions, as usual in a construction of this kind, to prevent as far as possible, warping or twisting of the wood. The bottom and side wall are provided with hinges 4, one leaf being secured to the bottom and the other to the wall and counter-sunk in the wood to allow the wall to be folded down flat upon the bottom when the box is collapsed. The wall is provided with a recess 5 wherein slotted wedges 6 are arranged and held in place by a screw 7. These wedges are capable of adjusting upon one another and contacting with one leaf of the hinges, allow the relative position of the bottom and side wall to be changed and the angle between them maintained at ninety degrees or a less degree if desired. When the side wall is swung in over the bottom plate of the box, the screw 7 will be accessible for the purpose of adjusting the wedges. Any desired number of these wedges and

screws may be provided in the wall of the box.

The saw guide is mounted in the box wall in a vertical recess 8 formed therein and plates 9 and 10 are secured to the wall on each side of the recess. The plate 9 has an outwardly curved middle portion 11 and the plates 10 have inwardly turned flanges 12, the edges of which form guides for the vertical tubular portion 13, which carries horizontal jaws 13'. This tubular portion has vertical slots 14 and 15 therein between which vertical wooden rollers 16 are mounted, said rollers being spaced apart to allow the insertion of the saw blade between them and the said rollers serving as guides for the saw blade during the operation of forming the miter. The tubular portion 13 is capable of rotary movement in its recess and the slot 15 is of sufficient width to allow the saw to be adjusted at any desired angle in the box to form the miter joint. Beneath the rollers 16 is a transverse wooden roller 17 with which the teeth of the saw contact when the joint has been cut through. The rollers 16 and 17 when worn can be removed and others substituted therefor.

The upper edge of the side wall is provided with a plate 18 and a curved bar 19 is adapted to rest on said plate and slide thereon and has its ends pivoted on the tubular portion. This bar is provided with a series of notches 20 adapted to receive a pin 21 mounted on the plate 18 and whereby the bar and tubular portion are held against premature rotation. The bar is suitably graduated to indicate the angle of the miter or degree obtained by the adjustment of the rotary portion of the guide. To adjust the guide, the tubular portion is raised slightly until the bar 19 clears the stop pin when rotation may be effected until the guide is set in position to obtain the desired angle on the miter joint. When the device is not in use, the guide may be withdrawn entirely from its support, the graduated bar folded down against the tubular portion and the hinged side wall turned over upon the bottom plate. The device thus compactly folded, can be packed in a carpenter's chest.

I claim as my invention:—

1. A miter box, comprising a bottom plate and side walls hinged together and capable of folding one against the other and means

for adjusting the angle formed between said plate and wall when they are in their open or expanded position.

2. A miter box comprising a bottom plate and side wall hinged together, said side wall having a recess therein and wedges fitting within said recess and having a clamping screw and said wedges contacting with said bottom plate and adjusting the angle formed between said plate and side wall.

3. A miter box, comprising a bottom plate and a side wall, hinged thereon and having a vertical recess therein, guide plates secured to said side wall and having edges projecting into said recesses, a hollow saw guide fitting within said recess between said guide plates and contacting with the edges thereof, said saw guide being capable of rotary adjustment and having vertical slots therein to receive the saw blade, and said saw guide being readily removable from said recess to facilitate the folding of the box.

4. A miter box comprising a side wall having a vertical recess therein and guides in said recess, a tubular rotary portion having vertical slots and fitting within said recess, said slots being adapted to receive a

saw blade, vertical guide rollers within said tubular portion and spaced apart and between which the saw blade is inserted.

5. A miter box comprising a side wall, a saw guide capable of rotary and vertical movement therein, and a graduated bar carried by said guide and having a notched edge to receive a stop on said wall.

6. A miter box comprising a side wall, a saw guide mounted therein and capable of rotary and vertical movement, a curved graduated bar pivoted on said guide and adapted to fold down against the same when the guide is removed or rotated, said bar having a notched edge and a stop mounted on said wall and adapted to engage said edge and lock said guide against accidental rotary movement, said guide being rendered capable of rotation by lifting it until said curved bar is out of engagement with its stop.

In witness whereof, I have hereunto set my hand this 6th day of November 1908.

CARL L. NYSTROM.

Witnesses:

RICHARD PAUL,
J. A. BYINGTON.