G. W. FISH.

MITER BOX.

APPLICATION FILED APR. 28, 1911.

999,769.

Patented Aug. 8, 1911.

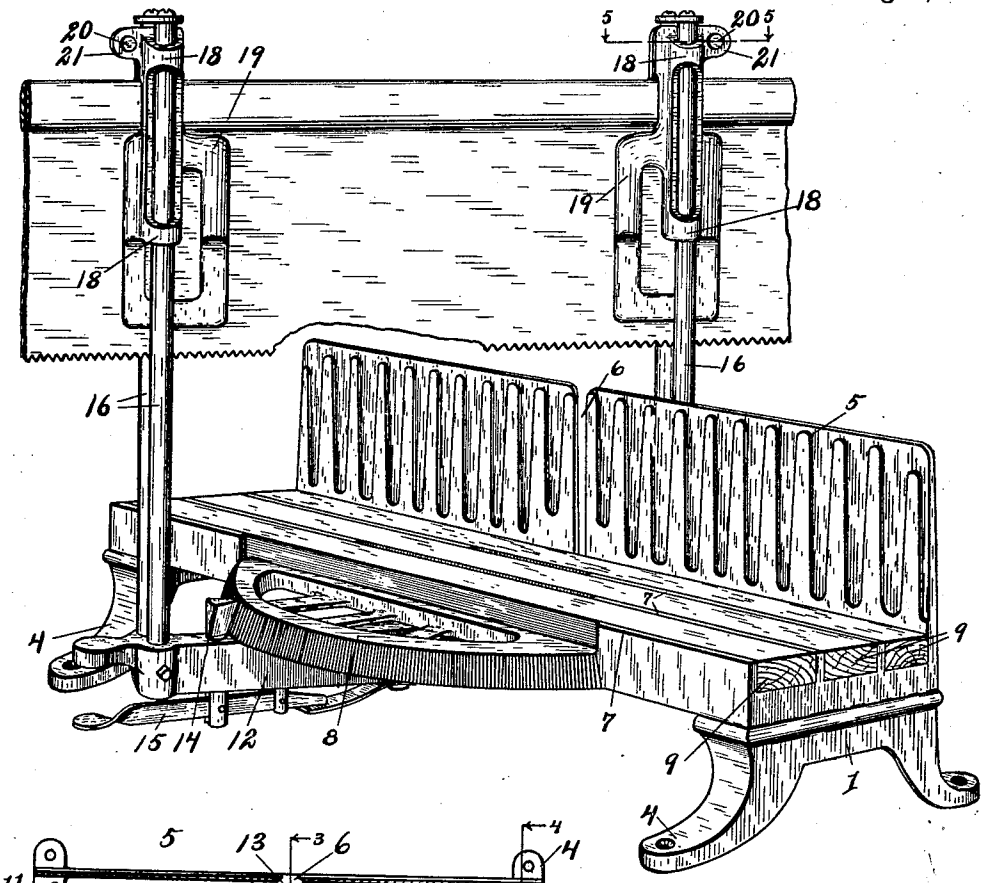


Fig. I.

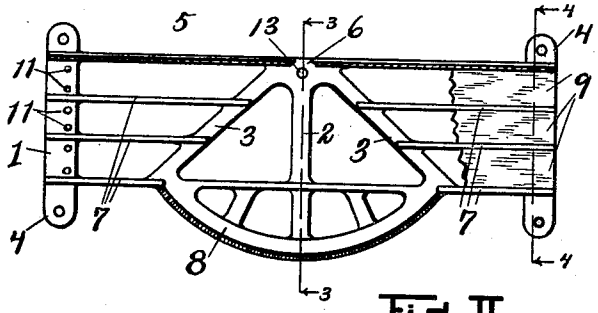


Fig. II.

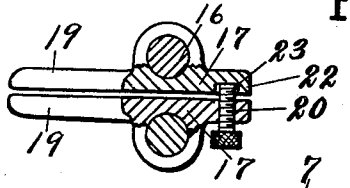


Fig. V.

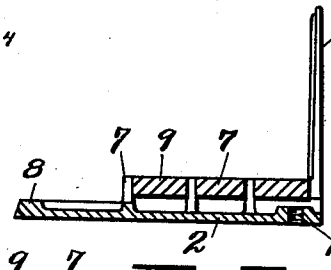


Fig. III.

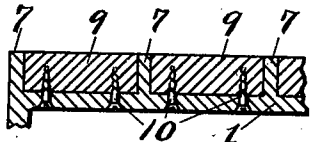


Fig. IV.

Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE W. FISH, OF KALAMAZOO, MICHIGAN.

## MITER-BOX.

999,769. Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed April 28, 1911. Serial No. 623,884.

*To all whom it may concern:*

Be it known that I, GEORGE W. FISH, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Miter-Boxes, of which the following is a specification.

This invention relates to improvements in miter boxes.

The main objects of this invention are: First; to provide in a miter box an improved saw guide carrier, adapted to be adjusted to saws of different thickness or to compensate for wear. Second; to provide in a miter box an improved base having a wood face, which is light in weight and at the same time one in which the wood portion is retained securely and so that it is not likely to warp or become distorted.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is a perspective view of a structure embodying the features of my invention, a saw being shown therein, portions of the saw being broken away. Fig. II is a plan view with the saw guide removed, a portion of the base face pieces 9 being broken away. Fig. III is a detail vertical section taken on a line corresponding to line 3—3 of Fig. II. Fig. IV is a detail vertical section taken on a line corresponding to line 4—4 of Fig. II. Fig. V is a horizontal section taken on a line corresponding to line 5—5 of Fig. I, with the saw removed, the adjusting screw 20 being shown in full lines.

In the drawings, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, the base in the structure illustrated comprises the end cross pieces, the central cross piece 2 and diverging cross pieces 3. The end cross pieces are provided with suitable feet 4. The back plate 5 is formed integrally with these base members and constitutes the rear longitudinal base member. The cross pieces 3 diverge forwardly from the saw guide slot 6 and the rear end of the central cross piece 2. The segment 8 connects the diverging cross pieces and the central cross piece.

The base face pieces 9 are arranged between the longitudinal rib like base members 7. The face pieces 9 are secured by the screws 10 arranged through the screw holes 11 in the end cross pieces. These face pieces are preferably dressed down flush with the upper edges of the longitudinal base members 7. The working face of the base within the swing of the saw is entirely of wood.

The saw guide bar 12 is pivoted at 13. The engaging member 14 of the latch is mounted on the lever 15 to coact with the segment 8. As the details of this latch form no part of this invention they are not further described.

The saw guide posts 16 are mounted on the bar 12, the posts being arranged in coacting pairs, the guide members being arranged in coacting pairs. The guide members 17 are mounted on the posts for pivotal and sliding movement. These members are provided with laterally projecting ears 18 for the posts and with forwardly projecting blade engaging portions 19. The members 17 are provided with an adjusting screw 20, which is arranged through the rearwardly projecting ear 21 on one member to engage a corresponding ear 22 on the other member. The ear 22 is provided with a seat 23 for the end of the screw, (see Fig. V). By thus arranging the guide members 17 they may be adjusted to saw blades of different thickness and to firmly support the blades against lateral movement. This is very desirable where accurate work is required. The texture of wood varies, that is it is likely to be harder or more dense in one place than in another, so that if the blade is not supported against lateral movement when the saw strikes a hard place in the wood it will swing one way or the other and a perfect cut is not secured. My improved saw guide may be adjusted so that this is impossible. The adjustment is simple and can be easily made by the workmen, either to adjust the same to a particular saw or to take up for wear. When it is taken into consideration that manufacturers find it practically impossible to make saws ex-

actly of uniform gage or thickness, the advantage of this will be apparent. Further, saws having coarse teeth are ordinarily thicker than those having fine teeth and the carrier can be adjusted by the workmen to the particular saw which he desires to use.

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

1. In a miter box, the combination of the relatively fixed saw guide posts arranged in pairs, saw guide members slidably and pivotally mounted on said posts in coacting pairs, said members being provided with outwardly projecting post ears and with saw blade engaging portions projecting forwardly from said ears, and an adjusting screw arranged on one member to engage the other, said members being provided with rearwardly projecting ears for said adjusting screw disposed above the saw slot.

2. In a miter box, the combination of the relatively fixed saw guide posts arranged in pairs, saw guide members slidably and pivotally mounted on said posts in coacting pairs, said members being provided with saw blade engaging portions, and an adjusting screw arranged on one member to engage the other.

3. In a miter box, the combination with the saw guide of a base and back plate, the back plate being provided with a vertical saw slot, the base comprising end cross pieces, a central cross piece, and a pair of cross pieces diverging forwardly from the rear end of said central cross piece and sets, rib-like longitudinal members extending from the end cross pieces to said diverging cross pieces, said back constituting the rear longitudinal base member, and base face pieces arranged and secured between said ribs and extending across the space between said diverging cross pieces.

4. In a miter box, the combination with the saw guide of a base and back plate, the back plate being provided with a vertical saw slot, the base comprising end cross pieces, and a pair of cross pieces diverging forwardly from the saw slot, rib-like longitudinal members extending from the end cross pieces to said diverging cross pieces, and base face pieces arranged and secured between said ribs and extending across the space between said diverging cross pieces.

5. In a miter box, the combination with a base, of a saw guide, said base being provided with longitudinal rib-like members disposed on each side of the portion of the base included in the field of the saw guide, and base face pieces arranged between said members and extending across the saw guide field portion of said base.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

GEORGE W. FISH. [L. S.]

Witnesses:
L. G. GREENFIELD,
P. E. LILLIE.