Aug. 20, 1968 A. E. LONG 3,397,722

MITER BOX

Filed Oct. 22, 1965

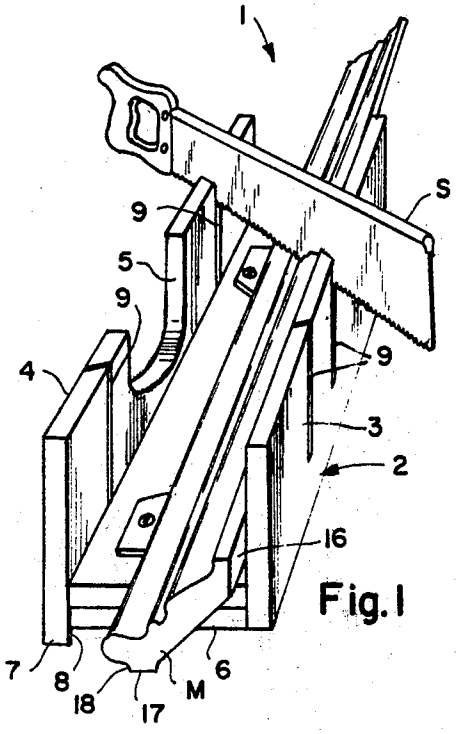


Fig. 1

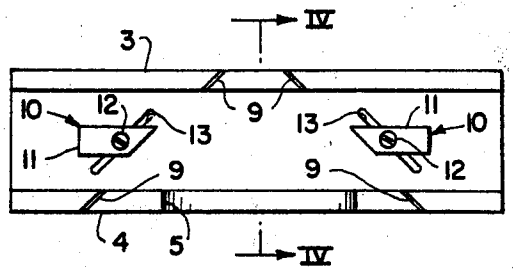


Fig. 2

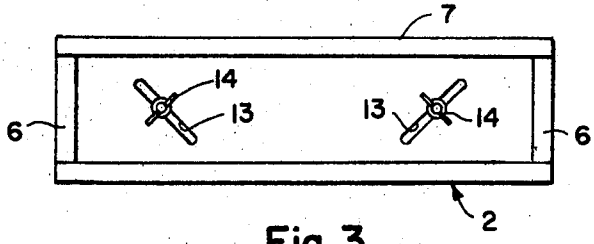


Fig. 3

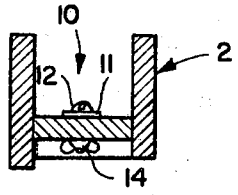


Fig. 4

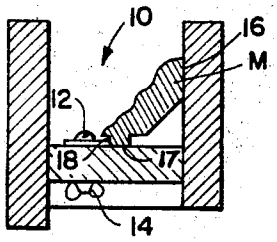


Fig. 5

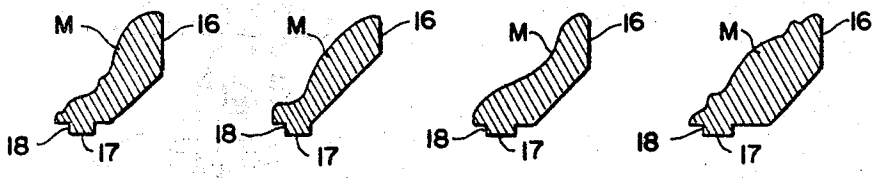


Fig. 6A Fig. 6B Fig. 6C Fig. 6D

INVENTOR.
ALBERT E. LONG

BY William J. Ruano

ATTORNEY

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MITER BOX

Albert E. Long, Belmont, Ohio 43718

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This invention relates to improvements in a miter box for use by carpenters in making miter joints, particularly for picture frames and the like.

An outstanding disadvantage of conventionally used miter boxes by carpenters is that the wood strip which is to be mitered must be laid flat on the base of the box. While this is satisfactory for flat strips, it is quite unsatisfactory for picture moldings and the like which extend angularly relative to the picture which the molding surrounds. Since the mitered joint is made while such molding is laid flat, that is, in its unnatural position when forming part of the picture frame, the miter cut is angularly incorrect and will not form a perfect miter joint.

An object of the present invention is to provide a novel miter box for making miter joints, which box is devoid of the abovenamed disadvantage and in which angularly extending molding strips may be supported in their normal angularly disposed manner, rather than flat, on the base of the miter box.

A further object of the invention is to provide an improved miter box including adjustable supporting means for supporting picture molding strips and the like of varying sizes and inclinations so that a perfect miter joint may be made for all such sizes and different angles of inclination.

A further object of the invention is to provide a miter box provided with a window so that the molding and adjustable supporting means may be visible at all times, particularly during adjustment.

Other objects and advantages will become more apparent from a study of the following description taken with the accompanying drawing wherein:

FIG. 1 is a top, perspective view of the miter box embodying the principles of the present invention;

FIG. 2 is a top view of the miter box shown in FIG. 1;

FIG. 3 is a bottom view of a miter box shown in FIG. 1;

FIG. 4 is a cross-sectional view taken along line IV—IV of FIG. 2, but without the molding to be mitered;

FIG. 5 is an enlarged, cross-sectional view, similar to FIG. 4, except showing the molding in adjustably supported position; and,

FIGS. 6A, 6B, 6C, 6D, are cross-sectional views of moldings of different cross-sectional outline to show some of the varieties which may be mitered with the present miter box.

Referring more particularly to FIGS. 1 to 5 of the drawing, numeral **1** generally denotes the miter box embodying the principles of the present invention, which box may be made of wood or any other suitable material. The miter box comprises vertical side walls **3** and **4**, and generally denoted by numeral **2**, which are directly fastened to the longitudinal edges of the bottom or base **6**. It will be noted that side wall **4** has a bottom extension **7** extending slightly beyond the bottom **6** so that the rear edge surface **8** may act as a stop which abuts against the front edge of a table on which the box may be mounted.

The side wall **14** has a cut-out **5** at the top thereof to provide a window so that the molding M may be viewed at all times while adjustably supporting it by wing bolts **12**, or while sawing a miter joint by the use of a saw S guided by vertical slots **9**, disposed angularly, usually 45° relative to a plane at right angles to the side walls **2** and **4** and botom wall **6**.

An important feature of the invention is the disposition and arrangement of the adjustable supporting elements, denoted generally by numeral **10** and comprising small blocks **11** having vertical holes through which wing bolts **12** extend which are in registry with and guided angularly by slots **13** formed in the base **6**.

The molding strip M has a rear vertical strip portion **16** which is laid against the inner surface of side wall **3** and a bottom horizontal strip portion **17** which rests on the top surface of bottom **6** as shown in FIG. 1. Then, with the wing nuts **14** loosened, the wing bolts **12** are slid along slots **13** until the edges of blocks **11** abut the front edge **18** of the molding strip, whereupon the wing nuts **14** are tightened. The molding is now supported properly and angularly in a manner corresponding to the normal position when forming a picture frame. The saw is then guided by vertical, angularly disposed slots **9** to form a miter cut, that is, a 45° angle at the ends of the four molding strips M forming the picture frame. Of course, the molding strips M may be used for forming other constructions, such as the molding along the base of floors, ceilings, doorways, etc.

Thus it will be seen that I have provided an efficient miter box which is so constructed so as to adjustably support, in normal angular position, the molding forming a picture frame or the like, whereby a proper miter cut may be made to form a perfect miter joint; also which can adjustably accommodate moldings of different widths and inclinations; also I have provided a window in the side wall of the miter box to permit visual observation of the adjustments made and of the molding as it is being cut.

While I have illustrated and described a single specific embodiment of my invention, it will be understood that this is by way of illustration only, and that various changes and modifications may be made within the contemplation of my invention and within the scope of the following claims.

I claim:

1. A carpenter's miter box comprising an elongated base, elongated side walls extending vertically upwardly and fastened to longitudinal edges of said base at right angle thereto, one of said sidewalls depending below the surface of said base and having a window in its upper edge portion, diagonally extending slots extending vertically downwardly from the top edges of said side walls, and a plurality of longitudinally disposed adjusting means comprising slots formed in said base, and supporting blocks having vertical holes, wing bolts extending through said holes for selectively securing said blocks in a position along said slots so as to support the front, bottom edge portion of a molding strip supported angularly in said box, the rear vertically extending surface of said molding strip adapted to abut the inner surface of one of said sidewalls and the front edge of the horizontally extending bottom surface of said moulding strip adapted to abut said blocks.

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DONALD R. SCHRAN, *Primary Examiner.*