

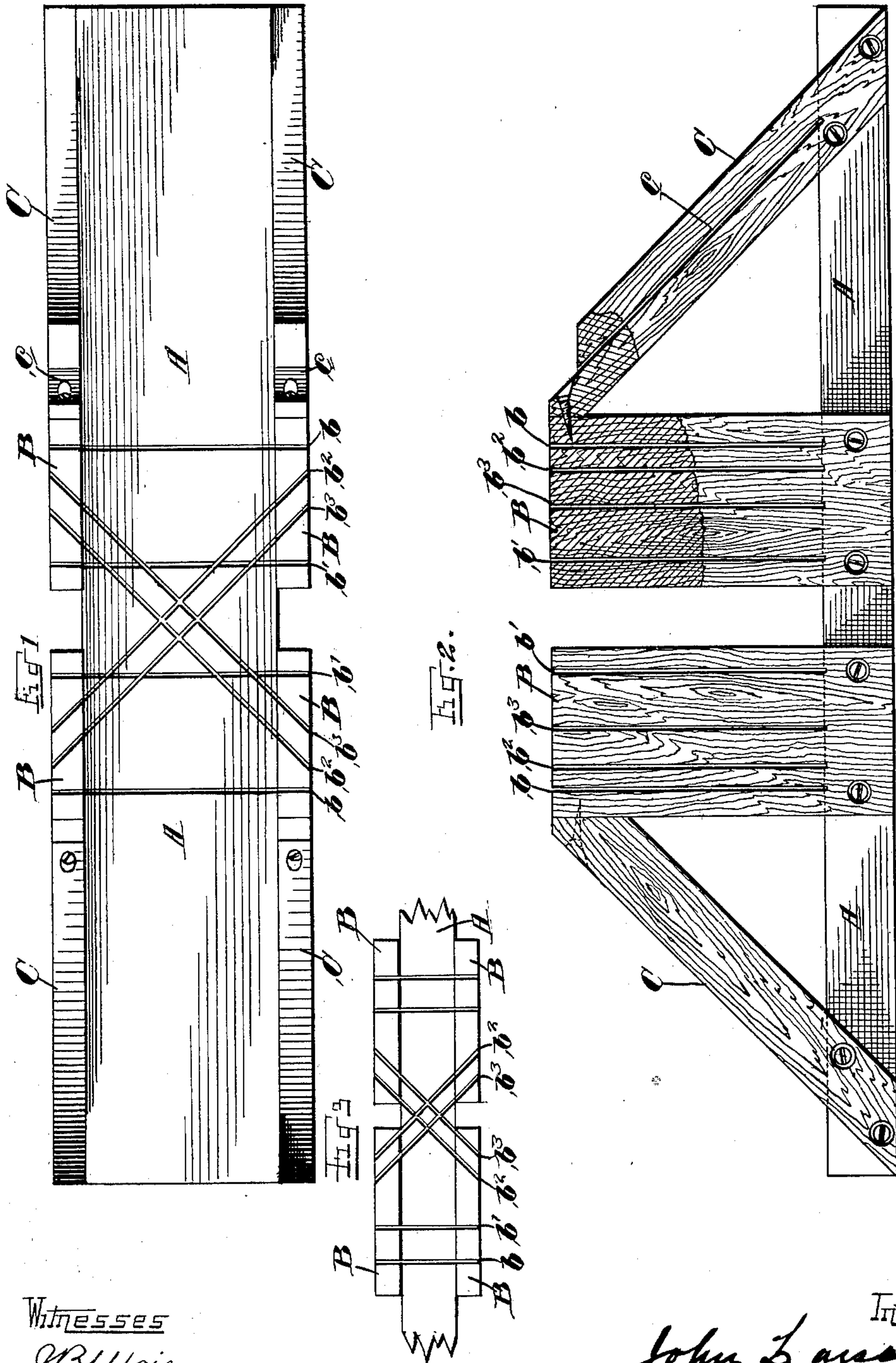
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J. LARSON.
MITER BOX.

APPLICATION FILED SEPT. 15, 1902.

NO MODEL.



Witnesses
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JOHN LARSON, OF CHICAGO, ILLINOIS.

MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 731,919, dated June 23, 1903.

Application filed September 15, 1902. Serial No. 123,434. (No model.)

To all whom it may concern:

Be it known that I, JOHN LARSON, a citizen of the United States of America, and a resident of Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Miter-Boxes, of which the following is a specification.

My invention relates to miter-boxes adapted for use by carpenters in sawing up lumber, moldings, or trimmings.

Generally stated, the object of my invention is to provide an extremely simple and comparatively inexpensive miter-box. A special object is to provide a wooden miter-box of such character that it will last for about double the length of time of the ordinary miter-box.

Another object is to provide a miter-box having wooden guide-blocks which can be employed with any width of base.

A further object is to provide an improved form of guide whereby an angular cut may be made, even though the piece of lumber is considerably wider than the trough of the miter-box.

It is also an object to provide details and features of improvement tending to increase the general efficiency and serviceability of a miter-box of this particular character.

To the foregoing and other useful ends my invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a plan of my improved miter-box. Fig. 2 is a side elevation of the miter-box shown in Fig. 1, the upper portion of one of the guide-blocks, and also one of the braces, the side being broken away for the purpose of showing the direction in which the grain of the wood runs. Fig. 3 is a plan of a portion of the miter-box, showing another arrangement of the cuts in the guide-blocks.

As thus illustrated, the base or bottom part A can be of any suitable or desired length or width. The vertically-arranged guide-pieces B can also be of any height and length, according to the character of the lumber to be sawed, and can be secured to the base in any suitable manner. Preferably, however, each guide-block B is constructed in such manner that the grain of the wood extends up and down, so as to lessen the liability of breakage

and also so as to reduce wear, and thereby lengthen the life of the blocks. In other words, the cuts b , b' , b^2 , and b^3 , with which each block may be provided, extend in the same direction as the grain of the wood, thereby making it possible to employ comparatively short blocks without danger of breakage. These cuts, which thus extend with the grain instead of across the grain, can be of any desired number and arranged in any suitable or desired manner. For example, each block can be provided with a pair of straight cuts b and b' and also at a point between these straight cuts with a pair of angle cuts b^2 and b^3 . With this arrangement the miter-box will have four straight cuts and also four angle cuts. One cut can be used until it has been objectionably widened by the saw, and after this another cut can be used. In this way each cut is duplicated at least once, so as to make the miter-box last at least twice as long as a miter-box of the ordinary construction. With the sides of the miter-box thus made in sections—that is to say, with each side of the miter-box composed of a plurality of guide-blocks—the said sides can be applied to bases of different widths. If the base is wider than that shown in the drawings, then the blocks at the side are arranged farther apart, and, vice versa, if the base is narrower than the adjacent sides of the blocks are brought closer together. In this way, as stated, I provide wooden miter-box guides which are applicable to any width of base. As stated, said guide-blocks can be of any suitable or desired height. If desired, they can be of considerable height, and in such case an angle cut can still be made, even though the piece of lumber be considerably wider than the trough of the miter-box. This is for the reason that the piece of lumber can in such case be turned on its edge in the trough of the miter-box, and a forty-five or other angle cut can then be made by sawing through the cut c in the brace C. At this juncture it will be observed that all of the guide-blocks are preferably provided with braces C, extending from their tops to the sides of the base. Thus with the provision of the inclined cut c a piece of lumber, even though it be considerably wider than the

trough of the miter-box, can still be cut off at an angle—that is to say, it can still be sawed off in the same manner as it could were it possible to have it lay flatwise in the trough of the miter-box.

With further respect to the relative adjustability of the guide-blocks according to the width of the base the cuts in the blocks can be arranged as shown in Fig. 3. With the two straight cuts arranged outside of the two angle cuts rather than one at each side of the angle cuts, as shown, it is possible to employ a much narrower base. In other words, the arrangement of cuts shown in Fig. 3 permits the angle cuts to be brought much closer together, and of course the closer together the angle cuts can be brought the narrower the base can be. In order to have a very narrow base, it is necessary that the angle cuts of one block be brought very close to the angle cuts of the other blocks on the same side of the box. In other words, with a very narrow base the angle cuts b^2 and b^3 of the two blocks at one side of the box must be brought very near together, and of course the blocks at the other side of the box must be correspondingly adjusted. Hence, as stated, by arranging the angle cuts close to the adjacent sides or edges of the guide-blocks, as shown in Fig. 3, it is possible to employ a much narrower base than the one shown in Fig. 1. Thus it will be seen that I not only provide a miter-box which is extremely simple and cheap to manufacture, but also that I provide wooden guide-blocks which can be applied to any width of base and which are constructed with the cuts extending with the grain of the wood instead of across the grain, so as to prevent the thrust or friction of the saw from breaking off the narrow perpendicular portions of the blocks. Furthermore, it will be seen that I provide a box with inclined cuts whereby the lumber may be cut off at the desired angle, even though it be much too wide to be placed in the trough of the box. In addition to these advantages it will be seen that each cut is duplicated at least once, so as to practically double the life of the box and make it fully as serviceable as two or three of the ordinary miter-boxes.

What I claim as my invention is—

1. A miter-box constructed with four wooden guide-blocks having vertical cuts extending with the grain of the wood.

2. A miter-box having wooden guides provided with vertical cuts extending with the grain of the wood.

3. A miter-box having sectional wooden sides, the grain of the wood in each side extending vertically, and provided with two angle cuts extending parallel and arranged close together, and also with a similar pair of an-

gle cuts, the two pairs of angle cuts thus provided crossing each other centrally and at right angles, and the guide-openings formed by the cuts in the sides extending with the grain of the wood.

4. A miter-box comprising a base, guide-blocks, braces connecting the tops of said blocks with said base, said braces being slotted for the purpose of providing the box with an inclined cut, whereby a piece of lumber too wide for the trough of the box may be sawed off at the desired angle.

5. A miter-box comprising a base, a plurality of wooden guide-blocks secured to each side of said base, each guide-block being provided with a pair of inclined cuts, and also with one or more straight cuts, the grain of the wood in said blocks extending vertically and parallel with said cuts, and each block being independently secured to the side of said base.

6. A miter-box comprising a suitable base, a pair of guide-blocks secured to each side of said base, each block being made of wood with the grain extending up and down, each block being provided at its inner side with a pair of angle cuts and at its outer side with a pair of straight cuts.

7. Miter-box side pieces, each side piece being composed of a plurality of wooden guide-blocks having vertical cuts extending with the grain, the said pieces thus constructed of a plurality of blocks being applicable to any width of base.

8. A miter-box constructed with wooden sides, each side being composed of a number of independent sections having the grain of the wood extending up and down, and said box having duplicate cuts, the like cuts arranged close together, so as to provide pairs of similar cuts, and each pair of guide-openings formed by the cuts in the sides extending vertically and with the grain of the wood.

9. A miter-box constructed with a bottom and sides, each side being composed of a plurality of wooden blocks provided with cuts extending vertically and parallel with the grain of the wood, the blocks at each side being adapted to be placed either closer together or farther apart, according to the width of said bottom, and one or more bottoms of different widths, each interchangeable with said first-mentioned bottom, and each wooden block being adapted to be secured independently and flatwise to the side of the bottom.

Signed by me at Chicago, Illinois, this 6th day of September, 1902.

JOHN LARSON.

Witnesses:

ARTHUR F. DURAND,
WM. A. HARDERS.