

April 7, 1925.

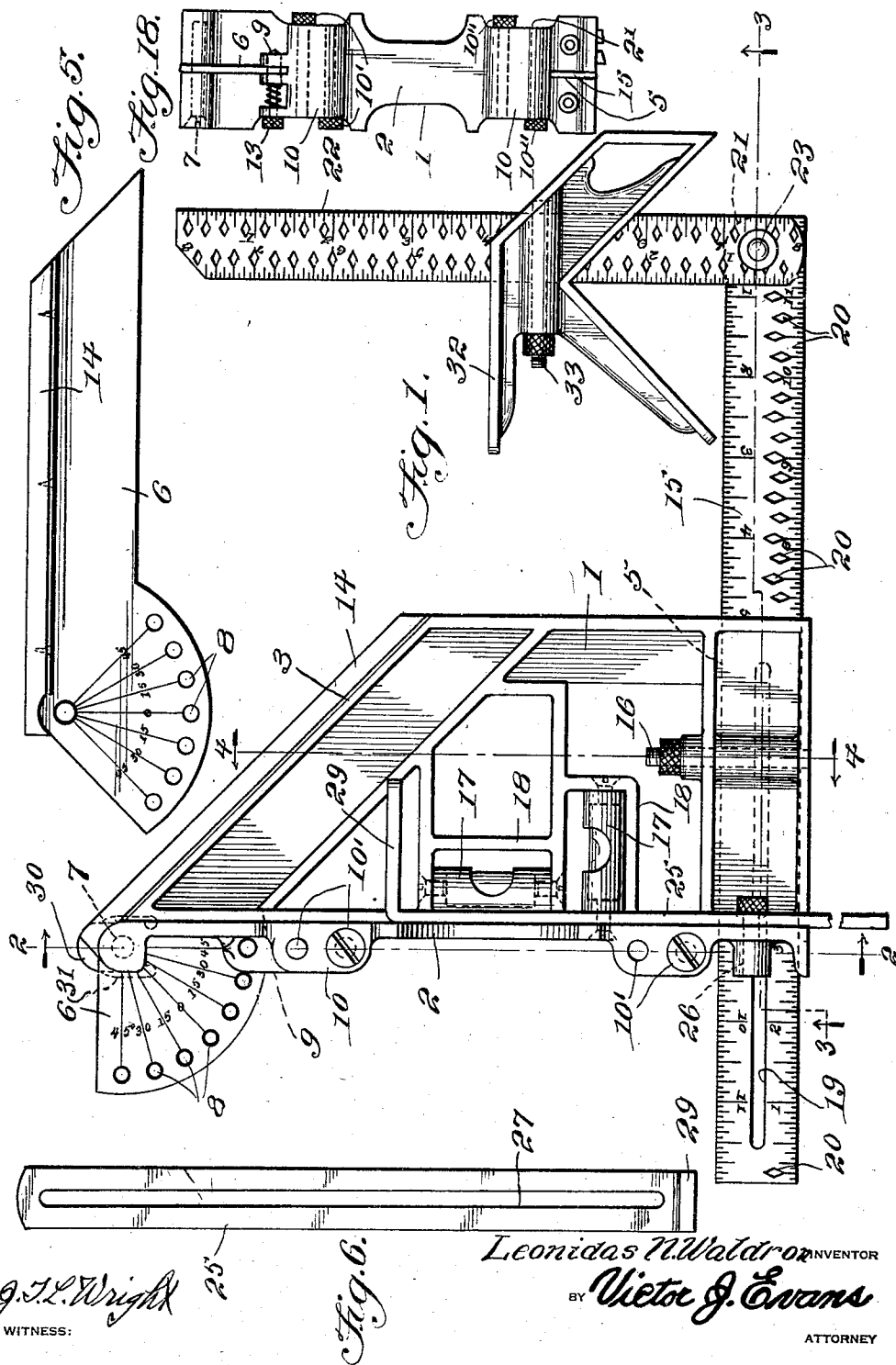
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L. N. WALDRON

COMBINATION TOOL

Filed March 12, 1923

3 Sheets-Sheet 1



g. J. L. Wright
WITNESS:

Leonidas N. Waldron INVENTOR
BY Victor J. Evans
ATTORNEY

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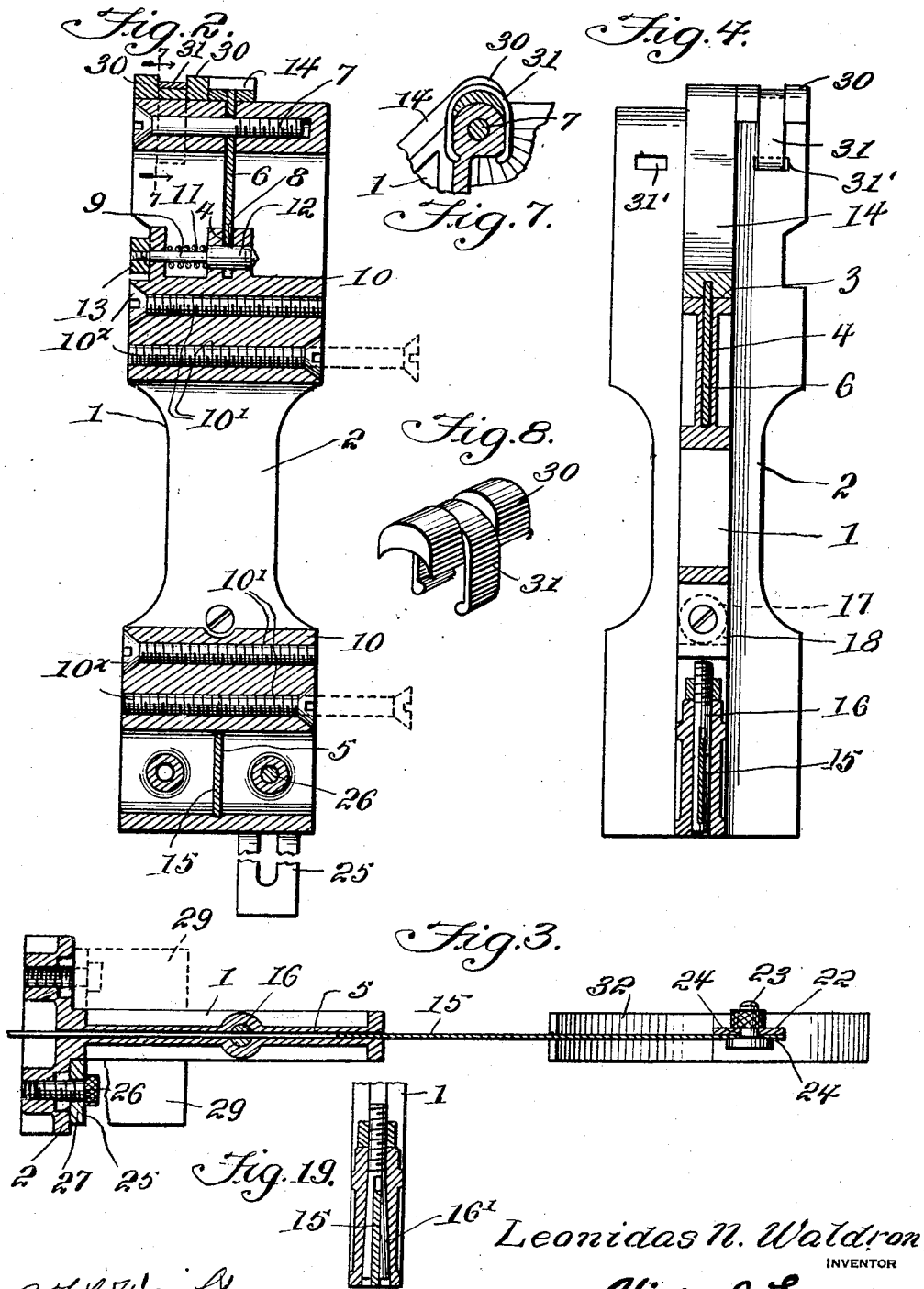
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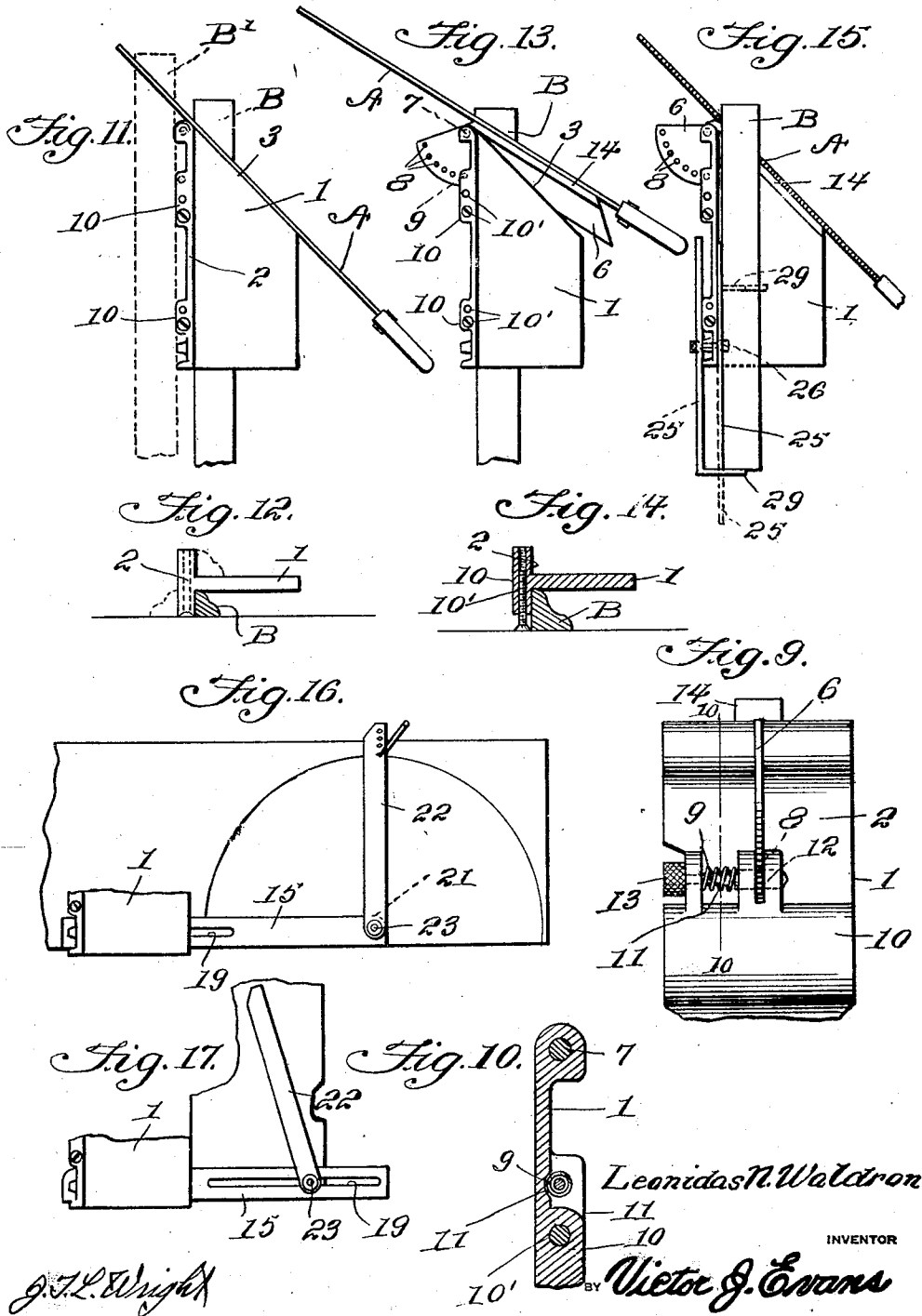
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3 Sheets-Sheet 3



Patented Apr. 7, 1925.

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UNITED STATES PATENT OFFICE.

LEONIDAS NINDE WALDRON, OF AMITY, OREGON.

COMBINATION TOOL.

Application filed March 12, 1923. Serial No. 624,499.

To all whom it may concern:

Be it known that I, LEONIDAS N. WALDRON, a citizen of the United States, residing at Amity, in the county of Yamhill and State of Oregon, have invented new and useful Improvements in Combination Tools, of which the following is a specification.

This invention relates to a tool, the general object of the invention being to provide a miter box, different kinds of squares, a level, plumb and the like.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is an elevation of the complete tool.

Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a section on line 4—4 of Figure 1.

Figure 5 is a side view of the miter blade and saw guide.

Figure 6 is a view of the duplicating gauge.

Figure 7 is a section on line 7—7 of Figure 2.

Figure 8 is a perspective view of the saw guide 30.

Figure 9 is a rear view of the upper part of the device.

Figure 10 is a section on line 10—10 of Figure 9.

Figures 11 and 12 are views showing the use of the device as a miter with the adjustable miter blade removed.

Figure 13 is a view showing the device in use with the blade thereon.

Figure 14 is a sectional detail view showing how the device is used on a high piece of molding.

Figure 15 is a view showing how the duplicating gauge is used to miter pieces of the same length.

Figure 16 is a view showing the device used as a compass.

Figure 17 is a view showing how the rules 15 and 22 may be used to mark or cut a work piece.

Figure 18 is a rear view of a modification. 60

Figure 19 is a sectional view of this modification.

In these views 1 indicates the miter box which has its front and bottom edges straight and its upper end sloping, as at 3. 65

The back 2 projects beyond each side so that the device is of T-shape in cross section as shown in Figure 3. The upper end is

slotted, as at 4, and the lower end is slotted, as at 5. The adjustable miter blade and

saw guide 6 is arranged to engage the slot 4 and this member 6 is pivoted to the back by the bolt 7. The pivoted end of the blade

is of segmental shape and is provided with a scale and the holes 8, the holes being

adapted to be engaged by a locking pin 9. Figure 2 which passes through one of the

lugs 10 on the back. The pin is held in locking position by a spring 11 and it is

provided with an enlarged part 12 and a knurled nut 13 so that it can be easily mani-

pulated by hand. The top edge of the blade has secured thereto a strip 14 which is pre-

ferably formed of wood and is of the same thickness as the top of the box as shown in

Fig. 4. Thus the blade and strip enable the box to be used to miter pieces at different

angles, the scale enabling the blade to be set at the desired angle. A rule 15 engages

the slot 5 and said rule is held in adjusted position by the slotted bolt 16. Figure 4. 90

Spirit levels 17 are carried by the box through means of the flanges 18. Some of

the lugs 10 on the back of the device are provided with screw threaded holes 10' Figure 9. 95

Figure 2 for receiving the bolts 10* which act as adjustable supporting means or legs for the

rear of the device when the same is used on pieces of molding or the like which are of

considerable height, as shown in Figure 14. 100

By these means the bolts can be adjusted so that the box will properly engage the top

of the piece or molding to be worked.

The rule 15 is provided with a slot 19 and with holes 20 which are preferably of dia-

mond shape. It is ground off at one corner of one end, as shown at 21 in dotted lines

in Figure 1 and in full lines in Figure 17, and this end is adapted to be pivotally con-

connected to a rule 22 by the bolt 23 which passes through the holes 24. Figure 3 in said rules. The rule 15 can be reversibly arrang-

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ed in the miter box and the rule 22 connected therewith by passing the bolt 23 through the slot 19, as shown in Figure 17.

A duplicating gauge 25 may be attached to either side of the back of the miter box by the bolt 26 engaging a slot 27 in said gauge as shown in Figures 1 and 15. The gauge is provided with a right angular part 29 at one end which forms a rest for one end of the piece to be cut or marked, as shown in Figure 15 so that a plurality of pieces can be cut to the same length. When short pieces are to be actuated upon the gauge is placed in a position shown in dotted lines in Figure 15 and when long pieces are to be actuated upon it is placed in the inner position shown in full lines in said figure. The gauge may be placed at either side of the frame 1 as holes are made in the back and at both sides of the frame for the bolt 26, as shown in Figures 2 and 3.

I also provide an additional saw guide 30 Figure 8 which is provided with a clamp 31 of spring construction for engaging the upper end of the back 2 which is provided with the slots 31' Figure 4 for receiving a part of the clamp. This guide acts in conjunction with the part 14 to hold the saw, shown at A, in Figures 11, 13 and 15, in proper position. The guide can be placed on either side of the frame 1.

A miter, try-square and center gauge frame 32 as shown in Figs. 1 and 3 may be adjustably fastened to the rule 22 by means of the slotted bolt 33. The lugs 10 have their outer edges in alignment and the side edges of the back 2 are straight so that both the back and side edges will act as straight edges.

Figure 18 shows the side edges of the back recessed, at 2', where the holes for the adjustable legs are and these bolts are provided with knurled heads 10'' which are located in the recesses when the legs or bolts are screwed home.

Figure 11 shows the miter box being used without the adjustable blade 6 and the piece of molding or the like can be placed in the position, as shown in full lines B or it may be placed as shown in dotted lines B', the saw being shown at A. Figure 12 is an end view of Figure 11 and showing how the molding can be placed in any one of three positions. Figure 13 is a view showing how the member 6 can be adjusted to miter pieces at different angles. Figure 14 shows how the adjustable legs are arranged when a piece of molding of great height is being worked. Figure 15 shows the duplicating gauge 25 in use so that a number of pieces can be cut to the same length. Figure 16 shows the device being used as a compass, the pencil being placed in one of the holes in the rule 22. Figure 17 shows the rule 15 reversed so that the rule 22 is adjustably

and pivotally secured thereto so that it can be adjusted to various positions upon the piece being worked.

As will be seen this device can be used for a great number of different purposes and when placed on the work both edges of the work can be marked at once. It may be held in position on the work by hand or it may be used in connection with a bench or a saw horse. It is not necessary to mark the work as the tool can be placed thereon and the work sawed off.

This device can be used as a miter box, a miter square, a bevel square, a try-square, marking gauge, depth gauge, mortise gauge, center gauge, level, plumb, compass and rule and each tool can be used in a plurality of ways.

As shown in Figures 18 and 19 the slot 5 extends through the bottom of the frame so that the lower edge of the rule 15 is flush with the bottom edge of the frame. The screw 16' for holding the rule in position is formed, as shown in Figure 19, to support the rule. This is the preferred construction. The bolt 7, pin 9 and nut 13 Figure 2 may be arranged on either edge of the frame and instead of having the slot 19 in the rule 15 the rule may be provided with a groove or it may be provided with both a slot and a groove. The rule 22 can be used alone as a compass by the use of pencils or the like. When connected with the first rule the two rules will act as a compass and bevel square for bevel or angle work. When the second rule is connected with the frame 32 Figure 1 the two parts will form a combination acting as try and miter square, depth, marking, mortise and center gages.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A device of the class described comprising a miter frame of T-shape in cross section and having a slot in its miter end, a miter blade and saw guide pivoted to the wide part of the frame with the blade engaging the slot and adjustable supporting members in the enlarged part of the frame.

2. A device of the class described comprising a miter frame having slots therein, a miter blade and a saw guide pivoted to the frame and engaging one slot, a rule slidably mounted in the other slot, spirit levels carried by the frame, said frame having a wide back and adjustable legs for the back.

3. A device of the class described comprising a miter frame having a straight bottom and a top inclined with respect to the bot-

tom, said top and bottom having slots therein, a miter blade and saw guide pivoted to the frame and engaging the top slot, means for holding said blade in adjusted position, a rule slidably and reversibly arranged in the lower slot and means for holding said rule in adjusted position.

4. A device of the class described comprising a miter frame having a straight bottom and a top inclined with respect to the bottom, said top and bottom being slotted, a miter blade and saw guide pivoted to the frame and arranged in the top slot, means for holding said blade in adjusted position, a rule slidably mounted in the lower slot, means for holding the same in adjusted position, a duplicating gauge, means for adjustably securing the same to a part of the frame, a second rule and means for pivotally connecting the second rule with the first rule.

5. A device of the class described comprising a frame having a straight bottom and a top inclined with respect to the bottom, said top and bottom being slotted, a miter blade and saw guide pivoted to the frame and arranged in the top slot, means for holding said blade in adjusted position, a rule slidably mounted in the lower slot, means for holding the same in adjusted position, a duplicating gauge, means for

adjustably securing the same to a part of the frame, a second rule, means for pivotally connecting the second rule with the first rule and a miter, try-square and center gage frame adjustably connected with the second rule.

6. A device of the class described comprising a miter frame having its back part of greater width than the major part of the frame, a miter blade and saw guide pivotally connected with the miter edge of the frame, means for holding the blade in adjusted position and an adjustable saw guide removably connected with the upper edge of the back.

7. A device of the class described comprising a miter frame having its back part of greater width than the rest of the frame, adjustable legs connected with the back, a miter blade and saw guide adjustably connected with the miter edge of the frame, a rule slidably and reversibly connected with a part of the frame, a second rule, means for pivotally and reversibly connecting the same with the first rule so that the second rule can act as a compass, said rules having holes therein for receiving a pencil or the like.

In testimony whereof I affix my signature.

LEONIDAS NINDE WALDRON.