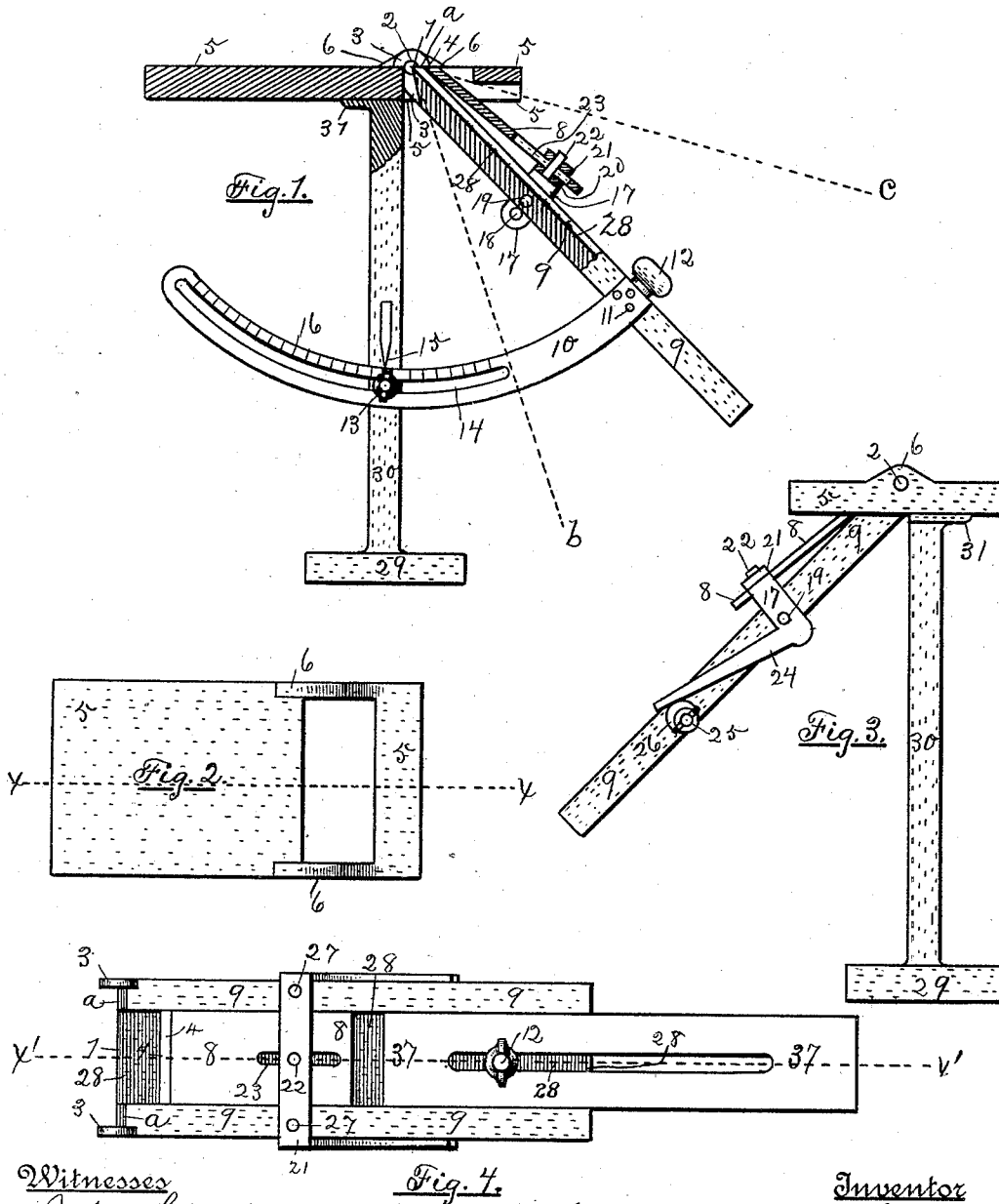


(No Model.)

W. H. F. BLOEBAUM.
PRINTER'S MITER TOOL.

No. 473,689.

Patented Apr. 26, 1892.



Witnesses

John Garlick
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Fig. 4.

Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM H. F. BLOEBAUM, OF CINCINNATI, OHIO.

PRINTER'S MITER-TOOL.

SPECIFICATION forming part of Letters Patent No. 473,689, dated April 23, 1892.

Application filed May 12, 1890. Serial No. 351,404. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. F. BLOEBAUM, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Printers' Miter-Tools; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in printers' miter-tools.

The object of my invention is to produce a printer's miter-tool which shall be simple of construction, convenient to use, durable, and not expensive.

The invention consists, essentially, of a work-table, a hinged rule-holder, adjustable means for supporting and holding the rule-holder at any desired inclination, and suitable means for holding the rule in position for being operated upon.

Figure 1 is a left-side view, partly in section, along the line $x x$, Fig. 2, and $x' x'$, Fig. 4. Fig. 2 is a plan view of the work-table. Fig. 3 is a right-side view of the device with a part of the work-table broken away. Fig. 4 is a plan of the rule-holder and devices connected therewith.

The same numbers and letters refer to the same parts in different figures.

5 is the work-table, 31 30 its support, and 29 the base of the support, which may be made heavy enough to maintain the device in an upright and stationary position, or it may be bolted to a table or other support.

The work-table 5 has an opening through its front end, into which the end of the rule-holder projects. Lugs 3 are formed on the end of the rule-holder, Figs. 1 and 4, and lugs 6 on the sides of the table 5, Figs. 1 and 2, and pins 2 hinge these lugs together. The axis of the pins 2, the edge of the end of the rule-holder 9, and the edge of the rule 7 all coincide in one line 1. This arrangement enables the rule-holder 9 to be rotated through any desired angle about the line 1, and thus enables any desired inclination to be given to the bevel on the end of the rule. The under side of the end of the rule-holder 9 is chamfered, as shown in Fig. 1, so that the holder 9 may have

the greatest possible downward swing and yet have its edge 1 close to the body of the table 5. The angle $b 1 c$ indicates the amount of swing of the rule-holder, the plane through the axis 1 being considered. The holder 9 is held in any desired position by means of the sector-arm 10, which is rigidly attached at 11 to the side of the rule-holder 9 and has a central slot 14, through which a binding-screw or a pin 13 is placed for guiding and clamping the arm 10. The rule-holder 9 (shown in Figs. 1, 3, and 4) is rectangular in outline and has a central rectangular recess 28 in its upper side of the width and depth of a printer's rule. A gage-bar 37, Fig. 4, is adjusted in a position such that a rule placed in the recess 28 and resting against its upper end will come into proper position at the end 1. The gage 37 is held in place within the recess 28 by the binding thumb-screw 12, Figs. 1 and 4. The pins 13 and 25 also have thumb ends and screw-threads.

Metal pieces 17, Fig. 1, are pivoted at 19 to the sides of the rule-holder 9, and have a cross-part 20 21 secured to their ends by screws 27, Fig. 4. A clamping-bar 8 is held in a rectangular slot between the parts 20 and 21, as shown in Figs. 1, 3, and 4, and is retained in place and guided by the pin 22 and a slot 23 in its center. The bar 8 may be clamped between the parts 20 and 21 by adjusting the screws 27, or the part 21 may be made of spring metal and thus hold the bar 8 in any desired position, while allowing it to be moved freely by the hand applied at the lower end. The bar 8 is designed to clamp a rule in place and hold it firmly while being operated upon. Such clamping action is obtained by means of the lever 24, and the eccentric 26, having the pin-bearing 25. The lever 24 is rigidly connected to the piece 17 which is pivoted at 19, and hence when the eccentric is turned into the position shown in Fig. 3, the upper end of the bar 8 will press upon and hold the upper end of the rule firmly in place. The bottom surface of the recess 28 in the rule-holder 9 for the reception of the rule is in a plane which passes through the axis or edge 1, and the ends of the rule-holder at the sides of the recess are beveled on top, as shown in Fig. 4, at a , and the top surface of the table 5 is plain and horizontal.

The operation of mitering is performed by means of a file worked by hand and held and guided upon the top surface of the work-table 5, bearing both in front and back of the opening through its body into which the end of the rule projects, whereby a plain even surface at any desired angle can be formed on the end of the rule. The upper end of the clamping-bar 8 is beveled on top, Figs. 1 and 4, so that it will not interfere with filing while having its end bear close to the end of the rule. The sector 10 is graduated, as indicated by the divisions 16, and an index 15 is fastened on the side of the frame part 30, whereby any desired angle may be formed at the axis 1 accurately, and whereby adjustments for different angles may be readily made.

The work-table 5 may be connected to the top 29 30 in any suitable manner, as by bolts through the flange 31. The table 5 itself is to be made of "case-hardened" steel, and the top surface made perfectly plain and even, so that the file may be guided in a true plane, and not abrade or injure the guiding-surface of the table. The parts 9, 10, 17, 20, 21, 24, and 26, may be made of cast or malleable iron. The parts 8 and 37 may be made of brass.

I claim—

1. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end and two pivotal points, one at each side of the opening, a rule-holder having one end pivoted at its upper end to the pivotal point of the table and so as to turn about an axis extending across the opening in the table and coincident with the upper surface of the table, substantially as set forth.

2. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end and having two perforated lugs on its upper surface, one at each side of the opening, a rule-holder having two perforated lugs or hinges at its upper end, and a beveled upper end edge coincident with the axis of its hinges, said hinges connecting the rule-holder to the table along an axis coincident with the upper surface of the table, substantially as set forth.

3. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end, a rule-holder having a rectangular outline and hinges connecting the holder to the table, a recess or formation of the holder of substantially the width and depth of the rule for receiving and holding a rule, said recess having its bottom surface in the plane of the axis of the hinges, and suitable means for retaining a rule in the said formation, substantially as set forth.

4. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end, a rule-holder

hinged to the table with the axis of the hinges and its upper end coincident, a formation for holding a rule, a gage for adjusting and setting the rule, and suitable means for retaining the rule in position when operated upon, substantially as set forth.

5. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end, a rule-holder hinged at its end to the table, suitable provision for retaining the rule in position on the holder, and a clamping device arranged to hold the rule firmly in position when operated upon, substantially as set forth.

6. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end, a rule-holder hinged to the table, a recess in the body of the holder of the width and depth of a rule, a gage for adjusting and setting a rule, a clamp engaging and holding the rule, and an eccentric for tightening the clamp, substantially as set forth.

7. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end, a rule-holder having suitable means for receiving and holding a rule and hinged to the table at its upper end, and an arm connecting the rule-holder with a part of stationary framing as a means of retaining the holder in a desired position, substantially as set forth.

8. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end, a rule-holder having suitable means for receiving and holding a rule and hinged to the table at its upper end, and a sector-arm connected to the holder and arranged to slide in engagement with a part of stationary framing and having adjusting and securing means for adjusting the inclination of the holder and securing it in a desired position to the said frame part, substantially as set forth.

9. In a miter-tool, the combination of a main table having an even flat top surface and an opening in one end, a rule-holder having suitable means for receiving and holding a rule and hinged to the table at its upper end, and a sector-arm connected to the holder and having a central slot arranged to slide in engagement with a part of the stationary framing, and having a binding-screw as a means for adjusting and securing the holder in any desired position, substantially as set forth.

In testimony whereof I now affix my signature in presence of two witnesses.

WILLIAM H. F. BLOEBAUM.

Witnesses:

EDWARD P. ROBBINS,
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