G. H. Babcock,

Mitering Printers' Rules.

No. 31,292. Patented Feb. 5, 1861.

Fig. 1.

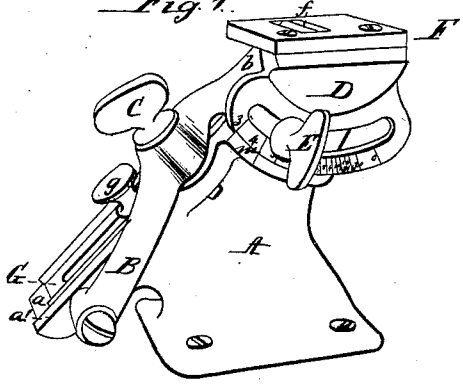
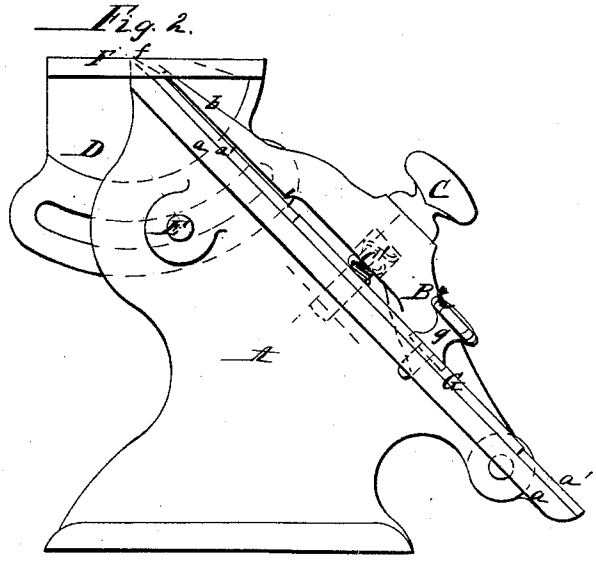


Fig. 2.



Witnesses:

Wm. Thomas D. Stetson

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Inventor:

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UNITED STATES PATENT OFFICE.

G. H. BABCOCK, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR MITERING PRINTERS' RULES.

Specification forming part of Letters Patent No. **31,292**, dated February 5, 1861.

To all whom it may concern:

Be it known that I, G. H. BABCOCK, of the city, county, and State of New York, have invented an Improved Apparatus for Mitering Printers' Rules; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the machine, and Fig. 2 is a side elevation.

Similar letters of reference indicate like parts in all the figures.

The nature of my invention consists in combining an adjustable hardened-steel templet for guiding the file used in beveling the rule, with a vise for holding the rule while undergoing the operation, whereby I cause the rule to be mitered to a perfect joint at any angle desired, and render the machine very simple, compact, and convenient.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings.

Upon a casting, A, which is to be screwed to a bench or other proper support, a bed, *a*, is planed at an angle of about forty-five degrees with the base, having a raised edge or guide, *a'*, for the purpose of holding the rule square and true. The bed *a* forms one jaw of the vise.

Near the bottom of the bed *a*, upon one side, is hinged the movable jaw B, which is operated by a screw, C, and a spring, C', placed in any proper position. The upper end, *b*, of the jaw B is thin and flat, and reaches nearly to the top of the bed *a*, the two forming a vise for holding the rule rigidly while being mitered, whereby a true bevel is secured. Were not the rule thus firmly held it would be liable to move during the operation, and thus destroy the accuracy of the work.

Upon the side of the casting A is placed an adjustable segment, D, firmly held by being fitted into a recess and by the screw E, but so mounted that it may be adjusted upon A by loosening the screw E. To D is rigidly fixed a flat plate of hardened steel, F, extending over the vise *a* B, but with a slot, *f*, immediately over the jaws thereof. This plate or templet F may be adjusted to any required angle with the bed *a* by means of the segment D and screw E. The face of D is graduated to the various angles required for the regular polygons, each of which is designated by the numeral expressing the number of sides in the polygon. This arrangement saves all calculating of angles; but D may be divided into degrees, if preferred. A slotted gage, G, held in place by a screw, *g*, is attached to the bed *a* for use when several short rules are to be mitered to the same length; but for longer rules this is removed.

The operation is as follows: The figure designating the angle required is brought in conjunction with a mark, *m*, on the casting A, and the segment D clamped firm by the screw E. The rule to be mitered is then placed in the vise *a b* with its edge in contact with the guide *a'*, and firmly clamped by turning screw C, with its end projecting through the slot *f* in the templet F. A file is now applied to the end of the rule parallel to F until its further action is arrested by the templet, which is too hard to be acted upon by the file, when the rule is beveled to the angle required.

I am aware that hardened-steel templets for guiding a file are not new, and one placed permanently at an angle of forty-five degrees has been used for mitering printers' rules at that angle; but I am not aware that one has been made adjustable or used in combination with a vise, as above described; and

What I therefore claim as my invention, and desire to secure by Letters Patent, is—

The combination of an adjustable steel templet with a vise or their equivalents, constructed and operating substantially in the manner and for the purpose above described.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

G. H. BABCOCK.

Witnesses:

THOMAS D. STETSON,

WM. B. SMITH.