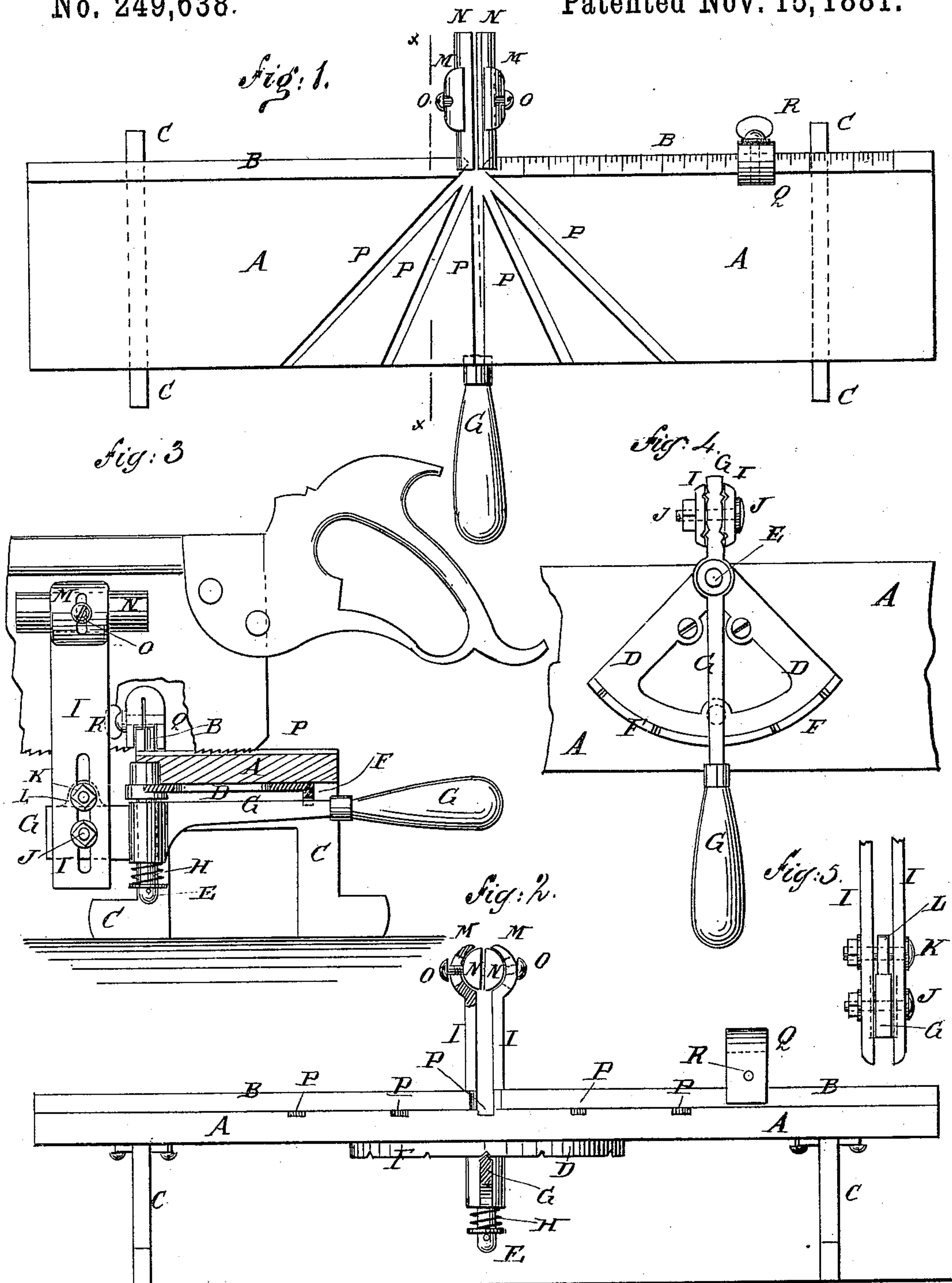


(No Model.)

T. E. KING.
MITERING MACHINE.

No. 249,638.

Patented Nov. 15, 1881.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THEODORE E. KING, OF WESTPORT, CONNECTICUT.

MITERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 249,638, dated November 15, 1881.
Application filed September 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, THEODORE E. KING, of Westport, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Mitering-Machines, of which the following is a full, clear, and exact specification.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improvement. Fig. 2 is a front elevation of the same, parts being broken away. Fig. 3 is a sectional side elevation of the same, taken through the line *x x*, Fig. 1. Fig. 4 is a bottom view of the middle part of the same. Fig. 5 is a rear view of the lower part of the guide-standards.

The object of this invention is to facilitate the setting of mitering-machines and their adjustment to different sizes of saws.

The invention consists of a pair of upright jaws for guiding the saw, which jaws are mounted on the extremity of a pivoted lever that is attached to the under side of a suitable bench or support, the construction being such that when the lever is moved laterally by the operator the guide-jaws and saw will be correspondingly moved, whereby the angle of the miter may be quickly changed, as desired.

The invention further consists in the combination, with the pivoted lever, table, and guide-jaws, of a lock-plate for holding the lever and jaws in the desired position; also, in the combination, with the adjusting-lever having V-shaped cross-ribs upon its rear end, of the guide-holding bars having slots and V-shaped grooves in their lower ends, and the fastening-bolts, whereby the guides can be adjusted to the size and thickness of the saw; and, also, in the combination, with the guide-holding bars having concaved and slotted jaws at their upper ends, of the semi-cylindrical guides and the fastening-screws, whereby the saw can be readily adjusted in a vertical position and will be accurately guided; also, in the lock-plate constructed with a curved flange provided with notches to engage with and hold the pivoted lever; also, in the combination, with the guide-carrying lever and its lock-plate, of the pivot whereby the guides can be quickly and accurately adjusted; also, in the combination,

with the pivot and the guide-carrying lever, of the spring for holding the said lever against the notched flange of its lock-plate; and, also, in the guide-carrying pivoted lever made with a knife-edge to adapt it to engage with the notched flange of its lock-plate, as will be hereinafter fully described.

A represents the platform or table of the machine, which has an upwardly-projecting guide flange or ledge, B, for the timber formed along its rear edge, and is attached to a suitable frame or support, C.

To the lower side of the middle part of the table A is attached a quadrantal plate, D, in such a position that the center of the circle of which the said plate is a part will be directly beneath the inner edge of the flange B.

To the angle of the plate D is attached, or upon it is formed, a pivot, E, which is thus in the center of the circle of which the said plate is a part. Along the curved edge of the plate D is formed a downwardly-projecting flange, F, in which are formed a number of radial notches to receive and hold the knife-edge of the lever G, the said notches being formed in such positions that the lever G, when resting in the said notches, will be at right angles with the inner side of the flange B, at an angle of forty-five degrees with the said flange, or at any other angle at which it may be necessary to cut the work.

The lever G has a hole formed in it at a little distance from its rear end, to receive and work upon the pivot E, the said lever being made so deep that it will work upon the said pivot true and steady. Upon the lower end of the pivot E is placed a spiral spring, H, the upper end of which rests against the lower edge of the lever G, and its lower end rests upon a washer secured to the end of the said pivot by a pin, key, or other suitable means. The rear end of the lever G projects beyond the pivot E, and to its opposite sides are secured the lower ends of two upright bars, I, by a bolt, J, passing through a hole in the lever G and through vertical slots in the upright bars I, so that the bars I can be moved up and down as the size of the saw may require. The bars I have V-shaped grooves formed in the inner surfaces of their lower ends, to receive V-shaped ribs formed upon the sides of the rear end of the lever G, so that the bars

I will always be kept vertical. The vertical position of the bars I is further secured by a bolt, K, which passes through the slots in the upright bars I, and through a lug, L, upon the upper edge of the lever G. The lug L is made thinner than the lever G, so that the upper parts of the bars I can be drawn toward each other by tightening the said bolt K. The bars I are made elastic, so that they will spring apart when the bolt K is loosened, and so that they will press the saw-guides toward each other with a yielding pressure. Upon the upper ends of the bars I are formed jaws M, to receive and fit upon the guides N, which are made semi-cylindrical in form and of such a length as will give a stable bearing to the saw.

The guides N are secured to the jaws M by screws O, which pass through vertical slots in the jaws M and screw into the guides N. The slots in the jaws M allow the guides N to be adjusted to hold the saw vertical, or at right angles with the plane of the table A, so as to remedy any irregularity in the construction of any of the various parts of the machine.

If desired, grooves P can be formed in the surface of the table A, radiating from the axis of the lever G and directly over the notches in the flange F. The grooves P allow the saw to pass entirely through the work to be mitered or sawed, so as to make a clean cut.

Upon the upper edge of the flange B is formed a scale of division-marks representing

inches and fractions of an inch, for convenience in adjusting the gage Q to regulate the distance of the cut from the end of the timber. The gage Q is formed of a small block slotted from its lower end to receive and fit upon the flange B, and secured in place by a set-screw, R, passing through the arms of the said gage and clamping them against the sides of the said flange B.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the apertured lever G, having V-shaped ribs on each side of its short arm, and an apertured lug, L, of the vertically-slotted elastic upright bars I, having V-shaped grooves on the inside, and the bolts J K, whereby the saw may be moved up and down, as described.

2. In a mitering-machine, the combination, with the holding-bars I, having concaved and slotted jaws M at their upper ends, of the semi-cylindrical guides N and the holding-screws O, substantially as herein shown and described, whereby the saw can be readily adjusted in a vertical position and will be accurately guided, as set forth.

THEODORE ELMER KING.

Witnesses:

CARRIE E. NASH,
JESSIE KEELER.