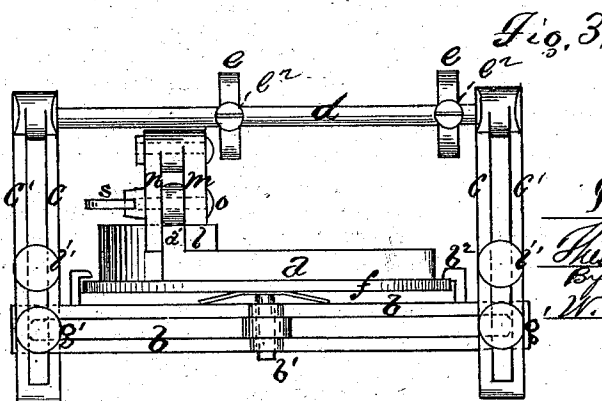
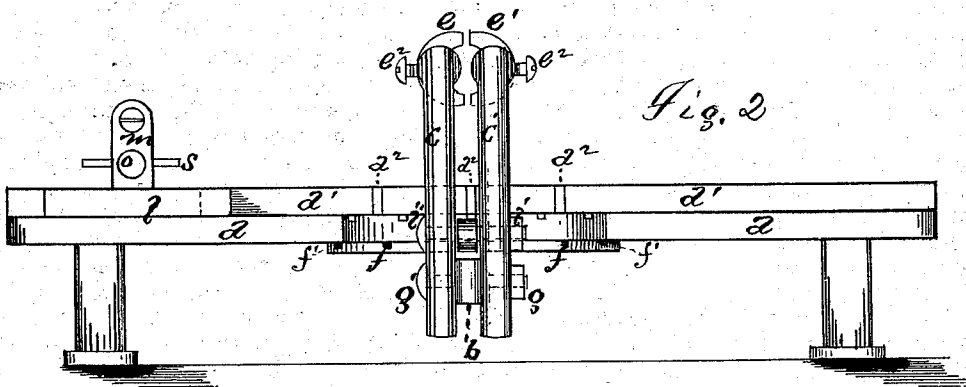
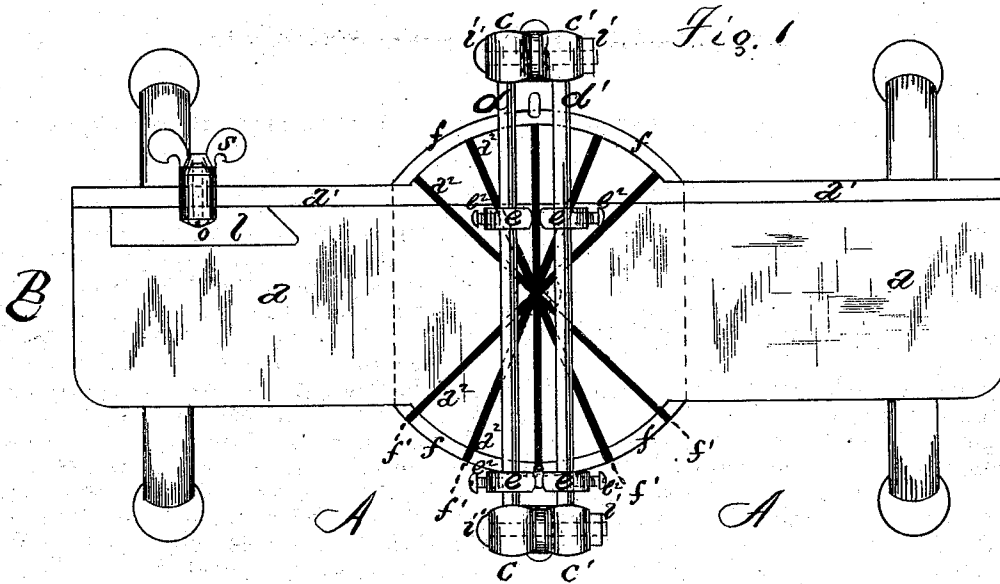


T. E. KING.
Mitering Machines.

No. 154,493.

Patented Aug. 25, 1874.



Witnesses
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THEODORE E. KING, OF ROCKVILLE, CONNECTICUT.

IMPROVEMENT IN MITERING-MACHINES.

Specification forming part of Letters Patent No. **154,493**, dated August 25, 1874; application filed October 6, 1873.

To all whom it may concern:

Be it known that I, THEODORE E. KING, of Rockville, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Mitring-Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of a machine embodying my said improvements. Fig. 2 is a side elevation of the same from the side A. Fig. 3 is an end elevation of the same from the end B, with the legs of the machine left off.

The nature of my invention consists in the combination and arrangement, in a miter-machine, of the devices employed, as will be hereinafter more fully set forth.

The letter *a* indicates the table of the machine, and *a'* the raised flange at one side, against which the piece of wood to be mitred is rested. The grooves *a''*, running across the table and through the flange *a'*, are saw-grooves, at different angles. The swing-frame which guides the saw is composed of the pivot-rod *b*, swinging on the pivot-pin *b'* under the table, the duplicate uprights *c c'* at each end of the pivot-rod, the gage-button rods *d d'*, connecting the tops of the uprights, and the gage-buttons *e e' e' e'* on the rods *d d'*. Underneath the table is fixed the index-plate *f*, having notches *f'*, corresponding to the different saw-grooves *a''*, and the pivot-rod *b* carries a right-angled index-finger, *b''*, with a knife-edge, which sets down into the index-notches *f'* and holds the swing-frame locked in that position. The whole weight of the swing-frame rests, by means of the index-finger *b''*, upon the index-plate *f*, so that when the index-finger is swung over one of the notches *f'*, the weight of the frame causes the index-finger to settle firmly in the notch. The tops of the uprights *c c'* are made adjustable toward and from each other, to accommodate saw-blades of different thicknesses, as follows: The outer ends of the pivot-rod *b* are made slightly wedge-shaped, thinnest at the bottom, and the nut and bolt *g g'* fasten the two uprights to each end of the pivot-rod. By screwing up the nut *g* tightly, the tops of the uprights are moved away from

each other. By screwing up the nut *i* on the bolt *i'*, the tops of the uprights are moved toward each other, and it is obvious that, by proper manipulation of both the nuts *g* and *i*, the tops of the uprights can be adjusted toward or from each other at pleasure. On the gage-button rods *d d'* are the opposed gage-buttons *e e' e' e'*, adjustable longitudinally on the rods, and also rotarily, for saw-blades of different thicknesses, and are secured in position by the screws *e''*. These buttons are opposed to each other in pairs, and to be so adjusted that their faces are parallel and perpendicular, so as to hold the saw from side motion, and to hold it vertically. A saw with a strengthening-rib at the back is usually used for mitring, and the uprights *c c'* are so adjusted in height that this rib rests on the top of the gage-buttons when a miter has been completed, thus preventing the saw from cutting into the table. The uprights *c c'* are open through their longitudinal centers, as shown in Fig. 3, through which openings run the bolts *g' i'*, and these openings in the uprights are for the purpose of permitting the vertical adjustment of the uprights and the gage-button rods, and, consequently, of the gage-buttons. On the flange *a'* slides a gage for the end of the piece to be mitred, composed of the body-piece *l*, the two legs *m n*, united at the top, the bolt *o*, running through the two legs, and the thumb-nut *s*, which, being screwed up, causes the body-piece *l* and the leg *n* so to embrace the flange *a'* as to hold the gage securely in place. One end of the body-piece is squared off, so that a square end can be rested against it, and the other is obliqued off at a miter bevel of forty-five degrees, so that a mitred end can be rested against it and securely held.

I claim as my invention—

1. The combination of the index-plate *f*, the pivot-pin *b'*, the pivot-bar *b*, bearing the index-finger *b''*, impinging on the index-plate, and also bearing a saw-guiding frame above, all constructed, arranged, and operating substantially as described, and for the purpose set forth.

2. The combination of the pivot-bar *b*,

wedge-shaped at the ends, the uprights *c c'*, open through the center, the bolts and nuts *g g' i i'*, the rods *d d'*, and the adjustable buttons *e e'*, all constructed, arranged, and designed for operation and use substantially as shown and described.

3. The sliding gage, composed of the body-piece *l*, with one end beveled, as described,

the legs *m-n*, bolt *o*, and thumb-nut *s*, all constructed, arranged, and operating substantially as described.

THEODORE E. KING.

Witnesses:

WM. E. SIMONDS,
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