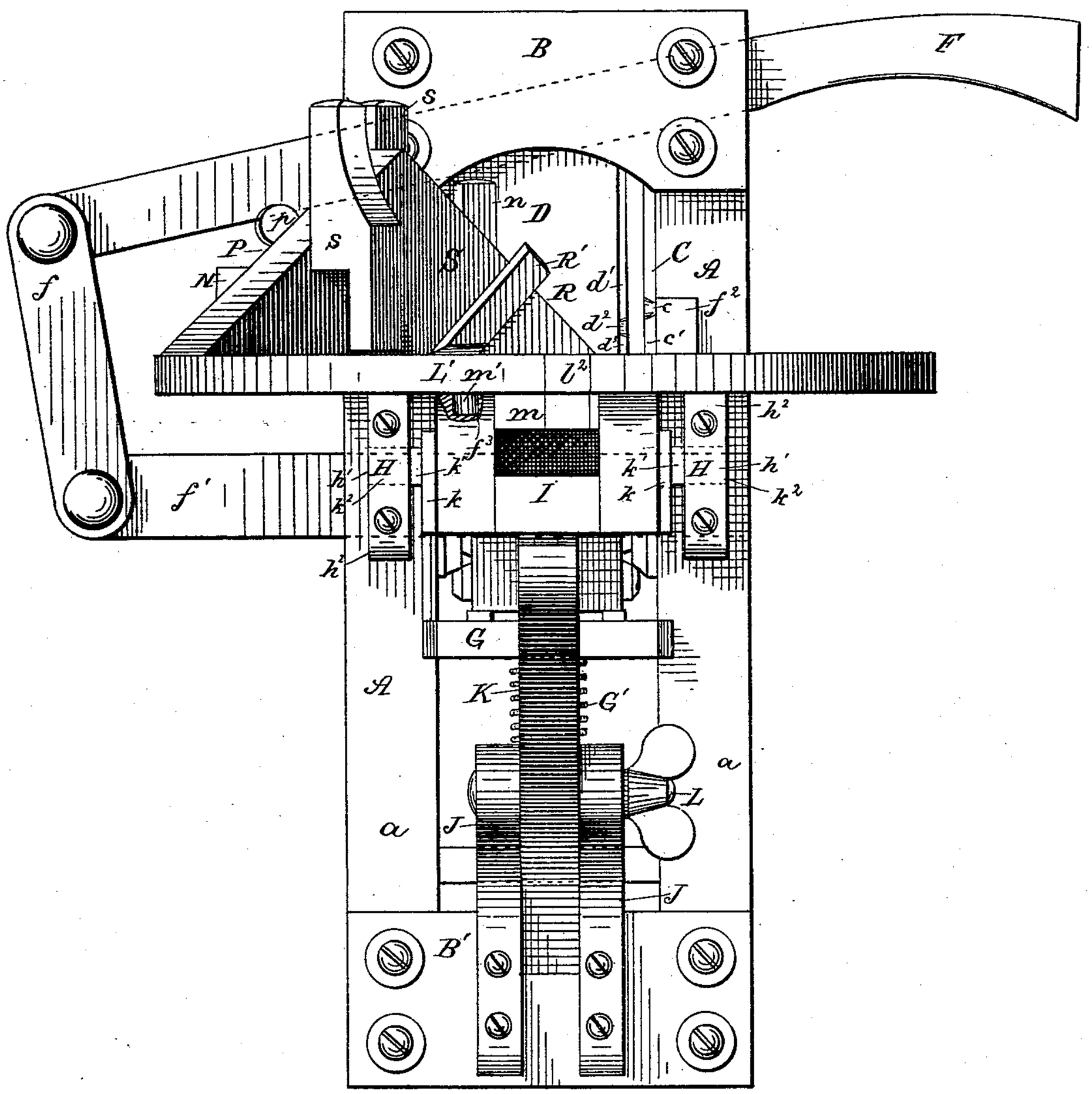
(No Model.) 3 Sheets—Sheet 1.

# N. J. KINCH.
## Miter Box.

**No. 243,577.** **Patented June 28, 1881.**

*Fig. 1.*




WITNESSES

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Philip C. Masi.

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his ATTORNEYS

(No Model.)

3 Sheets—Sheet 2.

# N. J. KINCH.
## Miter Box.

No. 243,577. Patented June 28, 1881.

Fig. 2.

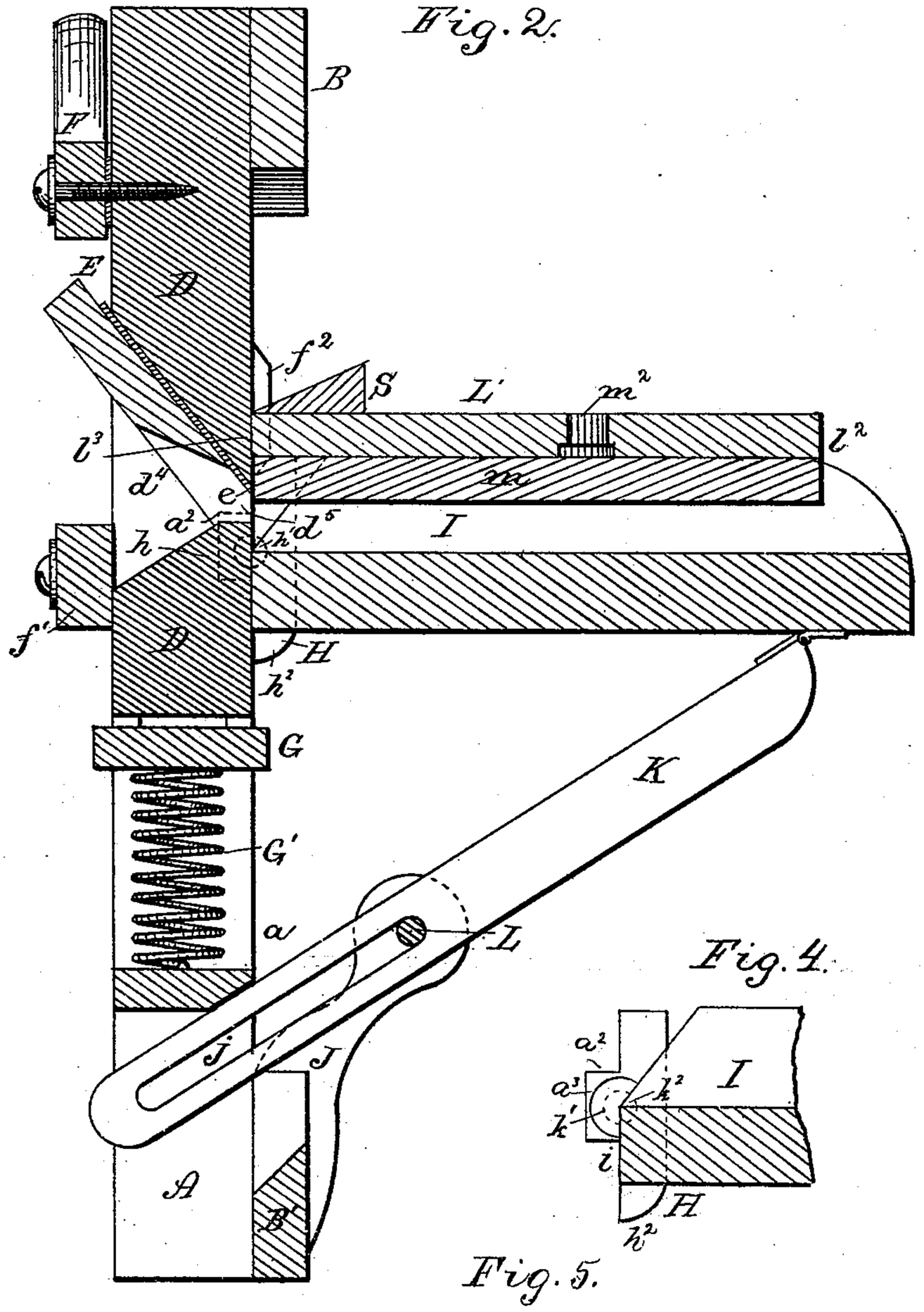
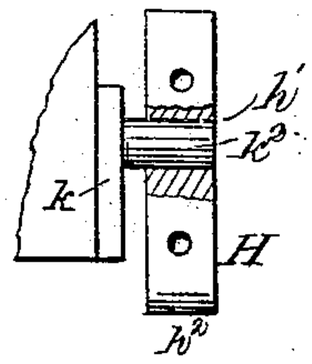



Fig. 4.




Fig. 5.




WITNESSES

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(No Model.) 3 Sheets—Sheet 3.

# N. J. KINCH.
## Miter Box.

No. 243,577. Patented June 28, 1881.

*Fig. 3.*

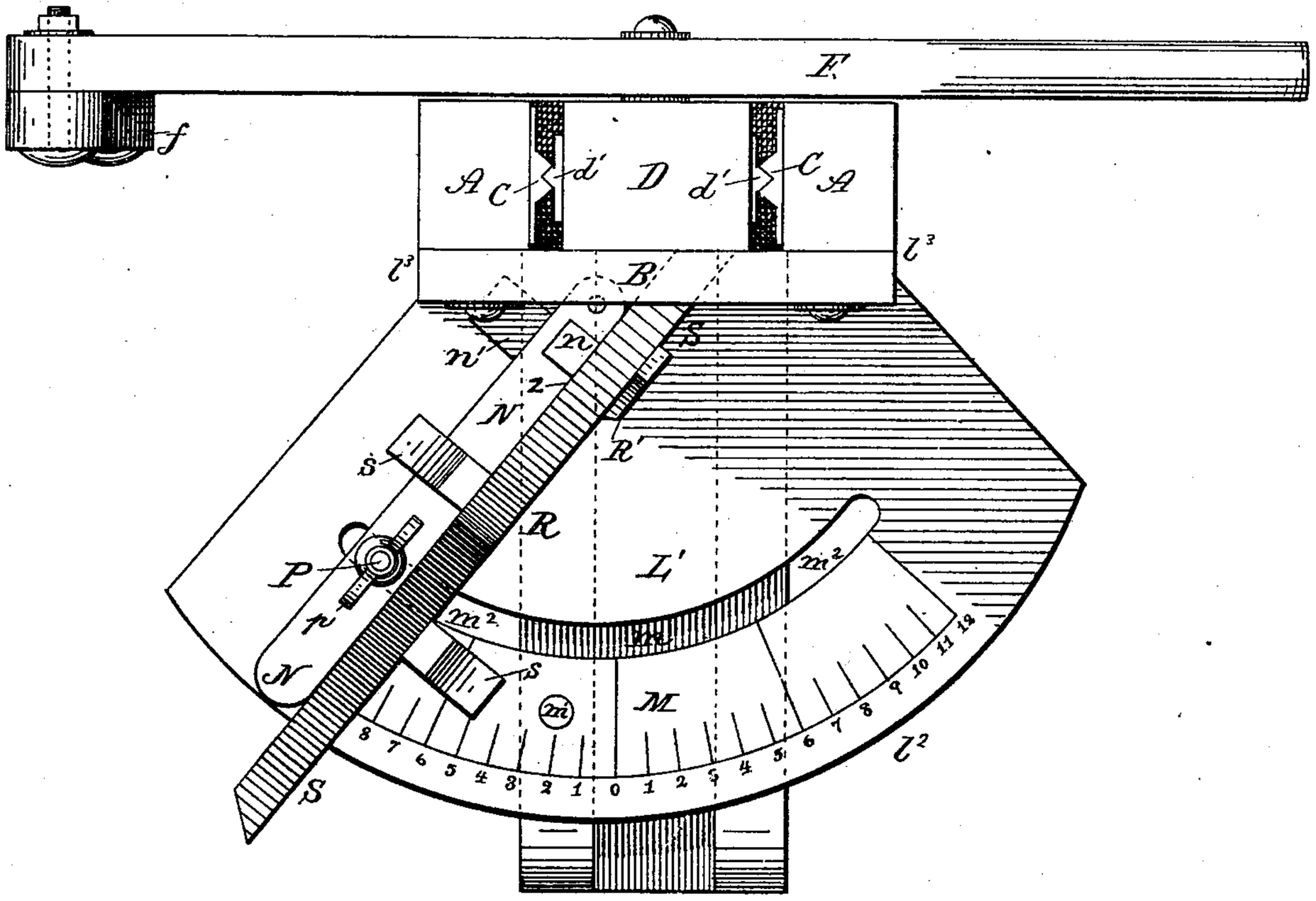
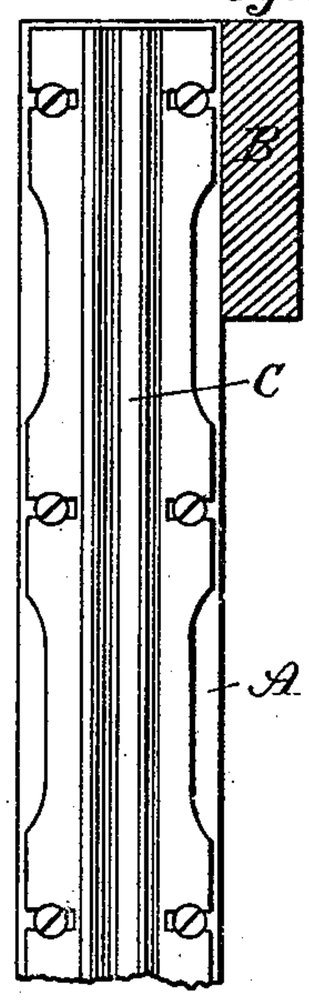



*Fig. 6.*




WITNESSES

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# UNITED STATES PATENT OFFICE.

NATHAN J. KINCH, OF WALTON, NEW YORK.

## MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 243,577, dated June 28, 1881.

Application filed March 7, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, NATHAN J. KINCH, a citizen of the United States, resident at Walton, in the county of Delaware and State of New York, have invented certain new and useful Improvements in Miter-Boxes; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a representation of a side view. Fig. 2 is a vertical section. Fig. 3 is a top view, and Figs. 4 and 5 are detail views. Fig. 6 is a detail view of one of the adjustable ways.

This invention relates to improvements in miter-machines.

The invention consists in the combination and arrangement of parts whereby a miter can be cut at any angle, as hereinafter described, and particularly pointed out in the claims.

In the annexed drawings, A A represent two standards, connected at the top and bottom on their faces *a a* by bars B B′. On the inside these standards are provided from the top, some distance down, with guideways C C, held by screws *c* in open slots *c′*.

D is the knife-stock, having on its sides the guide-ribs *d′ d′*, suited to ways C C, held by screws $d^2$ in open slots $d^3$. In this stock is the opening $d^4$, in which is placed the knife E, its edge *e* coming out at aperture $d^5$.

F is a lever for operating the knife, pivoted to the stock and hinged, by a link, *f*, to a rod, *f′*, attached to the back of the standards.

G is a buffer-block, and G′ its spring to receive the shock of the downward stroke of the stock.

About mid-length on their faces the standards are provided with recesses $a^2$ $a^2$, in which extend the tongues *h* of plates H. These tongues have perforations *h′*, and are at the outer edges of the recesses, the plates being held to the standards by bolts passing through their flanges $h^2$.

I is a box, having secured to its inner end, *i*, on the outer edges of its sides, the plates *k*, from which project on a line the curved ends *k′*, having the studs or trunnions $k^2$ extending at right angles outwardly. These curved ends are placed in a reduced inner portion, $a^3$, of recesses $a^2$, and the trunnions $k^2$ are inserted in the perforation *h′*. By this means the box I is hinged to the standards A A. The forward or inner ends of the sides of the box are beveled off so that it can be lifted up.

Hinged to the under side of the outer end of the box I is the brace K, having at its lower end the slot *j*, transversely cut.

J J are two jaws rising up from the lower bar, B′, between which passes the lower end of brace K, being held adjustably between by bolt L, passing through the jaws and slot *j*, by the compression of the jaws against the bar K, which is effected by screwing up the nut on the bolt. The jaws J J yield sufficiently under compression to bind the bar between them. The box I can thus be held at any angle, and stuff placed therein can be presented to the knife E, so as to receive any desired bevel.

Just above the flanges $h^2$ lugs $f^2$ are secured to the standards, and a hole, $f^3$, is made in one edge of the box I. These are to hold in place a table, L′. This table is sector-shaped, having a curve, $l^2$, and a straight edge, $l^3$. Attached to its bottom is the radial strip *m*, having the width of the interior of box I. To one side of this strip is the pin *m′*, having a position to enter hole $f^3$. In this plate is formed the curved slot $m^2$, and back of it, on top, is the dial M. Hinged to the inner end of this table is the guide N, having the stud *n* rising from it at its inner end, flush with its face *z*, and another, *n′*, from the back at the bottom. This guide extends back to the dial, and the set-screw P passes through slot $m^2$, having its head below, up through said guide, where it is held by a thumb-nut, *p*, on its threaded end. In using this table the box I is leveled and the table put in place, its narrow front end coming between the flanges $h^2$ and lugs *f′*, strip *m* fitting in the said box, and stud or pin *m′* resting in the hole $f^2$. The guide N is set to the desired angle by the dial. The work is put on the table by the guide and fed to the knife.

R is an attachment to be used in particular kinds of work, as forming the miter on the corners of carriage-seats. This is a triangular plate, S, having secured to each face a catch, *s*, having a width equal to that of guide N.

Attached near one end of plate S is a strip, R′, projecting beyond the edge of the plate.

The guide N is made fast at one of the numbers on the table, and the attachment is placed with one of its catches over the guide. The stuff is then fed down the inclined edge of the plate S to the knife E.

With the device described, its various parts and arrangement, a cut at any angle can be made, and as the stock wears it can be moved up to the work by adjusting the screws in the open slots of the guide ribs or ways.

What I claim is—

1. In a miter-machine, the combination of table L′, sector-shaped, having curved slot $m^2$ and dial M, strip $m$, pin $m'$, guide N, and screw P, substantially as described.

2. In a miter-machine, the triangular-shaped plate S, having catches $s$ $s$ on opposite sides thereof, in combination with the table L′, provided with the adjustable guide N, substantially as and for the purposes set forth.

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

NATHAN J. KINCH.

Witnesses:

C. H. PIERSON,

W. S. COLE.