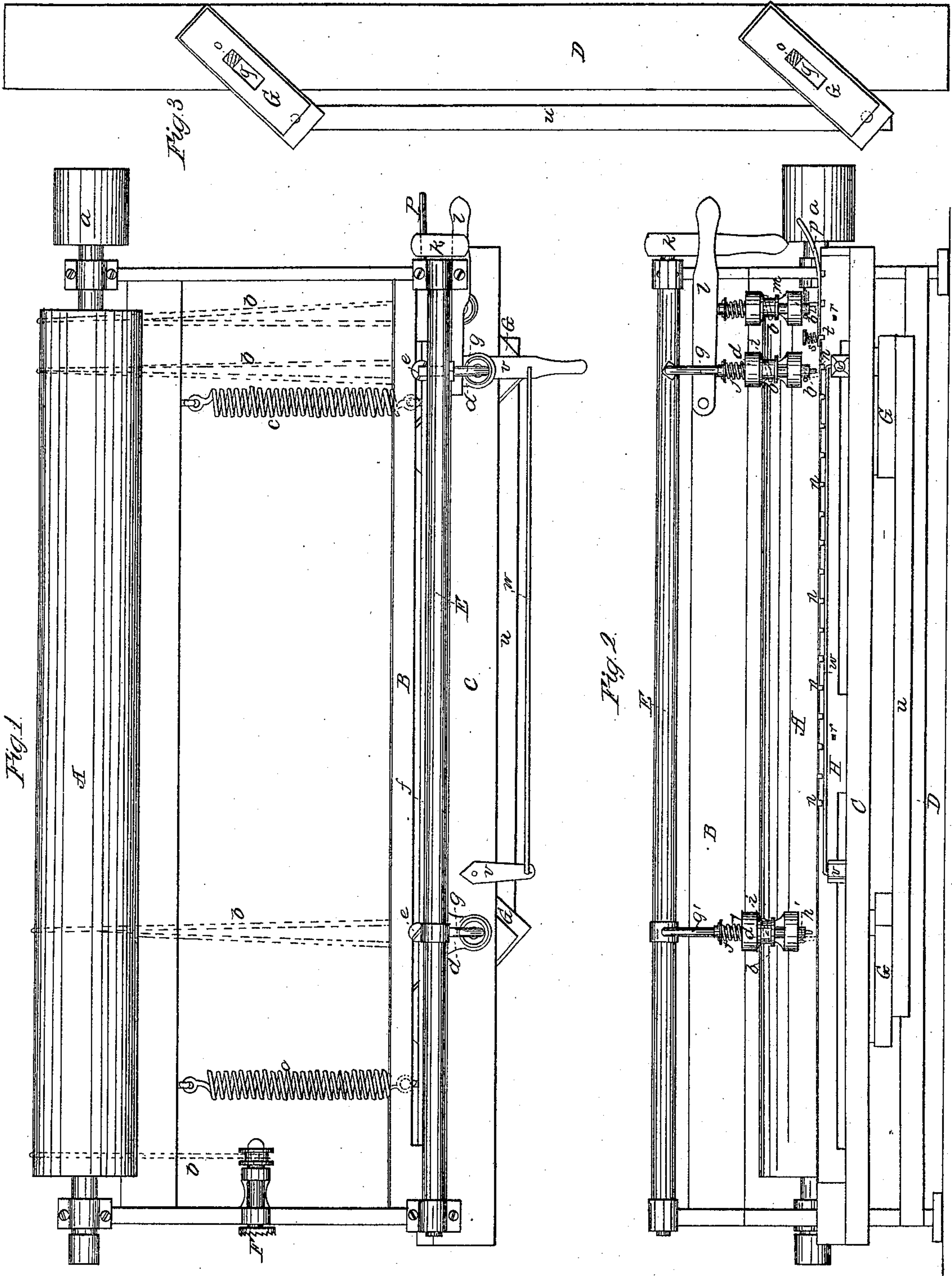


D. M. Cummings,
Mortising Blinds.
No. 10,403. *Patented Jan. 10, 1854.*



UNITED STATES PATENT OFFICE.

D. M. CUMMINGS, OF NORTH ENFIELD, NEW HAMPSHIRE.

MACHINERY FOR MORTISING FRAMES OF WINDOW-BLINDS.

Specification of Letters Patent No. 10,403, dated January 10, 1854.

To all whom it may concern:

Be it known that I, D. M. CUMMINGS, of North Enfield, in the county of Grafton and State of New Hampshire, have invented a new and Improved Machine for Forming Mortises in the Stiles of Window-Blinds; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being a plan of the machine, Fig. 2 a front elevation thereof, and Fig. 3 a view of a part detached.

Like letters designate corresponding parts in all the figures.

The stile to be mortised is placed on a movable platform C; and is attached to a gage H, being pressed against projecting points *r, r*, on the side of said gage by two cam-levers *v, v*, kept parallel and operated simultaneously by means of a connecting rod *w*. Said gage slides endwise, and is provided with a series of notches *n, n*, &c., in its upper edge, at uniform distances apart equal to the required distances of the slats of the blinds from one another; and a projection *t*, on the lower side of a vibratory lever *p*, fits into any one of said notches, and thus prevents the gage from moving. In operating the gage, the said projection *t*, is raised from its notch by pressing down the opposite end of its lever *p*, and the gage is moved along another notch, whereupon a spring *s*, pressing down upon the lever *p*, forces the projection *t*, into the notch then brought under it.

I cut the mortises by means of a gouge-bit *h*, or a series of such bits, arranged in the following manner: The bit is caused to revolve in an adjustable bearing-block *d*, attached to a bar B, extending across the frame of the machine. A band *b*, passes around the pulley *i*, on the shaft of the bit, and around the driving shaft A. Said shaft of the bit is made to move endwise sufficient to bore to the requisite depth of the mortise, and to allow it to be raised above the stile, when not boring, by means of a spring *j*. When the bit is to be put in operation, its shaft is pressed down to the stile by means of a curved pin *g*, attached to a rocking-shaft E, which is caused to vibrate for that purpose by a handle *k*. A single bit may be used for forming the mortises successively; or a series of bits equal in number to the number of mortises, may be employed, in

order to form all the mortises simultaneously; or any intermediate number may be used, and placed at suitable and uniform distances apart, so as to cut any convenient number of mortises at one time. I usually make a slot *f*, in the bar B, extending nearly its whole length, into which the bearing-blocks *d, d'*, &c., of the bit-shaft, are inserted, and secured by screws *e, e*, &c., so as to have them adjustable or removable at pleasure. In that case, the curved pins *g, g'*, &c., should be correspondingly adjustable upon the rocking-shaft E.

While the platform C, remains stationary, only the ends of the mortises are formed by the bits. In order to give the requisite length and obliquity to said mortises, I cause the platform C, to move in slots *q, q*, formed in ways G, G, which vibrate on pivots ascending from the sill D, of the frame, in positions directly beneath the slot-guides *o, o*, of the platform. The ways are kept parallel and vibrated simultaneously by means of a connecting rod *u*. The slots are of the proper length to allow the platform C, to slide a sufficient distance to form the mortise of the desired length; and by turning the ways G, G, on their pivots, their slots may be adjusted to any angle that it is desired to cut the mortises at. Springs *c, c*, or their equivalents, serve to draw the platform C, back to the rear ends of the slots. The bits *h, h'*, &c., are first pressed down, to form one end of their respective mortises; then, the platform C, is gradually drawn forward to the front ends of the slots, the bits being kept down and revolving in the meantime, by which operation the mortises are finished. The platform is then allowed to be forced back by its springs *c, c*, and the bits to be raised above the stile by their springs *j, j*, &c., in order to allow the stile to be advanced another notch *n*, of the gage H; or to insert another stile for mortising, if a whole stile is mortised at one operation.

In order to make the holes for rolling-shades, I make use of a center-bit *m*, operated and arranged in the same manner as the gouge-bits for mortising. It is pressed down by a separate lever *l*, because it is never used simultaneously with the mortising bits. When it is desired to bore the lower half of the stiles for rolling-shades, and mortise the upper half for fixed shades, all the mortising bits are removed except one, *h'*, which is adjusted at a proper dis-

tance from the center-bit. A hole is bored with the center-bit, and then a mortise is cut with the gouge-bit *h'*, at each movement of the gage H, till the whole is completed.

5 A revolving tenon-cutter F, may be added to the machine to cut the pivot-tenons on the rolling-shades. All the bits &c. are turned by bands *b*, *b*, &c., passing around their pulleys *i*, *i*, &c., and the driving shaft
10 A. Loose pulleys may be provided for ungearing the bits, when not to be employed.

Having thus fully described my improved machine for forming mortises in the stiles of window blinds, what I claim as my invention and desire to secure by Letters Patent, is—

15 The movable platform C, spacing gage H, and oblique ways G, G, when combined and arranged with each other and with the ad-

justable gouge bits *h*, *h'* &c., (or their equivalents) in such a manner that the mortises formed will be exactly equidistant from each other, and also in such a manner that any desired degree of inclination may be given to the said mortises substantially as herein
25 set forth; disclaiming the use of the said movable platform C, save when employed in combination with the said spacing gage and oblique ways as above set forth.

The above specification of my improved
30 manner of forming mortises in the sides of window blinds, signed this 31st day of March 1853.

D. M. CUMMINGS.

Witnesses:

WILLIAM HUSE,
BENJA. S. FLETCHER.