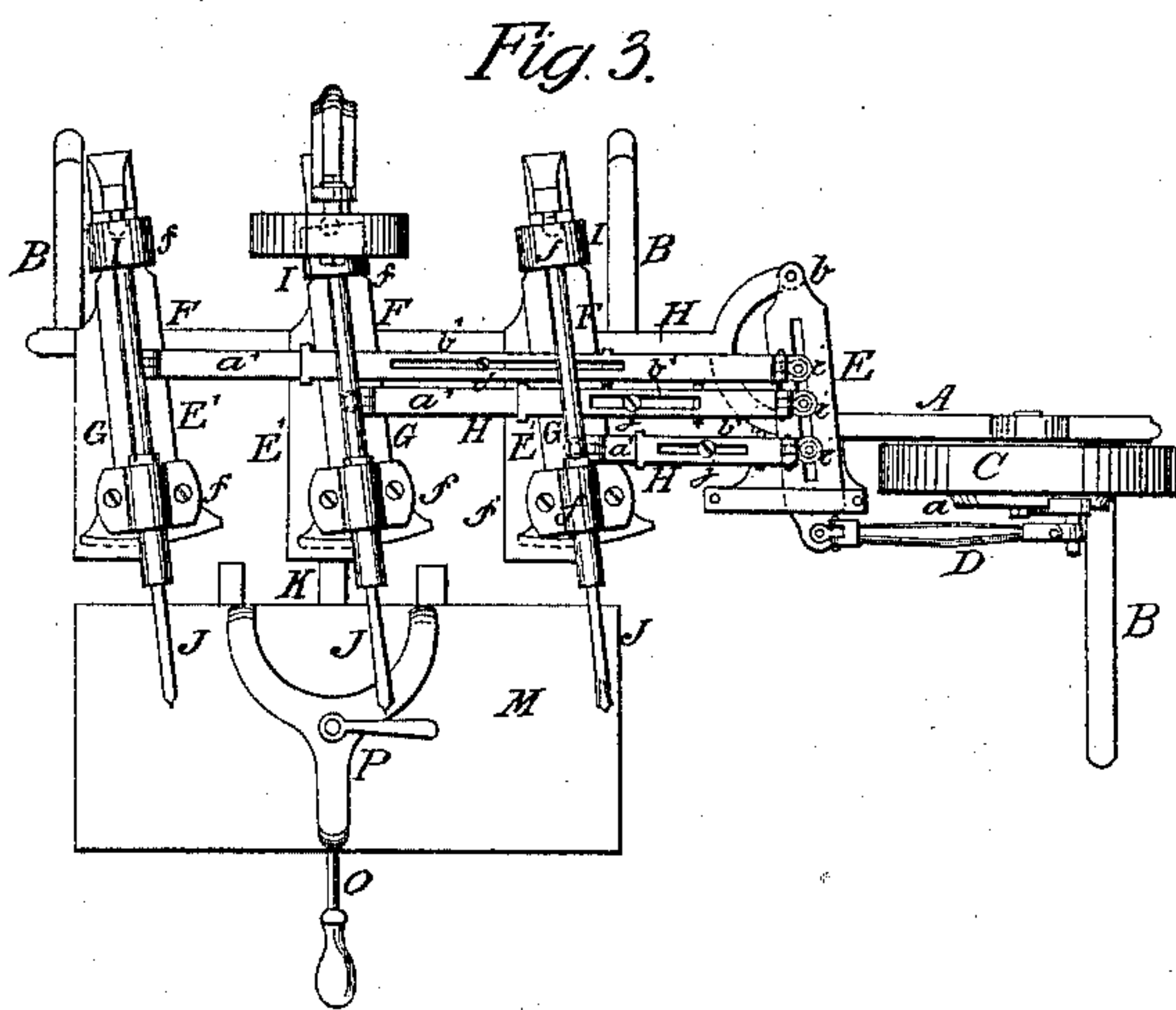
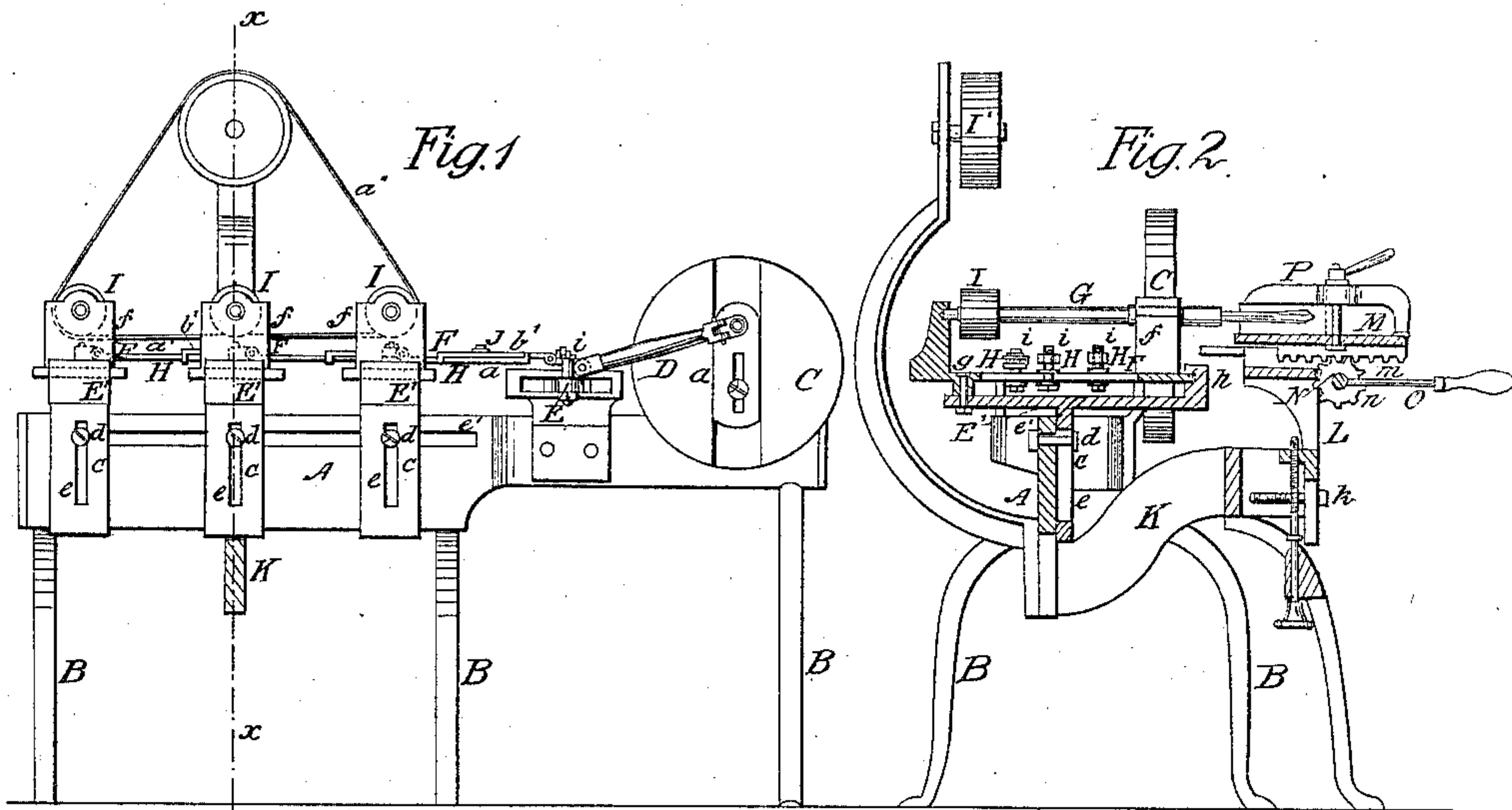


C. Green,
Mortising Machine.

N^o 16,332.

Patented Jan. 6, 1857.



UNITED STATES PATENT OFFICE.

CHARLES GREEN, OF BETHEL, OHIO.

IMPROVED MORTISING-MACHINE.

Specification forming part of Letters Patent No. 16,332, dated January 6, 1857.

To all whom it may concern:

Be it known that I, CHARLES GREEN, of Bethel, in the county of Clermont and State of Ohio, have invented a new and useful Improvement in Mortising-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of my improvement, the bed on which the "stuff" is placed being removed. Fig. 2 is an end sectional view, and Fig. 3 is a top view or plan of the machine.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a horizontal bar supported by legs B and having a driving-pulley C attached to it at one end. The pulley C has a slide *a* fitted in one of its sides, said slide having a connecting-rod D attached to it at one end. The outer end of the connecting-rod is attached to one end of a slotted arm E, the opposite end of the arm working on a rod *b*, attached to the bar A.

E' E' E' represent horizontal bars, which have vertical slotted projections *c* attached to their under sides. These projections are connected to the bar A by bolts *d*, which pass through vertical slots *e* in the projections *c* and horizontal slot *e'* in the bar A. By this mode of attaching the bars E' to the bar A it will be seen that the bars E' may be raised or lowered and also moved laterally and secured at points nearer together or farther apart, as desired.

F F F represent slotted bars or beds, which are pivoted at one end to the outer ends of the bars E' at *g*. The bars or beds F have heads *f f* upon them, in which arbors G are fitted. The ends of the beds F opposite to the pivots *g* fit in grooved ledges *h* on the ends of the bars E', as shown clearly in Fig. 2.

The beds F are connected to the arm E by means of arms H, the ends of the arms being fitted on rods *i*, which work in the slots in the beds F and in the slot in the arm E.

The arms H are each formed of two parts *a' b'*, one of which parts *b'* is slotted, and

bolts *j*, attached to the parts *a'*, fit in the slots in the part *b'*, as shown clearly in Fig. 3.

The arbors G have each a pulley I upon them at one end, and the opposite ends have bits or cutters J inserted in them.

The bar A has an arm K attached to it, the ends of said arm being forked and having a vertical frame L attached to it by bolts *k*, said bolts passing through slots *l* in the frame. The frame consequently may be raised or lowered to the desired height. On the upper part of the frame L there is placed a bed M, having racks *m m* underneath it, into which racks pinions *n n* gear, said pinions being upon a shaft N, which is fitted in the frame L. The shaft N has a handle or lever O attached to it.

The stuff to be mortised is secured upon the bed M by a clamp P of any proper form, and the stuff and bed are moved toward and from the cutters by operating the lever O. Power being applied to the pulley C, the beds F will have a vibratory motion communicated to them, and the cutters J will cut the mortises in the stuff on the bed M. The length of the vibrations of the cutters is regulated by adjusting the arms H at the desired points in the slots in the beds F and in the arm E, and also by adjusting the slide *a* in the pulley C, whereby the mortises may be cut the requisite length, and the space between the mortises may be made longer or shorter by adjusting the bars E' the proper distance apart. The arms H may be lengthened or shortened by loosening the bolts *j* in the arms and sliding the two parts *a' b'* over each other till the desired length is obtained. The arbors G are rotated by a band *a''*, which passes round the pulleys I and a pulley I' on an arm attached to the bar A.

I do not claim as new in mortising-machines chisels or bits vibrating through the mortise and simultaneously revolving about their axes, the stroke being varied, as desired, nor yet the manner in which the stuff is fed to the action of the bits, and so forth, as such are common to other machines; but

What I do claim as new and useful herein is—

The combination, substantially as shown and described, of the frame or bar A, with its slot *e'*, the T-shaped bars or pieces E', with their

slots *e*, slotted frames or beds F, pivoted in the rear to the bars E' and carrying the revolving chisel arbors or axles G, slotted and double arms or connecting-rods H, and slotted driving-arm E, all arranged for operation together for the easy adjustment and simultaneous production, when desired, of different-sized

mortises in the one stick and at varying distances apart, as herein set forth.

CHARLES GREEN.

Witnesses:

T. J. MORRIS,
B. I. TICE.