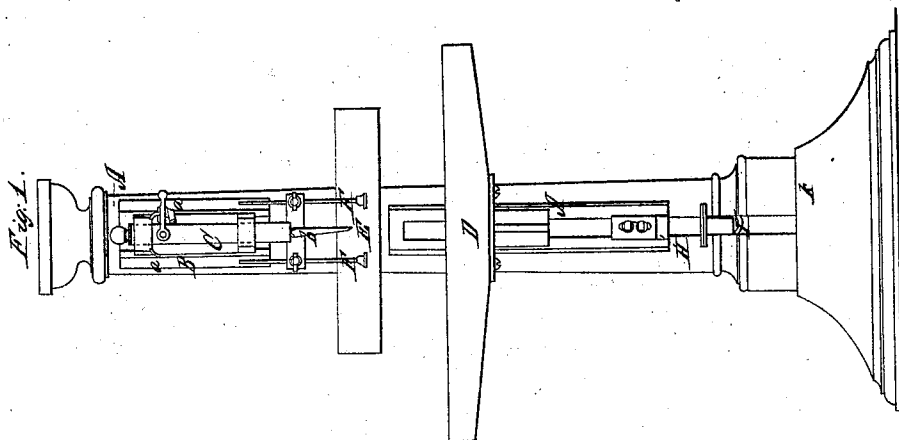
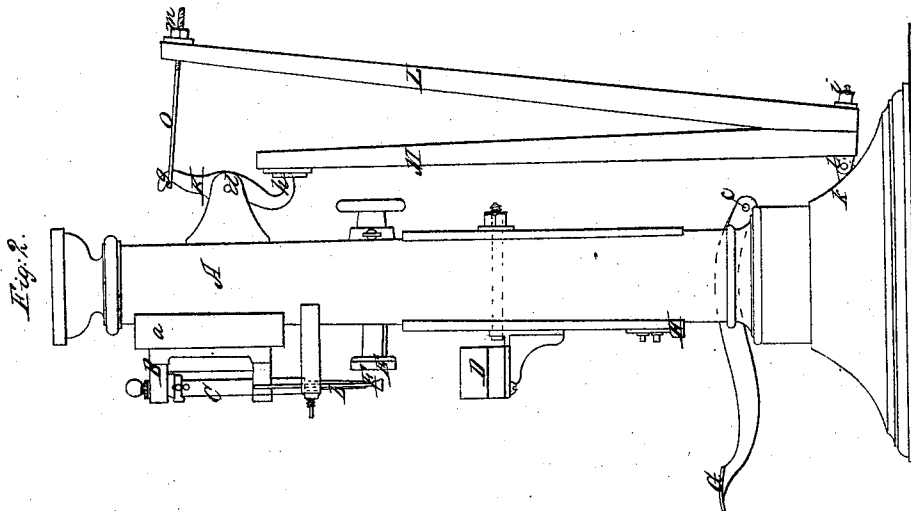
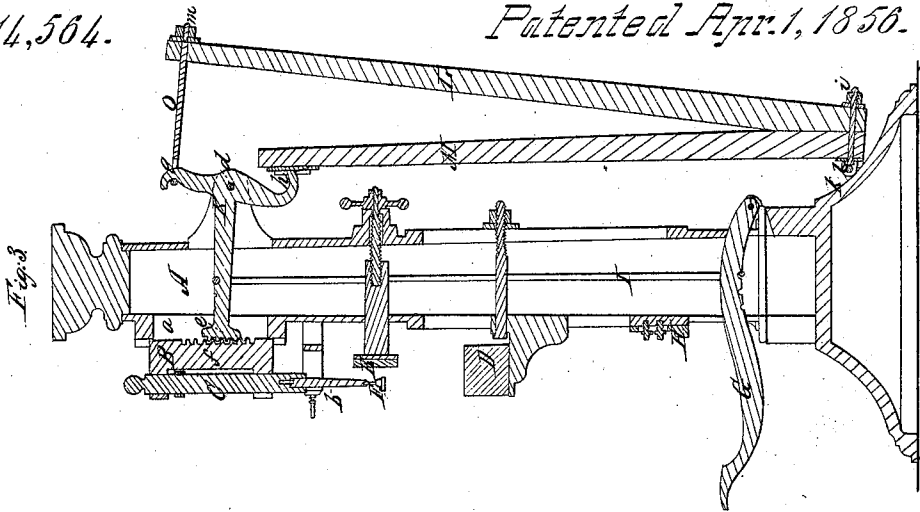


E. Joslin.

Mortising Machine.

No 14,564.

Patented Apr. 1, 1856.



UNITED STATES PATENT OFFICE.

EDWARD JOSLIN, OF KEENE, NEW HAMPSHIRE.

IMPROVED MORTISING-MACHINE.

Specification forming part of Letters Patent No. 14,564, dated April 1, 1856.

To all whom it may concern:

Be it known that I, EDWARD JOSLIN, of Keene, in the county of Cheshire and State of New Hampshire, have invented an Improvement in Machinery for Mortising Lumber; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 exhibits a front elevation of my improved mortising-machine; Fig. 2, a side elevation of it; Fig. 3, a central, vertical, and longitudinal section of it.

The main operative parts of the said machine are supported by a vertical stand-post or hollow column A, which may be constructed of cast-iron or other suitable material. It has a tool-carriage B applied to and so as to be capable of sliding vertically on suitable ways or guides *a a*, projecting from the column or post. A mandrel or tool-carrier C is supported by said carriage and has a chisel or cutter *b* projecting from it, as seen in the drawings.

D is an adjustable bed on which the stuff is supported during the operation of mortising it, the said bed being so applied to the post A as to be capable of being elevated or depressed and fastened in any desirable position, as circumstances may require. The bed operates in conjunction with a back-rest E and two pressers or bearers F F, arranged as seen in the drawings, they being common to mortising-machines.

In order to move the tool-carriage downward, I employ a foot-treadle G, arranged and extending through the post and turning on a fulcrum *c*, as seen in the drawings, a movable and adjustable stop H being arranged over the treadle and so adapted to the post as to be capable of being moved and fastened at any required elevation for the purpose of arresting the upward motion of the treadle and of course the rising of the cutting tool or chisel above the work on the bed D. The said treadle has a looped wire or connecting-rod I extending around it and upward and around the horizontal tri-armed sectional lever K, arranged in the upper part of the post A and so as to turn in a vertical plane on a fulcrum *d*, as seen in Figs. 2 and 3. The longer or horizontal arm of said le-

ver is provided with a toothed arc *e* to work in a corresponding rack *f*, affixed to the back of the tool-carriage B. The other arms of the lever K—viz., those marked *g h*—operate respectively in connection with two wooden or bar springs L M, which are connected at their lower ends by a screw and nut, as seen at *i* in Fig. 3, and are hinged or jointed to the base *k* of the post A, as seen in Figs. 2 and 3, or so that both springs may conjointly be turned on a common pin *l* and either toward or away from the post. The arm *h* of the tri-armed lever rests at its lower end against the upper part of the spring M, while the arm *g* of said lever is connected with the upper part of the spring L by a rod O, which extends through the said spring and has a screw and nut upon it, as seen at *m*, the said rod being jointed to or looped over the upper end of the said arm *g* of the said tri-armed lever.

By means of the springs applied to the tri-armed lever, as specified, the tool-carriage will be raised after each depression of it by the treadle. A single bent lever and a single spring might be employed to so elevate the tool-carriage; but its use in practice is attended with disadvantages which I have sought to remedy by employing two springs, a connecting-rod, and tri-armed lever, as specified. By using two light springs in the place of one single spring I am enabled to obtain elasticity without so much danger of breakage as when one spring only is employed. The strain on the springs at their feet or lower ends is disposed in a manner highly advantageous in preventing injury to them, and, besides, the tendency of their lower ends to separate from the stand is materially lessened in respect to what would result to the post of a single spring were it rigidly fastened to said frame. In case one of the springs should break the other will remain intact. Under such circumstances the accident can be repaired at a less cost than it could be were a single spring used. Again, should one or both of the springs lose any of their elastic properties they may be rendered stiffer by means of the nut and screw of the connecting-rod, the same enabling the stiffness or power of the springs to be adjusted or regulated as occasion may require. While

the tool-carriage is in the act of being depressed it will be observed that one of the springs will be pulled and the other pushed.

I do not claim the application of a spring to the tool-carriage in order to lift it; but

What I do claim is—

Combining or arranging, as specified, with the tri-armed sectoral lever K and the post or frame of the tool-carriage two wooden springs L M and a connecting-rod O, and so that one spring may be operated by draft and the

other by pressure when said lever is forced downward, as explained, the same effecting advantages as set forth.

In testimony whereof I have hereunto set my signature this 15th day of February, A. D. 1856.

EDWARD JOSLIN.

Witnesses:

ALLEN GIFFIN,
DALPHON L. GIBBS.