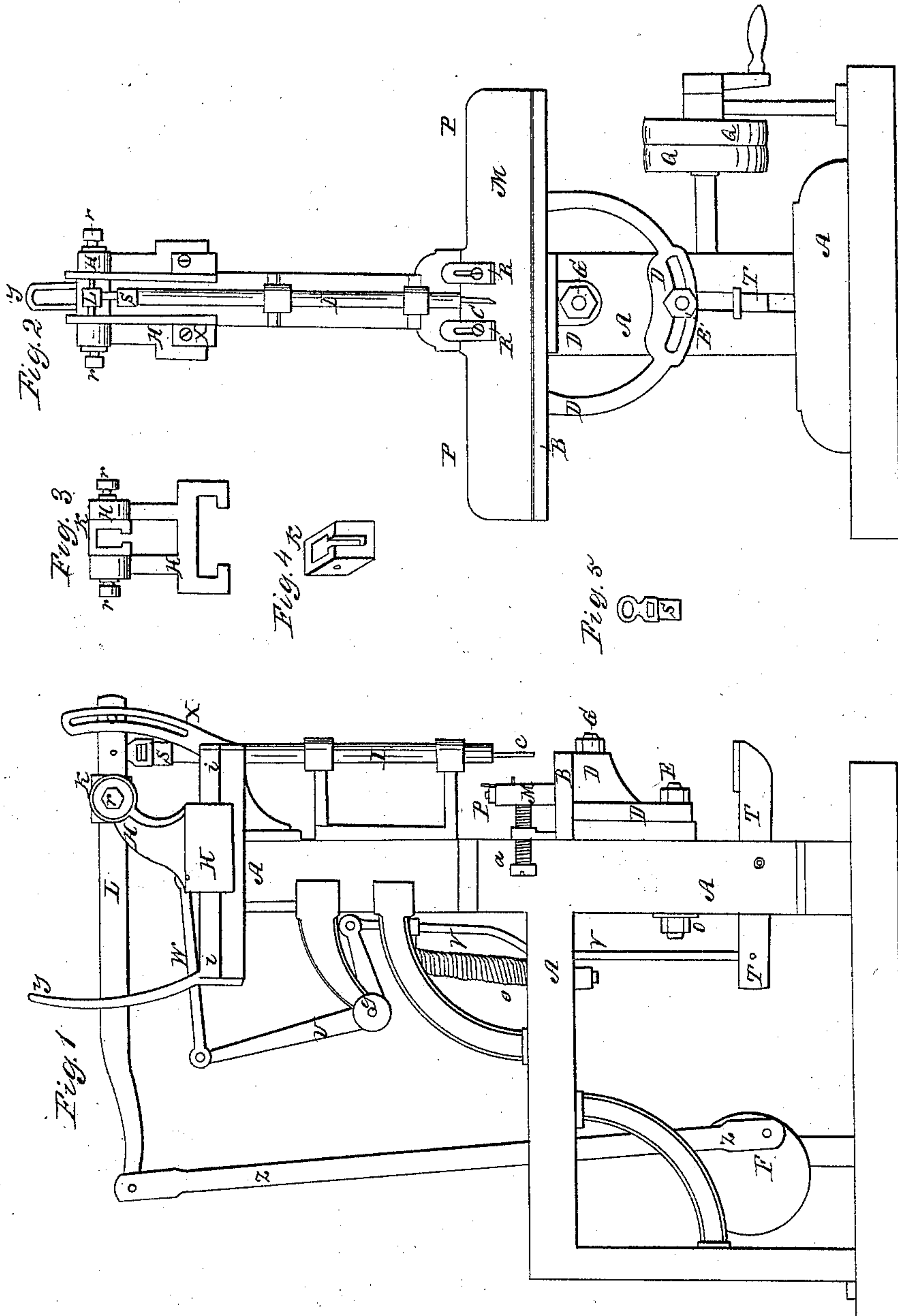


S. S. Bartlett,

Mortising Machine.

N^o 33,330.

Patented Sep. 24, 1861.



UNITED STATES PATENT OFFICE.

STEPHEN S. BARTLETT, OF WOONSOCKET, RHODE ISLAND, ASSIGNOR TO HIMSELF AND THOMAS H. DODGE, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVED MORTISING-MACHINE.

Specification forming part of Letters Patent No. 33,330, dated September 24, 1861.

To all whom it may concern:

Be it known that I, STEPHEN S. BARTLETT, of Woonsocket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Mortising-Machines; and I hereby declare the following to be a true and exact description of the same, reference being had to the drawings herewith presented, which drawings constitute a part of said description, as follows:

Figure 1 is a side view of the machine.

A A is the frame.

B B is the bench or table on which the timber is laid to be mortised.

C is the chisel.

D is a semicircular bracket or piece of metal on which the table rests. It is secured to the front post of the frame (and shown in Fig. 2) by means of the screw-bolts G and E. It may be adjusted higher or lower, and may be placed either in a horizontal or an inclined position, so as to cut the mortise either perpendicularly through the timber or beveled to any angle required.

H H is a head-stock movable on the top of the frame, where it is fitted to the slide *z z*. It carries the collar K, which forms the fulcrum to the lever L. This collar K is seen at Figs. 3 and 4, (shaded red.) It is supported on centers or pins *r r*, its front side notched out so as to admit the top of the swivel S, in order to let the fulcrum be brought directly over the top of the arbor I, which carries the chisel. R R are two small slips of metal to hold down the timber. It may be observed that the spiral spring *e* (shown at Fig. 1) is attached to the rod V, (shaded red,) as also the bent lever U, and the rod W, which connects it to the head-stock H. This bent lever U has its fulcrum at *g*, and is connected by the rod V to the treadle T. The lever L is put in motion by the shackle-bar Z, which is moved by a crank-pin or stud fixed in the disk F, which is placed on the shaft of the tight and loose pulleys Q. (Shown in Fig. 2.)

X is a stand with a circular slit, placed on the top and front of the frame, and its use is to guide the front end of lever L to prevent its being drawn backward by drawing back the fulcrum. Y is a standard, placed at the

back of the frame in which the back part of lever L is guided.

To enable others to understand the action of this machine, I will proceed to describe its movements and the manner in which I use it.

I should first observe that one difficulty heretofore encountered in using mortising-machines by power has arisen from the circumstance that the chisel cannot be forced down at first to any considerable depth, but must stop at short stroke, and then strike in deeper and deeper at each successive stroke until it has reached to the depth required for the mortise. Now this machine, when first started, gives no motion to the chisel at all, by reason of the fulcrum of the lever being right over the arbor I; or, in other words, the fulcrum is concentric with the pin which connects the top of the swivel S to the lever. Then by pressing on the treadle T, I draw back the head-stock H.

The connection is shown in Fig. 1. The (red-shaded) pitman W connects the stock H to the top arm of the bent lever U, which has its fulcrum at *g*. Its lower arm is connected by the rod V to the back end of the treadle T. Now by pressing the treadle a little downward a short movement is given to the arbor I, which carries the chisel, and by pressing still lower and lower at each successive stroke the length of stroke is increased, while the motion of the lever is all the time given by the belt from a power wheel, engine, or drum to pulley Q.

I do not claim a shifting fulcrum in a mortising-machine; but

What I now desire to secure by Letters Patent is—

The combination of the stationary slide-piece *z*, movable sliding fulcrum-piece H, with the frame A, and operating-lever L and spindle I, arranged to operate substantially as and for the purposes set forth.

In testimony whereof I have hereto subscribed my name in presence of two witnesses.

STEPHEN S. BARTLETT.

Witnesses:

ABNER JILLSON,
JAMES PIKE.