# M. Marshall,

## Mortising Machine.

No. 17,183. Patented Apr. 28, 1857.

Fig. 1.

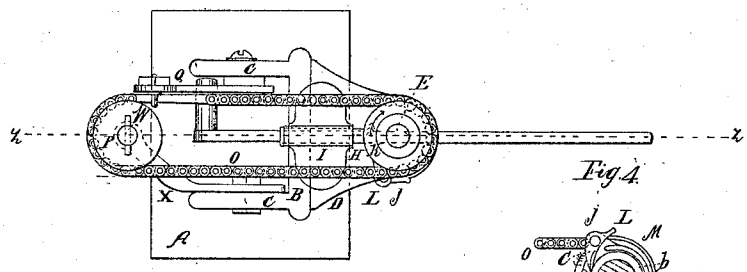



Fig. 4.

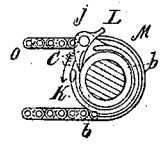



Fig. 5.

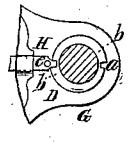
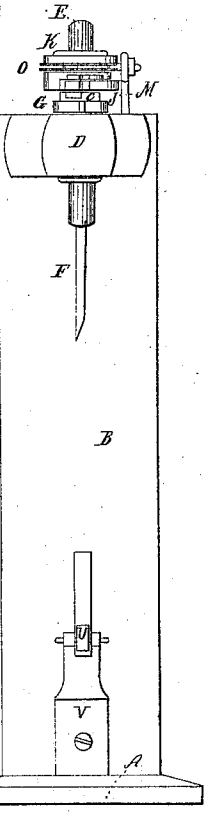



Fig. 3.




Fig. 2.



# UNITED STATES PATENT OFFICE.

MOSES MARSHALL, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO RICHD. BALL AND CHAS. H. BALLARD, OF WORCESTER, MASSACHUSETTS.

## METHOD OF REVERSING THE CHISELS OF MORTISING-MACHINES.

Specification of Letters Patent No. 17,183, dated April 28, 1857.

*To all whom it may concern:*

Be it known that I, MOSES MARSHALL, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Mortising-Machines; and I do hereby declare that the same are described and represented in the following specifications and drawings.

To enable others skilled in the art to make and use my improvements I will proceed to describe the construction and operation, referring to the drawings in which the same letters indicate like parts in each of the figures.

Figure 1, is a plan or top view, such parts only of the machine being represented as are necessary to show my improvements. Fig. 2, is a front elevation. Fig. 3, is a sectional elevation representing the machine cut through the line *z*, *z*, Fig. 1. Figs. 4, and 5, are sections of the collar and spindle in each direction from the line *y*, *y*.

The nature of my invention and improvements in mortising machines consists, in the arrangement of certain devices, which are operated by the foot of the attendant, to release, reverse and lock the mortising chisel as often as it is desirable to do so.

In the accompanying drawings the base or bottom of the machine is shown at A, with the front B, and sides C, C, firmly fastened to it, to form the frame of the machine. The stand D, is fastened to the front B, and perforated for the spindle E, to turn in, which is fitted to it and has a socket at its lower end for the chisel F. The spindle E, has a collar G, on it above the stand D, made in the form shown in Fig. 5, and provided with two scores *a* for the end of the locking bolt H, which slides in the stand I, fastened onto the stand D, for that purpose. The collar G, extends above the line *y*, *y*, and is made cam-shaped as shown in Fig. 4, with two notches *b*, for the point of the pawl J which turns the collar G to reverse the chisel.

The collar K, is fitted to turn freely on the spindle E, above the collar G, and is provided with a flange which surrounds the upper part of the collar G, see Fig. 3. This collar K, has a projection L, on it provided with a pin on which the pawl J, vibrates being pressed against the camshaped part of the collar G, by the spring M, fastened to the collar K. The pawl J, has projection *c*, on its lower edge shown in Fig. 4, which projection *c*, when the collar is moved in the direction indicated by the arrow acts on the pin *e*, in the bolt H, and forces the bolt back and holds it until the pawl J, moves the collar G, so as to carry the score past the end of the bolt and then releases the bolt, so that the spring N, fastened on the rear of the front B, presses the end of the bolt against the collar G, and into the score *a*, when it comes opposite the bolt, so as to hold the chisel F, in a proper position after it is reversed.

The collar K, has a groove in it for the chain O, with spurs in the bottom of the groove which work in between the links of the chain O, to prevent it from slipping so as to turn the collar K, by the chain O. This chain passes around the collar K and pulley, P, and its ends are connected to the lever Q, which vibrates on the stud R, in the side C, and has the slot S, in it for the stud T, of the lever U, to work in which lever U, vibrates on a pin in the stand V, fastened to the front B. The pulley P, is fitted to turn on the stud W, in the stand X, which stand is fastened to the side C. The lower portion of the slot S, is arranged at such an angle, that if the stud T, is in the lower end of the slot and the attendant depresses the lever U, with his foot, so as to raise the stud T, it will vibrate the lever Q, and traverse the chain O, and turn the collars K, and G, and reverse the chisel. If the lever U is raised the chain O, is traversed in the opposite direction and the collar G, remains stationary, while the collar K, is turned back and the projection *c*, on the pawl J passes outside of the pin *e*, in the bolt H, and stands prepared to act again when its services shall be required, to aid in reversing the chisel as above described.

With my improvements the operator can reverse the chisel as often as he pleases, while the machine is in motion with his foot and use his hands to manage the stuff he is mortising.

I believe I have described and represented my improvements in mortising machines, so as to enable any person skilled in the art

to make and use them, and I will now state what I desire to secure by Letters Patent to wit.

I claim—

1. The projection *c*, on the pawl J, so constructed and arranged as to press back the bolt H, when moved in one direction and release the collar G, so that it may be turned by the pawl J, to reverse the chisel; and also that it, the projection *c*, will pass outside of the pin *e*, when moved in the other direction substantially as described for the purposes set forth.

2. I claim the slotted lever Q, chain O, and lever U or their equivalent, so constructed and arranged as to turn the collar K, and reverse the chisel as described.

MOSES MARSHALL.

Witnesses:

J. HENRY HILL,

APPLETON DADMAN.