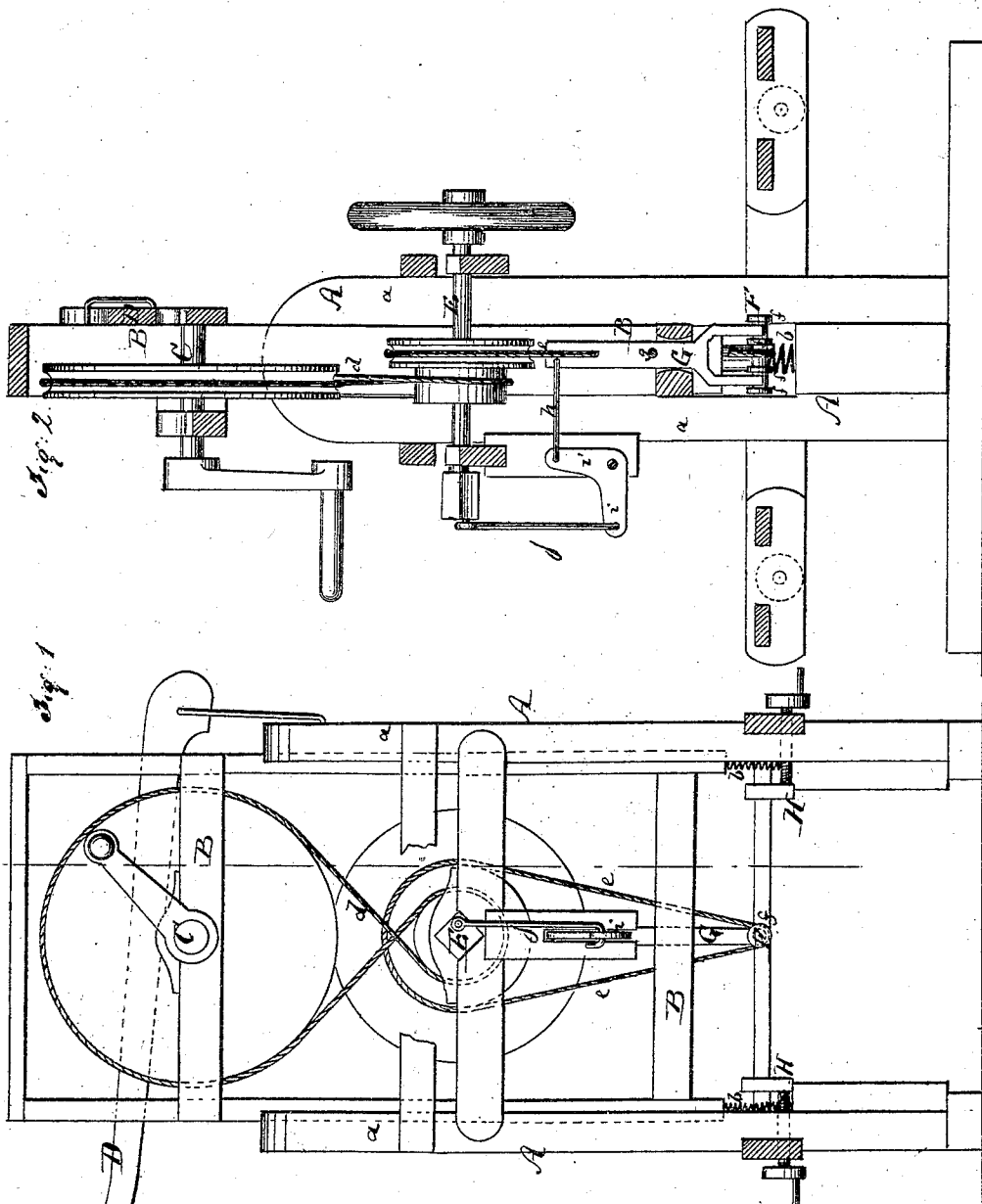


E. WALLACE.

Improvement in Mortising-Machines.

No. 131,236.

Patented Sep. 10, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

ELI WALLACE, OF HUNTSVILLE, PENNSYLVANIA.

IMPROVEMENT IN MORTISING-MACHINES.

Specification forming part of Letters Patent No. 131,236, dated September 10, 1872.

Specification describing a new Improvement in Mortising-Machines, invented by ELI WALLACE, of Huntsville, in the county of Luzerne and State of Pennsylvania.

Figure 1 represents a front elevation, and Fig. 2 a vertical transverse section, of my improved mortising-machine.

Similar letters of reference indicate corresponding parts.

This invention relates to a new mortising-machine in which a series of saws are employed having a double motion—to wit., rotary and oscillating. The latter motion is in direction with the axle of the mandrel carrying the saws, and enables each saw to clear away as much wood as the length of its stroke will permit; such length of stroke, being equal to or exceeding the distance between the several saws, enables the gang to cut a rectangular mortise of suitable depth.

A in the drawing is the frame of the machine, containing, between vertical or horizontal guides *a a*, a sliding frame, B, in which the operating shaft C has its bearings. By means of a lever, D, screw, or equivalent device, the frame B can be set down or against the work, while springs *b b* tend to elevate or move it away therefrom. The shaft C imparts rotary motion by a band, *d*, to a shaft, E, hanging in B. A band or belt, *e*, extends from the shaft E to the mandrel F, which carries the several saws *f f*. This mandrel hangs in the lower end of a frame, G, which is, at *g*, pivoted in the frame B, and by a rod, *h*, bell-crank *i*, and pitman *j*, connected with a crank of the shaft

E, as shown. By this connection the frame G is vibrated on its pivot *g*, while, at the same time, the mandrel is revolved. The work to be mortised is under the saws, and held between adjustable guides H H in the frame A. As the frame B is gradually fed down, the shaft C being revolved, the saws will cut into the wood, and, by virtue of their oscillations on the pivot *g*, will also clear as much away of the wood as their sweep will permit. It is necessary that the pivot *g* should be at a right angle to the mandrel in order to give the saws a sweep at right angles to their cutting-edges.

It is evident that with this machine the process of mortising can be rapidly and accurately carried out.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The saw-mandrel F, journaled in a vertically-reciprocating and laterally-oscillating frame, G, to give corresponding motions to the saws, as and for the purpose described.

2. The sliding frame B, provided with the pulley-shafts C E, frame G, and saw-mandrel F, as and for the purpose described.

3. The frame G, pivoted in the slide B, and connected by the rod *h*, bell-crank *i*, and pitman *j* with the shaft E, to be operated substantially as specified.

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Witnesses:

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