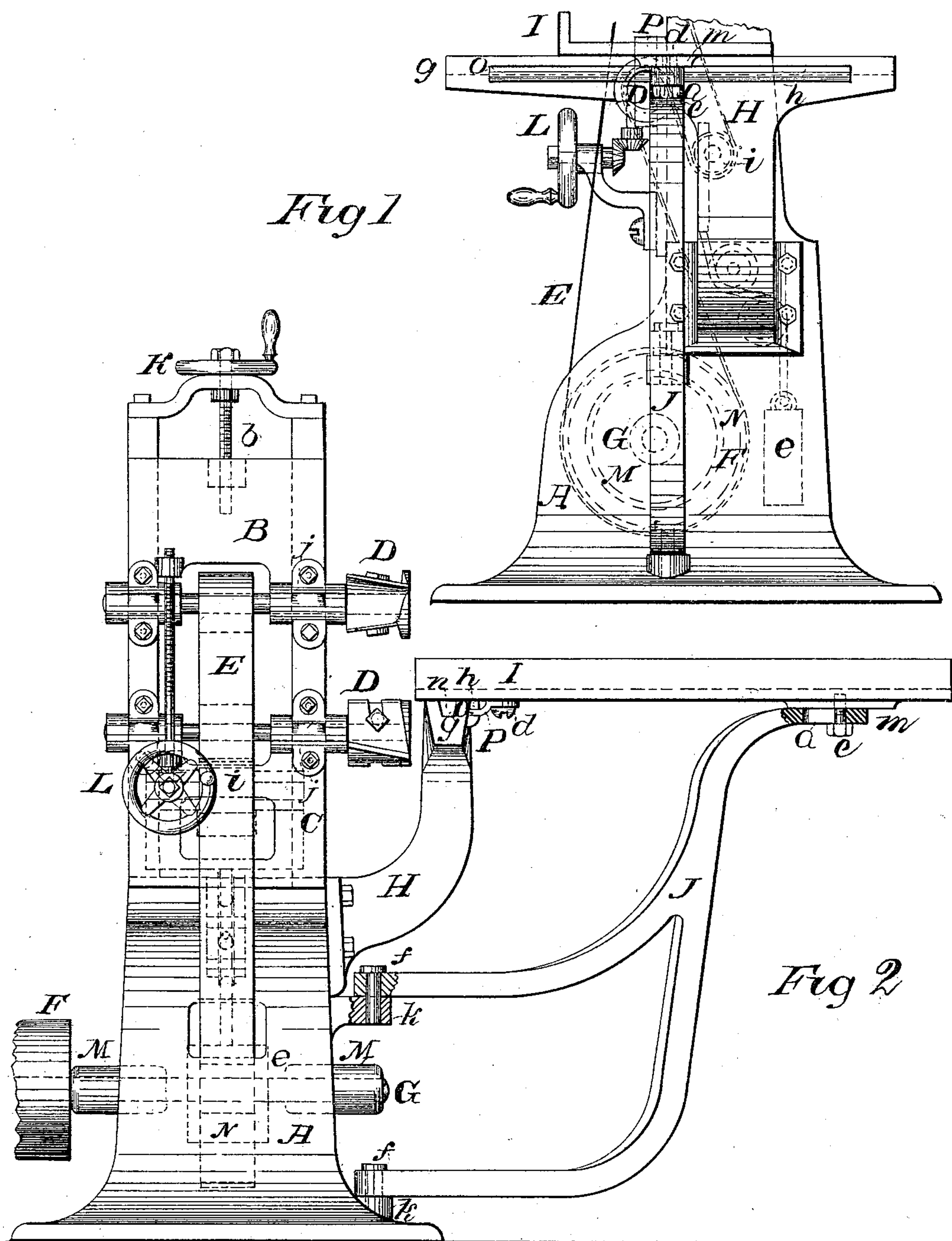


(No Model.)

A. L. CUSHMAN.
TENONING MACHINE.

No. 350,872.

Patented Oct. 12, 1886.



Witnesses
Hiram F. Gerrish
George H. Mills

Inventor
A. L. Cushman

UNITED STATES PATENT OFFICE.

ABE L. CUSHMAN, OF CONCORD, NEW HAMPSHIRE, ASSIGNOR TO JOHN A. WHITE, OF SAME PLACE.

TENONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 350,872, dated October 12, 1886.

Application filed December 20, 1884. Serial No. 150,883. (No model.)

To all whom it may concern:

Be it known that I, ABE L. CUSHMAN, a citizen of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented a new and useful Improvement in Tenoning-Machines, of which the following is a specification.

My invention relates to an improvement in tenoning-machines, in which a swinging bracket operates in connection with the table.

The object of my improvement is, first, to provide a support for the outer end of the table; second, to hold the table in position so that it cannot be thrown into cutter-heads; third, to provide a stop for stopping the table after passing the desired distance. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 2 is a front elevation of machine with my improvement on. Fig. 1 is a side elevation of Fig. 2.

Similar letters refer to similar parts throughout both views.

A is the main base or support, the upper half of which is planed for the purpose of receiving carriages B and C, on which are cast boxes J J, for the purpose of receiving arbors on which are secured cutter-heads D D, hereinafter referred to.

To base A are cast boxes M M, through which passes driving-shaft G, on which are secured driving-pulleys F and N, and over the latter passes belt E, for the purpose of driving cutter-heads D D. The latter can be raised or lowered simultaneously or independently, as desired, first, by turning hand-wheel L; second, by turning hand-wheel K, on which is secured screw b, passing through the top of frame A, and into an ear tapped out for the purpose of receiving the same, as shown by dotted lines in Fig. 2.

I prefer to carry out my invention in the manner shown in Fig. 2, where it will be seen that there are two ears or lugs, k k, cast to the frame A, and drilled out for the purpose of receiving pins or arbors f f, on which oscillate

one end of bracket J, the other end having a slot, a, through which passes bolt or pin c, and into boss m, cast to the table I, as shown in Figs. 1 and 2, hereinafter referred to.

To frame A is secured an arm, H, the top of which is twice as long as the width of the table I, and standing at right angles with cutter-heads D D, (see Fig. 1,) having a V-groove, g, for the purpose of receiving and guiding rib n on table I, so that it will pass straight by cutter-heads D D, when table I is moved front or back. The arm H has also another groove, O, running the entire length on the outside (see Fig. 2) and parallel with groove g, for the purpose of receiving the casting P, secured to the under side of table I with the screw d, (see Fig. 2,) so that the table I cannot be raised up without removing the casting P. The latter is to obviate the table being raised up if the work is caught in top cutter-heads, as is frequently the case. The lugs or bosses k k are placed directly in under the center of cutter-heads D D, on which rest one end of bracket J, oscillating on pins or arbors f f. The other end moves back and forth with the table I, the slot a being just long enough to allow the table I to pass the entire width front and back of cutter-heads D D.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a tenoning-machine, of a bracket, J, one end supported by lugs k k secured to base A, and oscillating on pins or arbors f f, passing through the said lugs, the other end supporting the reciprocating table I, substantially as described.

2. In a tenoning-machine, the combination of the reciprocating table having a casting, P, secured to the under side and adapted to the groove g, parallel with the top of support H, substantially as specified and shown.

ABE L. CUSHMAN.

Witnesses:

HIRAM F. GERRISH,
GEORGE H. MILLS.