

(No Model.)

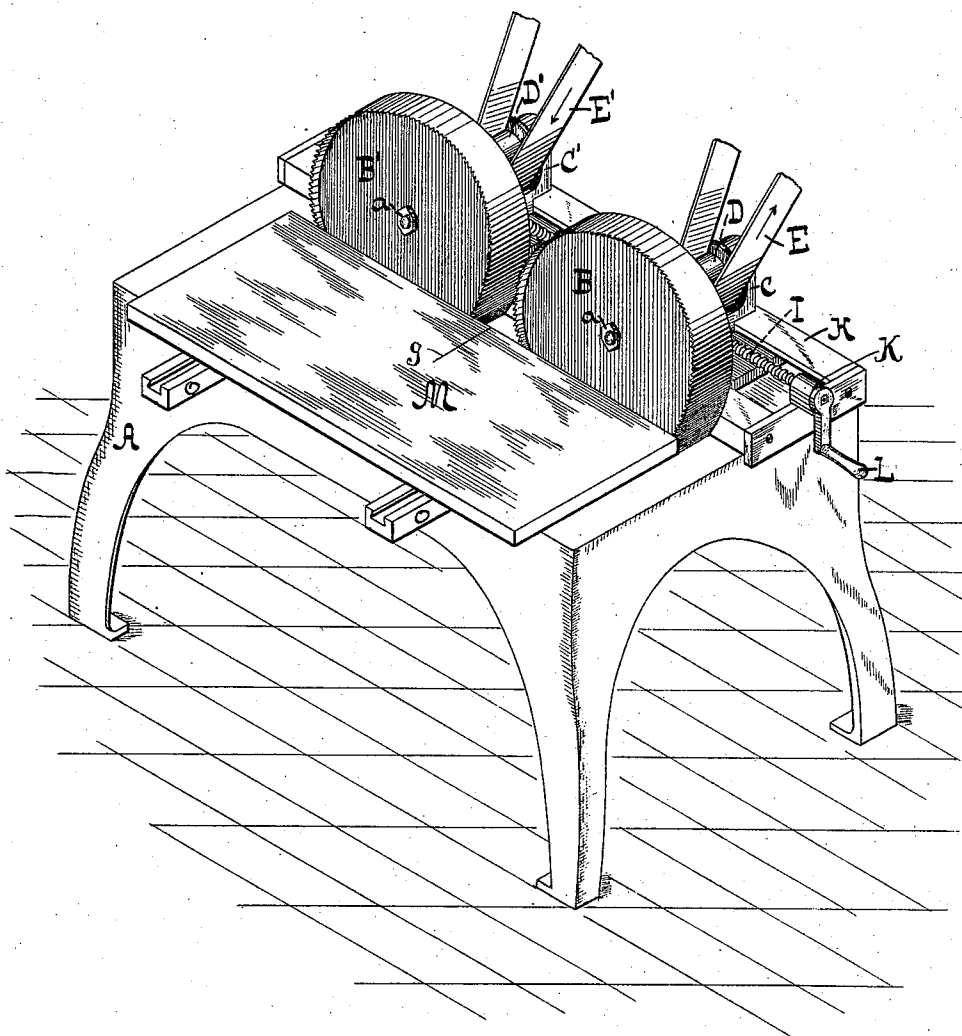
2 Sheets—Sheet 1.

A. P. & C. F. SUNDBERG.
MORTISE AND TENON MACHINE.

No. 576,062.

Patented Jan. 26, 1897.

Fig. 1.



WITNESSES:

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Fig. 2.

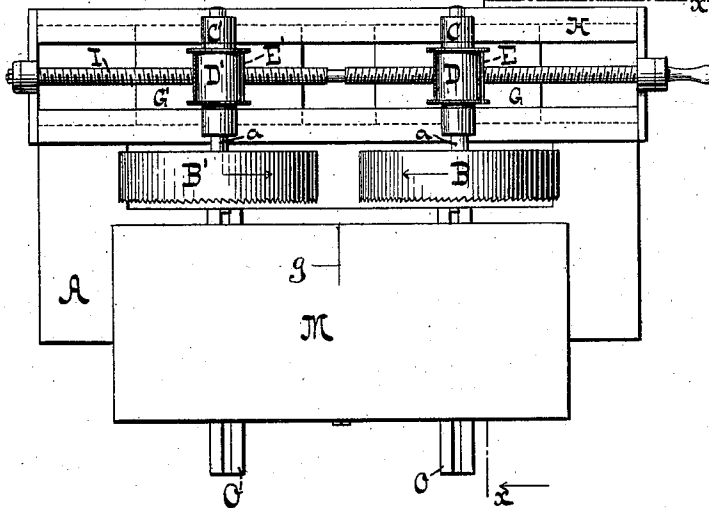


Fig. 3.

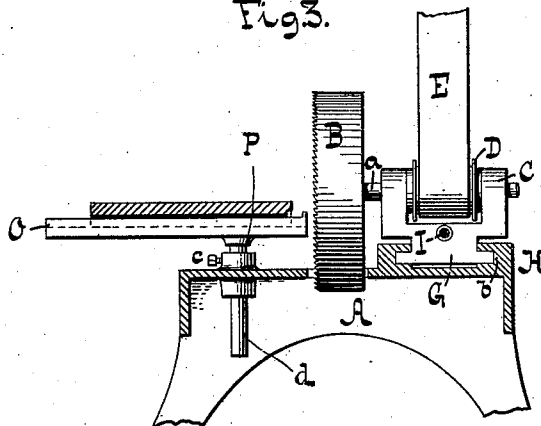
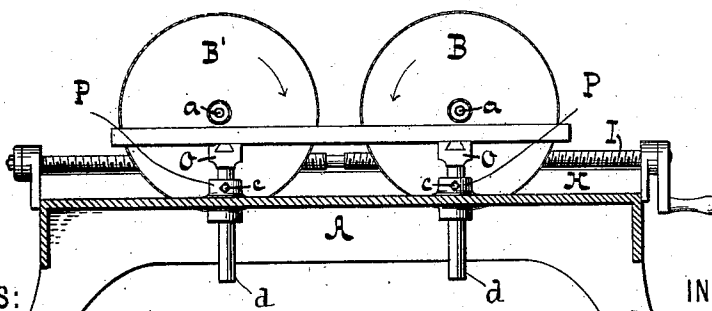


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANDREW P. SUNDBERG AND CHARLES F. SUNDBERG, OF LONG ISLAND CITY,
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MORTISE-AND-TENON MACHINE.

SPECIFICATION forming part of Letters Patent No. 576,062, dated January 26, 1897.

Application filed January 13, 1893. Serial No. 458,217. (No model.)

To all whom it may concern:

Be it known that we, ANDREW P. SUNDBERG and CHARLES F. SUNDBERG, of Long Island City, in the county of Queens and State of New York, have made a new and Improved Mortise-and-Tenon Machine; and we hereby declare the following to be a full and clear description of the same, reference being had to the annexed drawings.

This invention relates to that class of machinery used in cutting and shaping the parts of an article for the purpose of joining the same together by mortise and tenon. It is more particularly adapted for use in the manufacture of guitars and similar musical instruments where the neck is joined to the body, but may be used in various similar instances.

There are two sheets of drawings.

Figure 1, Sheet 1, is a perspective front view of the machine. Fig. 2, Sheet 2, is a top view. Fig. 3, Sheet 2, is a vertical cross-section through *xx* of Fig. 2; and Fig. 4, Sheet 2, is a front elevation.

In the drawings, A is the main frame of the machine, which should be heavy and adapted to be secured to the floor.

B B' are two cylindrical or barrel saws carried on spindles *a a*, which are journaled in double standards C C' and secured to pulleys D D', which may be operated by belts E E' or other convenient means, the revolutions of the pulleys and saws being preferably in the direction indicated by the arrows in Fig. 1.

The double standards C and C', in which are journaled the spindles *a a*, each have a base G and G', with lugs or lips *b b*, so that they fit in grooves in a guide-plate H, the base G of the double standard forming a traveler by means of which the saw B or the saw B' may be adjusted in any desired position.

Passing through the base or traveler G and threaded therein is a threaded bar I, which is journaled in a bracket K and provided with a handle L. The threaded bar I may pass through both the carriers G and G', if desired,

and be threaded in them both, so that when it is revolved in one direction the two carriers and the saws will approach toward each other and when turned in the opposite direction the saws will recede. The handle L is for use in readily making adjustments of the saws by turning the threaded bar I. The saws are shown in the drawings as being operated by belts and pulleys, but it will be apparent that their motion may be produced by other similar devices, and, if desired, they may be geared together by proper adjusting apparatus.

In front of the saws B and B' is a sliding bed-plate M, which slides to and from the saws on ways O O. These ways O O are preferably made adjustable by means of sleeves P P, which are secured to the frame A and have set-screws *c c*. The ways O O are provided with pins *d d*, which pass through the sleeves P P and by turning the set-screws *c c* are held at any desired height. The sliding bed-plate M may be provided with a spring or weighted so it will recede from the saws when not being pressed up toward them.

In operation the end of the neck of the guitar or other instrument which is to be mortised to the body is laid on the bed-plate M and approached to the saws until they have cut into it the desired extent to make the tenon, those portions not required for the tenon being removed. This tenon at the end of the neck will be just the size and shape of the space between the two saws B and B'. Then the saws are set closer together, and the body of the guitar is cut into by being laid on the bed M and pushed up to the saws. In order to make the cutting accurate, we place a center *g* on the bed-plate M, which is at equal distance from each saw.

What we claim as our invention is—

1. In a machine for cutting mortises and tenons two barrel-saws arranged side by side and parallel with each other operating together substantially as described.

2. The combination of the two barrel-saws

B B' side by side, a bed-plate in front thereof and means for adjusting the saws substantially as and for the purpose shown and described.

- 5 3. In a machine for cutting tenons and mortises, the two barrel-saws B and B' side by side in combination with the carriers G and G', adjusting-bar I and means for operating

the saws substantially as and for the purpose shown and described.

ANDREW P. SUNDBERG.
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Witnesses:

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