(No Model.)

W. D. HERSCHEL.

TENONING MACHINE.

No. 266,623. Patented Oct. 31, 1882.

Fig. 1.

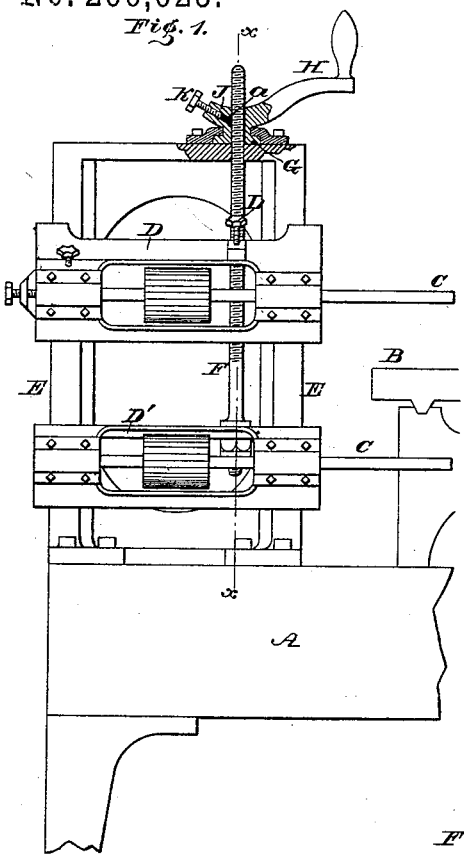


Fig. 2.

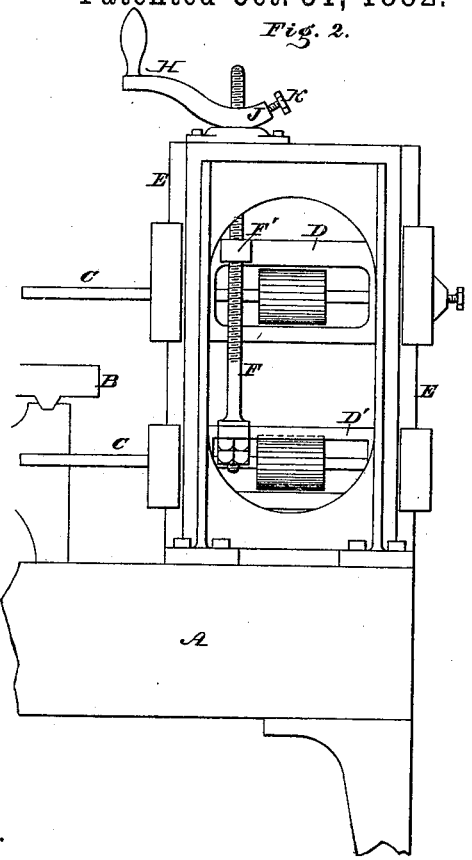


Fig. 3.

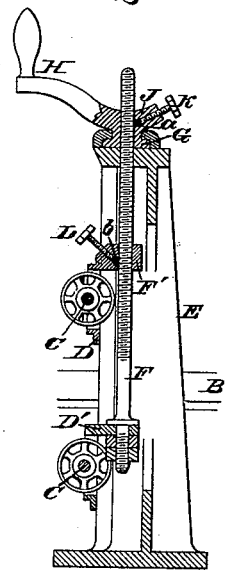
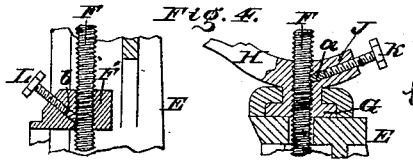


Fig. 4.



WITNESSES:

L. Douville

W. F. Kircher

INVENTOR:

Wm D. Herschel,

by John A. Diedesheim

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM D. HERSCHEL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO JOSEPH O. COLLADAY & BROTHER, OF SAME PLACE.

TENONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 266,623, dated October 31, 1882.

Application filed May 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. HERSCHEL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Tenoning-Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is an end view of a portion of the tenoning-machine embodying my invention. Fig. 2 is a side elevation thereof. Fig. 3 is a vertical section in line *x x*, Fig. 1. Fig. 4 is an enlarged view of portions thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of means, substantially as hereinafter set forth, whereby the cutters of a tenoning-machine may be adjusted separately or in combination, as desired.

Referring to the drawings, A represents the frame of the machine, and B the table thereof.

C represents the cutter shafts, whose bearings are mounted on slides D D′, which are fitted to the standards E of the frame of the machine, and thus in the present case have vertical motions thereon.

F represents a screw-shaft, which is journaled at its lower end to the slide D′, fitted to a nut, F′, secured to or formed with the slide D and passed freely through a rotary head, G, the latter being swiveled to the top piece or cross-bar of the standards E, the swivel being formed by an annulus, which is attached to said cross-bar and embraces the neck of the head.

Formed with or secured to the head G is a crank-handle, H, for rotating the same, and likewise a boss, J, whose inner wall is threaded for engagement of a screw or bolt, K, whose point is adapted to bear against the shaft F or press a key, *a*, at the base of the boss against said shaft. (See Fig. 4.)

L represents a screw or bolt, which is fitted to the nut F′, its point being adapted to bear against the shaft F or press a key, *b*, at the base of the threaded opening for said screw against said shaft F.

It will be noticed that the wall of the central opening of the head G is threaded, and that of the nut F′ is also threaded, so that both engage with the threads of the screw-shaft.

The operation is as follows: When both cutters are to be raised or lowered simultaneously the bolt K is loosened, the bolt L tightened, and the head G rotated, whereby the screw-shaft F is raised or lowered, according to the direction of rotation of the head G, thus simultaneously moving both slides or frames D D′ and connected parts.

By tightening the bolt K and releasing the bolt L the screw-shaft F and head G may be rotated as one, the effect of which is to move the cutter of the upper slide or frame and adjust it the required distance from the cutter of the lower frame, the latter being undisturbed. When the lower cutter is to be adjusted the bolt K is loosened, and the rotation of the head G will raise or lower the screw-shaft and both frames and cutters. Then, when the lower cutter is in proper position and the upper cutter requires to be adjusted, the bolt K is tightened and the bolt L released, whereby when the head is rotated the upper frame and cutter will be raised or lowered without disturbing the lower slide or frame and cutter.

It is evident that the means of adjustment stated are applicable to all cutting-machines having two heads, it being noticed that the screw-shaft employed is common to the slides or supporting-frames of the shafts of both cutters.

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

1. A screw-threaded adjusting-shaft in combination with two cutter-head slides or frames, two screw-tapped parts, and clamping devices, whereby either one of said screw-tapped parts may be locked to said shaft, for the purpose set forth.

2. A screw-threaded adjusting-rod and two cutter-head slides or frames, one of which has a nut that receives said rod, in combination with a head or nut to which the operating-handle is attached, and clamping-screws K and L, whereby either one of said nuts may be locked to said rod, for the purpose set forth.

WM. D. HERSCHEL.

Witnesses:
C. H. POWELL,
CARROLL R. WILLIAMS.