R. W. EATON.

Spoke-Tenoning Machine.

No. 200,649. Patented Feb. 26, 1878.

Fig. 1.

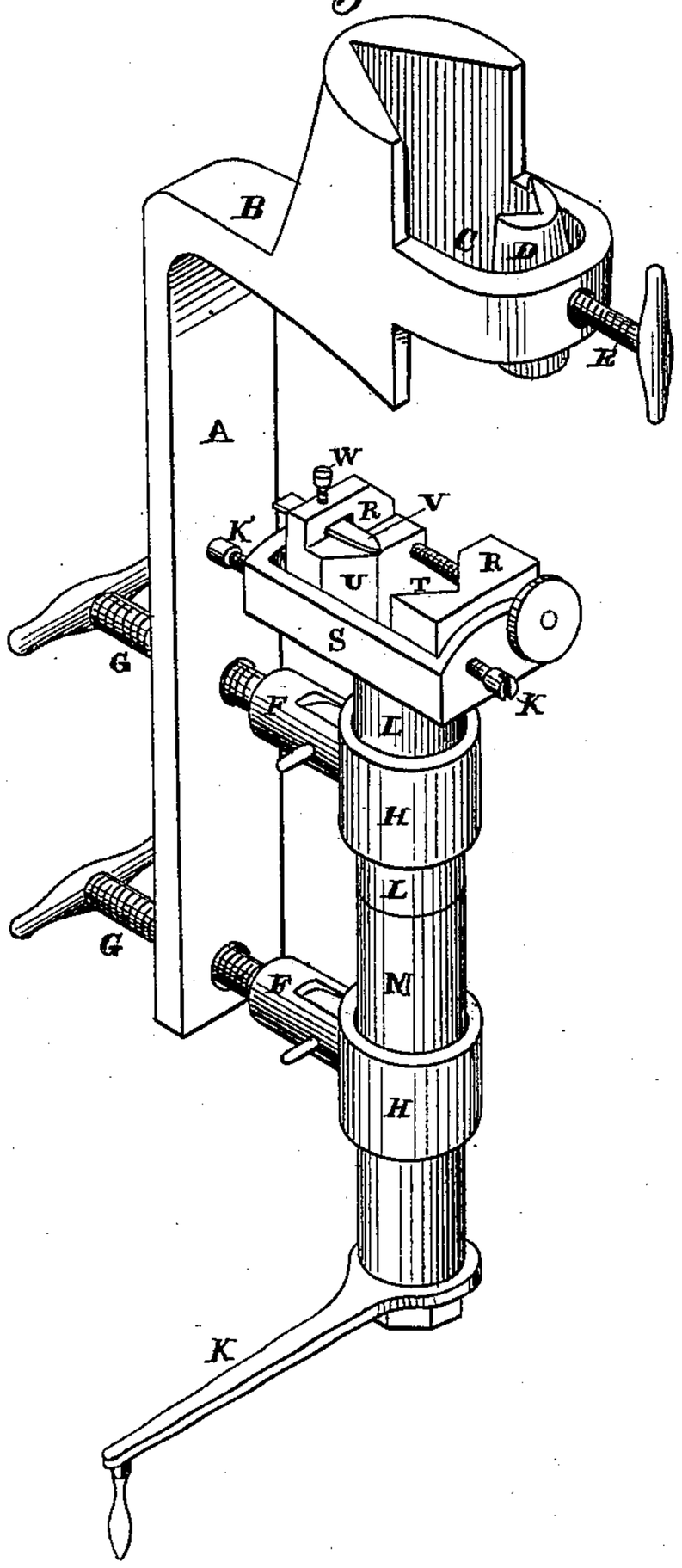
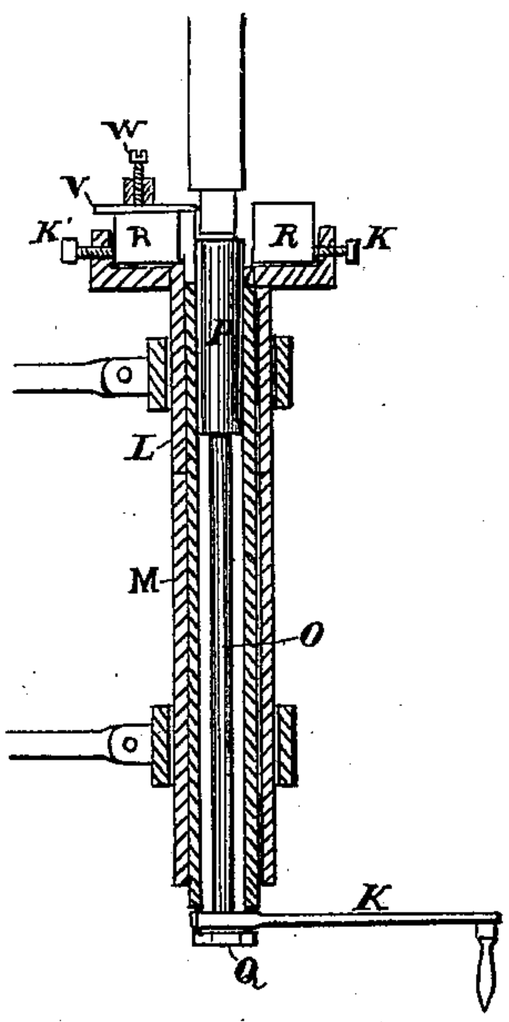


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT W. EATON, OF WATSONVILLE, CALIFORNIA.

IMPROVEMENT IN SPOKE-TENONING MACHINES.

Specification forming part of Letters Patent No. **200,649**, dated February 26, 1878; application filed January 14, 1878.

To all whom it may concern:

Be it known that I, ROBERT W. EATON, of Watsonville, county of Santa Cruz, and State of California, have invented an Improved Spoke-Tenon Auger; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention has reference to a novel arrangement of a tenon-auger for boring tenons on the ends of spokes.

Referring to the accompanying drawings, Figure 1 is a perspective view of my device. Fig. 2 is a sectional view of the same.

A represents a bar, having a portion, B, at one end bent at right angles, and provided with means for securing it upon the end of the spoke to be tenoned.

The means which I have represented consists in making the end of this bent portion B larger than the spoke, and then making a hole, C, through it longitudinal with the bar A, which hole is considerably larger than the end of the largest-sized spoke. The upper part of the hole I make angular, in the form of an inverted V, and in the lower part of the hole I place a block, D, the upper part of which is grooved out to form a V-shaped channel.

The block D is attached to a screw, E, which passes through the end of the part B, so that it can be adjusted up or down by turning the screw.

In attaching the device to a spoke, I lower the block D and slip the end of the spoke in between the upper portion of the hole C and the block D, so as to leave a sufficient length projecting inside of the hole to form the tenon on. I then set the block up against the under side of the spoke, so as to clamp it between the two angular grooves. The bar A will then project out beyond the end of the spoke.

F F are two blocks, which I secure underneath the bar A by means of screws G G, which pass down through the bar. To the lower end of each block I secure a ring, H. The ends of the screws G turn freely in the blocks, so that the blocks and rings can be raised or lowered by turning the screws without changing their position otherwise.

The band of the auger passes through the rings H H, and as these rings can be raised or lowered by means of the screws G G, the band can be readily lined with the end of the spoke.

The tenon-auger is secured to the inner end of the band, and a crank, K, is attached to its opposite or outer end, so that by turning the crank and advancing the band the tenon will be bored.

The band I make in two parts, L M, which are screwed together at about one-third its length from the cutter-head or auger, so that the cutter-head can be removed, if desired, and used on an ordinary hand-brace. Through the longer part M of the barrel I pass a rod, O, into the outer end of which a rod, P, is screwed, and on the outer end of the rod is a button, Q. By grasping the button the pipe can be pulled back or forth, as desired, and adjusted, as desired, to regulate the length of the tenon.

The cutter-head consists of two sliding heads, R R, mounted in a frame, S, and moved by means of screws K K′. One of these heads has a V-shaped notch, T, and the other a V-shaped projection, U, which fit each other when the blocks or heads are closed together. The knife V is secured on the face of the head R, which has the V-shaped projection, and is held in place by a set-screw, W.

The point of the V projection of the block R is cut off and made concave, so as to form three points of bearing for the tenon when it is cut, the sides of the V-notch forming two, while the concave point forms the third.

The heads R R have each a ridge or flange on its outside, which fits in grooves in the sides of the frame. These blocks can be set at any required distance from each other, according to the size of the tenon desired.

The bit or cutter need only be taken out when it requires sharpening.

After the implement has been secured to a spoke, as represented at Fig. 2, the heads R R are set to the required distance apart, and the band turned until the end of the tenon

strikes the end of the rod P, thus forming a tenon of the required length.

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

The cutter-head consisting of the block R R, adjustable in the frame S, and having the interlocking V-shaped groove T and V-shaped projection U, with its concave edge, all combined and arranged to operate substantially as shown, and for the purpose described.

In witness whereof I hereunto set my hand and seal.

ROBERT WILLIAM EATON. [L. S.]

Witnesses:
L. D. HOLBROOK,
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