A. D. RUFF.

Chucks for Making Swelled Tenons.

No. 161,706. Patented April 6, 1875.

Fig. 1

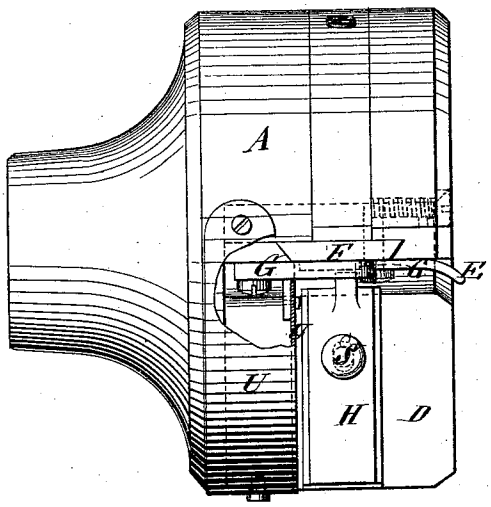


Fig. 2

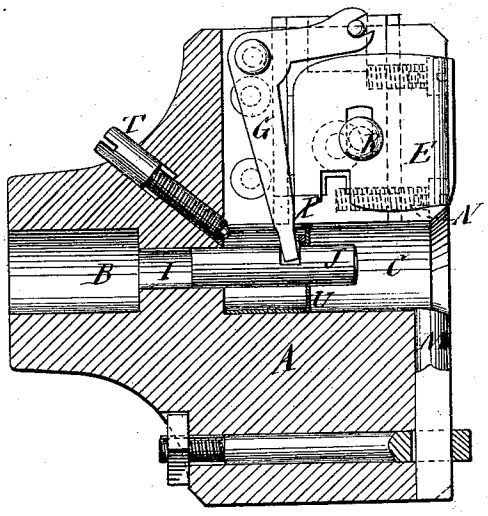


Fig. 3

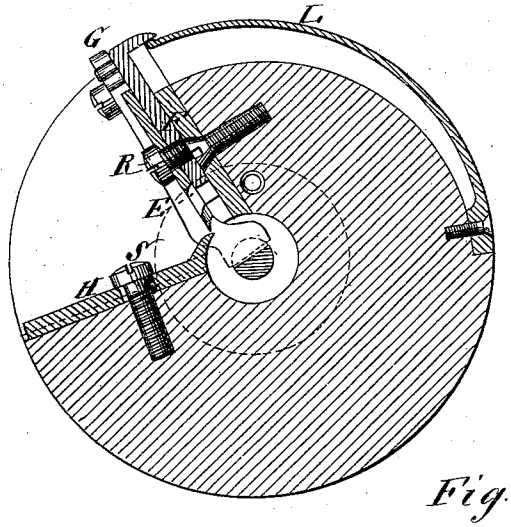


Fig. 4

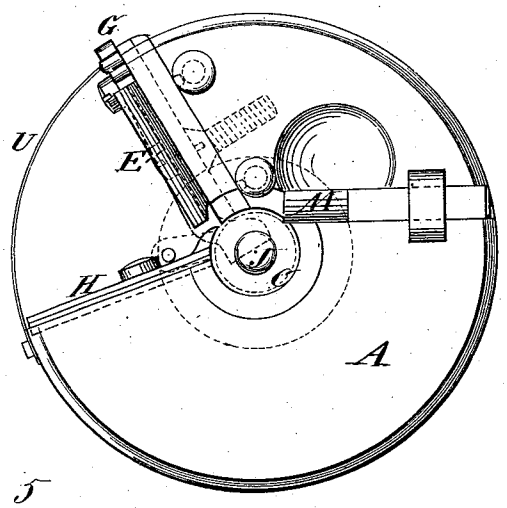
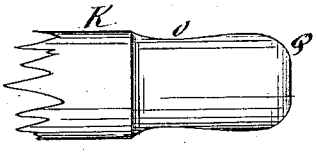


Fig. 5



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UNITED STATES PATENT OFFICE.

ALEXANDER D. RUFF, OF OWINGSVILLE, KENTUCKY.

IMPROVEMENT IN CHUCKS FOR MAKING SWELLED TENONS.

Specification forming part of Letters Patent No. **161,706**, dated April 6, 1875; application filed January 18, 1875.

To all whom it may concern:

Be it known that I, ALEXANDER D. RUFF, of Owingsville, in the county of Bath and State of Kentucky, have invented a new and Improved Chuck for Making Swelled Tenons, of which the following is a specification:

My invention consists of a pin and a lever, combined with a sliding tool in a revolving chuck, in such manner that the end of the piece on which the tenon is to be formed forces the tool, having an irregular edge for making swelled tenons, down against the side to dress off the tenon, by pushing the pin backward as the piece enters the cavity of the chuck.

My invention also consists of a spring, combined with the sliding tool, the lever, and the pin, so as to push the tool back out of the way of the swelled portion of the tenon when it begins to withdraw from the cavity of the chuck, and allow it to pass out without the swell being cut off.

Figure 1 is a side elevation of my improved chuck, with a part broken out. Fig. 2 is a longitudinal sectional elevation of the chuck. Fig. 3 is a transverse section. Fig. 4 is an end elevation; and Fig. 5 is a side elevation of a swelled tenon, such as the chuck is designed for making.

Similar letters of reference indicate corresponding parts.

A is the body of the chuck, having a socket, B, for the revolving mandrel, by which it is to be carried; also having a cavity, C, in the other end for the tenon, and a notch, D, through one side into said cavity for the turning-tool E, its carrying-slide F, the lever G, and the gage H. There is also in the cavity C, and in a smaller hole, I, behind it, a sliding pin, J, by which the end of the tenon-piece K pushes the turning-tool down against its side, the lever being of elbow shape, also pivoted at its angle, and connected at one end to the tool-slide, and at the other end to the pin.

L represents the spring for pushing the tool back when the tenon withdraws and frees the pin. M is an ordinary roughing-gouge, which reduces the tenon to the size of the swell as it enters the cavity C. The convex portion N of the edge of the tool reduces the tenon in the part O, and the part P rounds the end at Q. This tool is mounted adjustably on the carrier by means of a slot in it and the binding-screw R, to adjust it to tenons of different sizes. The gage H is also adjustable in the same manner as the tool by a binding-screw, S, passing through a slot in it. The office of this gage is to bear against the tenon in the direction to counteract the springing of it by the tool E.

The length of the tenon is gaged by the adjustable set-screw T, which arrests the lever when pushed back by the tenon. The part of the notch D and cavity C containing the arm of the lever, which is connected with the sliding pin, is inclosed by a metal cap, U, to prevent the chips from clogging behind the lever, so as to obstruct its operation.

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

1. The combination of the pin J, lever G, and the sliding and adjustable tool E in a chuck, A, having a cavity, C, and a notch, D, substantially as specified.

2. The combination of the spring L with the sliding tool E, lever G, and pin J in a chuck, A, substantially as specified.

ALEXANDER D. RUFF.

Witnesses:

FRED. K. VISSCHER,

JAMES J. NASBITT.