(No Model.)

L. E. RHODES.

SCREW CUTTING LATHE TOOL.

No. 346,499. Patented Aug. 3, 1886.

Fig. 1

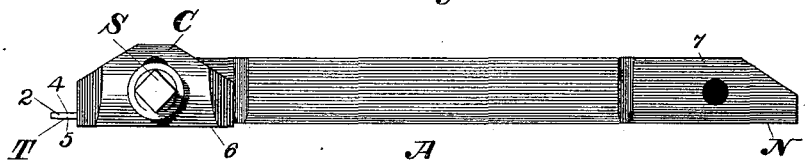


Fig. 2

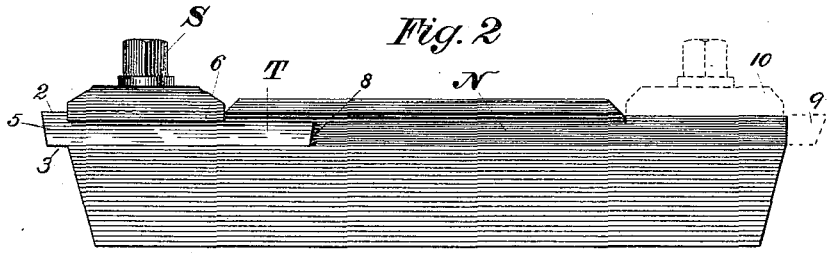


Fig. 3

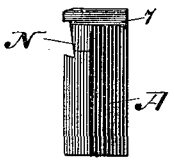


Fig. 4

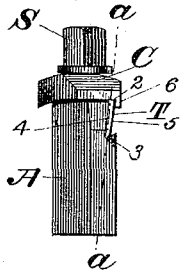


Fig. 5

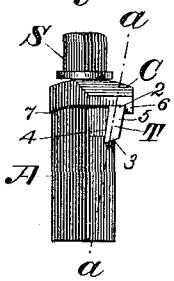
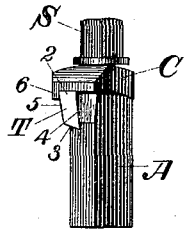


Fig. 6



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UNITED STATES PATENT OFFICE.

LEVERETT E. RHODES, OF HARTFORD, CONNECTICUT.

SCREW-CUTTING-LATHE TOOL.

SPECIFICATION forming part of Letters Patent No. 346,499, dated August 3, 1886.

Application filed December 28, 1885. Serial No. 186,967. (No model.)

To all whom it may concern:

Be it known that I, LEVERETT E. RHODES, a citizen of the United States, residing at Hartford, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Screw-Cutting-Lathe Tools, of which the following is a specification.

This invention relates to improvements in lathe-tools for cutting square threaded screws of either right-hand or left-hand pitch, the object being to furnish such a tool adapted to receive cutters made for threads of different pitch, and to so hold these cutters as to cut with the same one either a right or a left hand screw.

To this end the invention consists in the improvements and combinations hereinafter set forth.

In the drawings accompanying and forming a part of this specification, Figure 1 is a top view of a lathe-tool embodying my improvements. Fig. 2 is a side elevation of the same. Fig. 3 is an end view of the body of the tool, drawn in projection with Fig. 2. Fig. 4 is an elevation of that end of the tool at the left hand in Figs. 1 and 2. Fig. 5 is a similar view showing a larger cutter clamped to the tool-body. Fig. 6 is a similar view of the opposite end with the cutter set for making a left-handed thread.

Similar characters designate like parts in all the figures.

My improved screw-cutting tool comprises a body, A, a tool, T, a clamp, C, and a binding-screw, S. The tool-body is a flat bar of metal, usually of steel, and preferably case-hardened, of sufficient length to be conveniently held in the tool-post of an ordinary screw-cutting lathe, and deep enough to have the necessary stiffness. Said body has in one side a channel, N, formed to hold properly inclined the cutter T, and at each end it is cut away on the upper side, and shaped and bored to receive, respectively, the clamp and binding-screw. The cutter is a straight piece of hardened steel, of the form substantially as shown, the upper and widest edge, at 2, being about level, the lower and narrowest edge, at 3, beveled to hold it in place, and the two sides 4 5 inclined both in the same direction, the latter more than the former. Said sides are, however, oppositely and about equally inclined to the inclined line *a a*, which line is supposed to represent the average direction of the screw-threads for which the cutter T is adapted, it being understood that one cutter is in practice used for making threads of the same pitch on cylinders of different diameters, within a given range. For this reason side 4 of the cutter must, in practice, be nearly enough to vertical for the largest diameter, while side 5 is inclined or relieved enough for the smallest diameter within the given range.

The cutter-holding clamp is a perforated metal plate having a lip, 6, projecting over the upper edge of the cutter, for holding this against the tool-body, and fitting over the beveled or rounded edge 7 of body A. To more perfectly adapt the clamp for holding cutters of different thicknesses, its under side is made of a concave shape, so that it may have substantially the same holding-power, whether holding a thin cutter, as in Fig. 4, or a thicker one, as in Fig. 5; and to provide in all positions of the clamp a proper bearing of the screw-head thereon the upper side of said clamp is also curved conformably with its under side.

As shown in the first five figures, the tool is adjusted for use in making a right-hand screw-thread. For making a left-hand thread, the cutter is slid along in channel or groove N until its end 8 projects from the right-hand end of the body, as shown by dotted lines at 9, Fig. 2, the clamp and screw being also changed to this end, as shown by dotted lines at 10 in this figure. Thus one end of the cutter is used for right-hand and the other for left-hand threads.

Having been properly adjusted for the threads to be made, my improved tool is used in the same manner as the ordinary lathe-tools heretofore used for screw-cutting.

Having thus described my invention, I claim—

1. As an improved article of manufacture, the herein-described cutter for screw-cutting tools, which cutter has its upper cutting-edge flat, its sides inclined, one more than the other, and both in the same direction, and its lower edge beveled, all substantially as set forth.

2. The improved screw-cutting-lathe tool herein described, it comprising the body A, grooved on one side to receive the cutter, the cutter T, widest at the top and beveled on the

lower edge, as shown and described, and having its sides inclined, one more than the other, in combination with a clamp, substantially as described, for holding said cutter into the groove of said body, substantially as set forth.

3. The combination of the tool-body A, having a groove shaped to receive the cutter, and having the rounded corner 7, the cutter in said groove, and a concaved clamp bearing on said rounded corner and on said cutter, whereby this is held down and sidewise, substantially as described, and for the purpose specified.

4. The combination of the body A, having channel N, beveled on its under side, and the rounder corner 7, the cutter T, fitting said channel, the curved clamp C, having lip 6, and the binding-screw S, all constructed and arranged substantially as described.

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