

(No Model.)

C. A. EKLUND & J. F. WESTIN.

LATHE TOOL.

No. 337,673.

Patented Mar. 9, 1886.

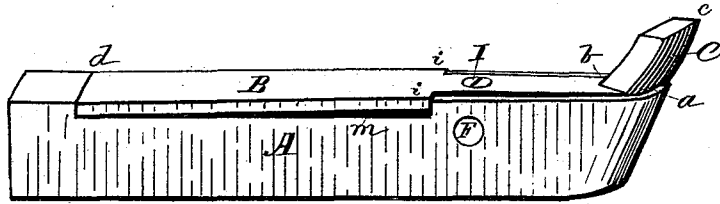


FIG. 1

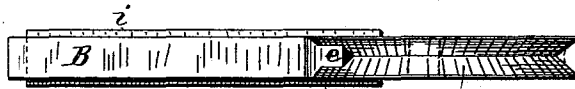


FIG. 2

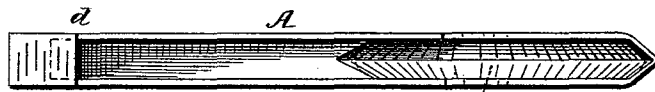


FIG. 3

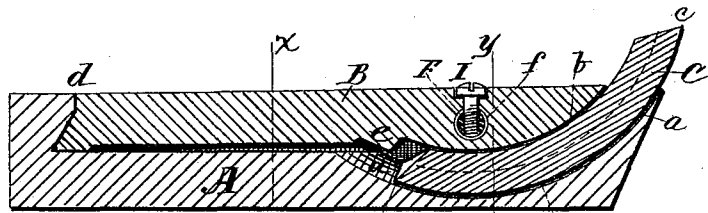


FIG. 4

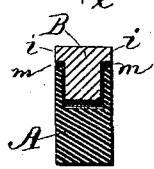


FIG. 5

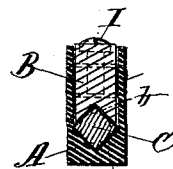


FIG. 6

WITNESSES:

*Henry Hays*  
*Ed. J. Taylor.*

INVENTORS.

*Carl A. Eklund*  
*John F. Westin*  
*By Chas. H. Dunleigh*  
*Attorney*

# UNITED STATES PATENT OFFICE.

CARL A. EKLUND AND JOHN F. WESTIN, OF WORCESTER, MASSACHUSETTS.

## LATHE-TOOL.

SPECIFICATION forming part of Letters Patent No. 337,673, dated March 9, 1885.

Application filed November 27, 1885. Serial No. 184,061. (No model.)

*To all whom it may concern:*

Be it known that we, CARL A. EKLUND, a citizen of the United States, and JOHN F. WESTIN, a citizen of Sweden, both residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Lathe-Tools; and we declare the following to be a description of our said invention sufficiently full, clear, and exact to enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to the improved construction and manner of combining the parts of the tool, the object being to provide a more practical, convenient, and efficient tool than those heretofore invented. This object we attain by the mechanism shown and described, the particular subject-matter claimed being as hereinafter definitely specified.

In the drawings, Figure 1 is a perspective view of our improved lathe-tool. Fig. 2 is a bottom view of the top piece. Fig. 3 is a plan view of the body-bar with the top piece removed. Fig. 4 is a longitudinal vertical section. Fig. 5 is a transverse vertical section at line  $x x$ , and Fig. 6 is a transverse section at line  $y y$ .

In reference to parts, A denotes the bar or body of the tool, B the top or clamping piece, and C the cutting bit or point. The body A is formed as a simple rectangular bar of proper size to fit the tool-post of the lathe, with an internal cavity open from the top, and having at the forward end a concavely-curved seat,  $a$ , for receiving the cutter C. The central plane of said seat and cutter is coincident with the central vertical plane of the bar A, the radius of its curve being some four inches, (more or less,) according to the size and purpose of the tool. The cutter C is formed of a plain bar of steel of square section, cut off at proper length, and curved in the plane of its diagonal to a circular form and radius corresponding to that of the seat  $a$ , and its extremities ground off diagonally across the ends to sharpen the cutting-points  $c c'$ , one of which may be for left-hand and the other for right-hand turning. If desired, the cutter can be of round steel, for giving a round-point tool,

instead of square steel, which makes a diamond-point, and the curved seats  $a$  may be made laterally to match the shape or section form of the cutter. The cutter C lies within the cavity of the bar A, resting in the circular seat  $a$ , with one of its ends projecting above the end of the bar, as shown, and the other end entirely concealed. The top or clamp piece B is made to lie within the body-bar A, its rear end being fitted to take bearing on the body at  $d$ , while its forward end is fitted with a longitudinally-convex bearing-surface, oppositely corresponding with the seat  $a$ , for embracing the cutter C and clamping it down upon said seat  $a$  with a firm and secure grip. A hole,  $f$ , is formed laterally through the parts A and B, and a stud, F, is passed through the same for retaining the said parts in connection. The hole  $f$  in the part B is of greater diameter than the stud F, so that the said part B can be forced down upon the cutter C by the action of the poppet-screw, whereby the tool is fixed on the tool-post of the lathe. A small screw, I, is passed down through the top of the clamp-piece B, which screws into the stud F. This screw serves for clamping the parts B upon the cutter with sufficient force for holding it when grinding, or for adjusting it in and out. A lug,  $e$ , is formed on post B, to prevent the sharpened end of the cutter from striking. The clamp-piece has side flanges,  $i$ , that extend over the top edges of the bar A along that portion where the poppet-screw of the tool-post takes bearing. Sufficient space at  $m$  is allowed, so that the flanges will not prevent the part B from firmly clamping upon the cutter.

The size and general form of this tool, when the parts are together, are approximately similar to that of the ordinary solid forged lathe-tool, and it is adjusted and fastened in the tool-post and used in similar manner to such tools. When the cutter is dull, it can be sharpened by grinding across the end. If a left hand tool is required, the cutter-piece C may be taken out and reversed, or vice versa.

The cutters C can be made cheaply and conveniently. Being of regular-shaped bar-steel, they can be readily formed, tempered, and then ground.

The tool as it wears away by grinding can be set forward at intervals until the piece is

used up, and the tool can then be readily renewed by simply inserting a new cutter, C, in place of the old one.

We are aware that lathe-tools having an adjustable curved cutter have been heretofore invented and patented, and we do not therefore herein claim such feature broadly, or irrespective of the particular construction and arrangement of the parts, which, in our improved tool is, so far as we are aware, essentially different from those heretofore produced.

What we claim as of our invention, and desire to secure by Letters Patent, is—

1. The within-described tool, composed of the bar A, having the longitudinal cavity and curved seat *a* internally thereof, the piece B,

having the curved bearing *b*, fitted within the cavity of said bar, and the curved cutter C, formed as shown, and supported and held between said seat and bearing, substantially as set forth.

2. The combination, with the bar A, the top piece, B, and cutter C, of the stud F and screw *f*, substantially as and for the purpose set forth.

Witness our hands this 21st day of November, A. D. 1885.

CARL A. EKLUND.  
JOHN F. WESTIN.

Witnesses:

CHAS. H. BURLEIGH,  
S. R. BARTON.