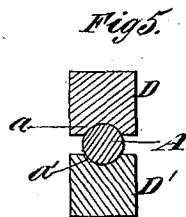
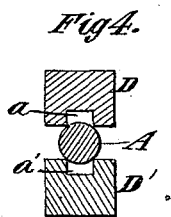
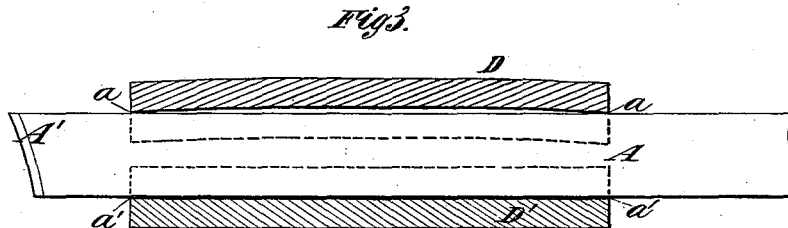
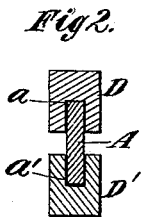
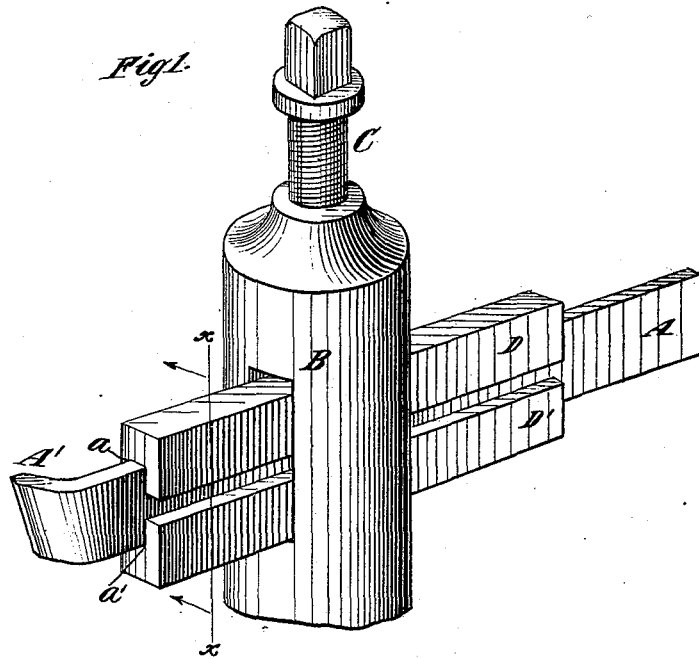


(No Model.)

C. W. LE COUNT.
Tool Holder for Turning Lathes.
No. 240,430. Patented April 19, 1881.



Witnesses
John Becker
Geo. Hays

Inventor
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UNITED STATES PATENT OFFICE.

CHARLES W. LE COUNT, OF SOUTH NORWALK, CONNECTICUT.

TOOL-HOLDER FOR TURNING-LATHES.

SPECIFICATION forming part of Letters Patent No. 240,430, dated April 19, 1881.

Application filed November 17, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. LE COUNT, of South Norwalk, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Holding-Clamps or Holders for Metal-Working Tools, of which the following is a specification.

My invention relates to the cutting-tools commonly used for turning, planing, shaping, and performing other similar operations on metal, and which are composed of pieces of bar-steel forged to give their ends the desired form, and clamped in tool posts or clamps in the machine in which they are to be used. Such tools require to be stiff enough to prevent their springing and chattering, and to this end, when intended for heavy work, they have been heretofore commonly made from steel bars of large transverse section.

The object of my invention is to provide for adequately supporting the tools near their cutting edge or end and imparting stiffness to them, thus enabling steel of small transverse section to be used, even for tools for heavy work.

To this end the invention consists in a pair of clamps adapted to be applied to opposite faces of a metal-cutting tool composed of a steel bar, and to receive the pressure of the securing device or devices whereby the tool is held while cutting, both of said clamps having in their faces channels or grooves for the reception of said tool, and one having the bottom of its groove or channel bowed or curved concavely, so as to bite upon the tool near its cutting edge or end.

In the accompanying drawings, Figure 1 represents a perspective view of a tool-post, and a tool and pair of clamps embodying my invention held therein. Fig. 2 represents a transverse section of the tool and clamps upon the dotted line XX, Fig. 1. Fig. 3 represents a vertical longitudinal section through said clamps, and a side view of said tool. Fig. 4 represents a transverse section of said clamps, and a round tool held thereby; and Fig. 5 represents a transverse section of a round tool, and clamps of modified form for holding the same.

Similar letters of reference designate corresponding parts in all the figures.

A designates a lathe-tool having its cutting end, point, or face A' fashioned to suit the char-

acter of the work to be performed by it, and B designates the upper portion of an ordinary tool-post of a lathe, in which said tool is to be clamped by a set-screw, C.

D D' designate a pair of clamps, which are preferably made of steel and tempered, and which are adapted to be applied to opposite faces or sides of the tool, as clearly shown. For a lathe-tool which extends in an approximately horizontal position I apply the clamps D D', one to the top and the other to the bottom or under side of the tool; but for a planer or shaping-machine tool, which extends ordinarily in an approximately vertical position, I apply the clamps one to the front and the other to the back of the tool. The clamps D D' should be of considerable length, and are applied to that part of the tool A which is in the holder or tool-post, and said clamps in all cases receive the pressure of the set-screw C, or other securing devices which hold the tool, and they transmit the pressure to the tool, holding it as firmly as if the set-screw or other securing devices acted directly upon the tool. The said clamps may, and preferably do, extend as nearly as possible to the cutting point, end, or face A' of the tool A, and as they bear firmly upon opposite sides or faces of the tool they impart their stiffness and rigidity to it, and enable a light tool to be used for very heavy work.

The lower clamp, D', has in its face a groove or channel, a', for the reception of the tool A, and the upper clamp, D, also has in its face a similar groove or channel, a. The said grooves or channels provide for supporting the tool at the sides, as well as the top and bottom, and stiffening it to resist transverse strain.

As shown in Figs. 1, 2, and 3, the tool A is of rectangular transverse section, and the grooves or channels a a' are square-bottomed to conform snugly thereto; but this is not necessary, as a round tool, as shown in Fig. 4, might be held between said clamps, the edges of the grooves or channels biting into or onto the tool.

Where round tools are mainly employed, the clamps D D' might have their channels or grooves concaved or rounded to conform to said tools, as shown in Fig. 5. The bottom of the channel or groove in one of the clamps—in this instance the upper one, D—is bowed or

curved concavely, as shown clearly in Fig. 3, to enable the clamp to bear with greater force upon the tool near its ends.

The clamps D D', which, as before stated, are preferably made of steel, are tempered, and are not expensive, and if the lathe-tools in a shop are all made from steel of the same, or nearly the same, size, a single pair of clamps for each machine in which tools of this character are used is all that is necessary.

What I claim as my invention, and desire to secure by Letters Patent, is—

A pair of clamps adapted to be applied to

opposite faces of a metal-cutting tool composed of a steel bar, and to receive the pressure of the securing device or devices, whereby the tool is held while cutting, both of said clamps having in their faces channels or grooves for the reception of said tool, and one having the bottom of its groove or channel bowed or curved concavely, substantially as and for the purpose specified.

C. W. LE COUNT.

Witnesses:

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HENRY M. WALRADT.