

(No Model.)

C. F. PRATT.
ENGRAVING TOOL.

No. 476,817.

Patented June 14, 1892.

Fig. 1.

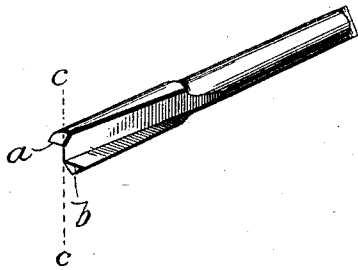


Fig. 2.

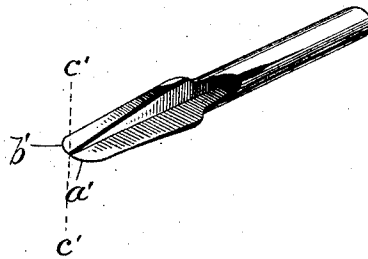


Fig. 3.

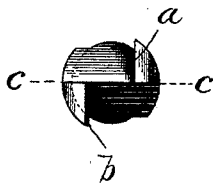
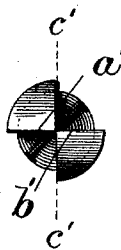


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ENGRAVING-TOOL.

SPECIFICATION forming part of Letters Patent No. 476,817, dated June 14, 1892.

Application filed April 8, 1892. Serial No. 428,332. (No model.)

To all whom it may concern:

Be it known that I, CHARLES FREMONT PRATT, a citizen of the United States, residing at East Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Engraving-Tools; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention pertains to carving-tools of that class which are designed to be secured in a rotary holder and held in the hand and guided by it over the pattern to be defined.

The object of the invention is to prevent vibration, obviate side stress, and provide a tool that will be as efficient as the ordinary tool when rotated at a greatly-diminished speed, thereby lessening the wear and the tear on the machinery for driving the flexible shafting to which the tool is secured.

These tools as generally constructed have their cutting-edges located wholly, or nearly so, to one side of the axis of the tool. Hence the tendency of the tool is to vibrate, because the stress is not evenly divided and is to one side of the axis of the said tool. Moreover, only one set of cutting-edges being provided, it has been found necessary to rotate such tools at a high rate of speed—say from sixteen to eighteen thousand revolutions per minute. These objections are obviated by the present invention, which remedies them wholly, or nearly so.

The present invention consists of a rotary carving-tool having co-ordinate cutting-edges on opposite sides of a plane passing longitudinally through the axis of the tool and which may be in the same or different transverse planes.

The invention further consists of the novel features which will be hereinafter more fully described and claimed and which are shown in the annexed drawings, in which—

Figure 1 is a perspective view of a rotary carving-tool embodying my invention. Fig. 2 is a perspective view of a modified form of

tool. Fig. 3 is an end view, on an enlarged scale, of the tool shown in Fig. 1; and Fig. 4 is an end view, also upon an enlarged scale, of the form of tool shown in Fig. 2.

The vital feature of the invention is the co-ordinate cutting-edges on opposite sides of the axis or a plane passing longitudinally through the axes of the tool, whereby the tool is balanced—*i. e.*, the stress on the tool will be equal—both edges or set of edges cutting alike and with equal force.

In Figs. 1 and 3 the cutting-edges *a* and *b* are in different planes and project from opposite sides of a line *C*, passing through the axis of the tool, and are located equidistant from the said axis.

In Figs. 2 and 4 the cutting-edges *a'* and *b'* are in the same plane, forming in effect a straight cutter, and are located on opposite sides of a plane or line *C'*, passing through the axis of the tool.

The form of the co-ordinate cutting-edges will depend upon the nature of the work. They may be straight, curved, or a combination of straight and curved lines, so long as the cutting-edge on one side of the axis of the tool is the counterpart and the equal of the cutting-edge on the opposite side of the said axis.

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

1. A rotary carving-tool having a plane passing longitudinally through the axis of the tool and having co-ordinate cutting-edges projected from opposite sides of the said plane, substantially as shown and described.

2. A rotary carving-tool having a plane passing longitudinally through the axis of the tool and terminating in a cutting-edge and co-ordinate cutting-edges projected from opposite sides of the said cutting-edge at points equidistant from the axis of the tool, substantially as specified, and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES FREMONT PRATT.

Witnesses:

DE WITT C. PRATT,
FRED. B. LAMPHERE,