(No Model.)

W. W. TUCKER.

KNURLING TOOL.

No. 290,612. Patented Dec. 18, 1883.

Fig. 1

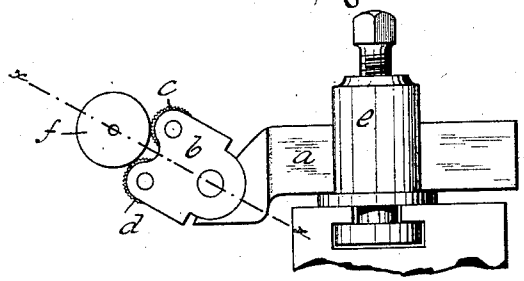


Fig. 2

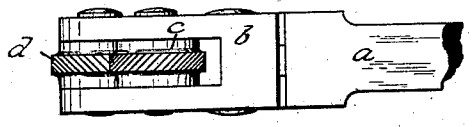
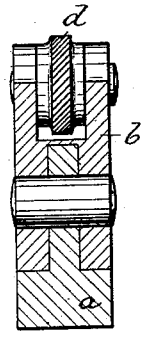


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM W. TUCKER, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE PRATT & WHITNEY COMPANY, OF SAME PLACE.

KNURLING-TOOL.

SPECIFICATION forming part of Letters Patent No. 290,612, dated December 18, 1883.

Application filed April 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. TUCKER, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Knurling-Tools; and I do hereby declare that the following is a full, clear, and exact description of the invention, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Figure 1 is a side view of my improved tool as applied to an article held in position for work. Fig. 2 is a top view of the cutters in the tool. Fig. 3 is a view of same in section on plane *x x* of Fig. 1.

My invention relates to the class of tools used for roughening or "knurling," as it is called, the surfaces of the heads of thumb-screws and the like; and it consists in so securing a block bearing the cutters and a stock or handle that an equal pressure is exerted on both cutters when the tool is being used, and the cross-cuts formed by the cutters made of equal depth. The old form of knurling-tool—that is, one having the cutters pivoted in the end of a stock or handle—requires a skilled workman to produce even an average class of work by its use, as, without great care and skill, one of the cutters will make deeper cuts than the other, marring the work. By my improvement any pressure exerted on the handle is divided uniformly and automatically between the cutters, so that an unskilled person can produce first-class work by its use.

In the accompanying drawings, the letter *a* denotes a stock or handle; *b*, a carrier-block pivoted to the stock; *c d*, rotary cutters, pivoted so as to rotate in a mortise, *b'*, in the outer end of the carrier-block. The tool-post *e* is of any ordinary form, secured to the lathe in the usual manner, and preferably so as to bring the cutter *d* below the center of the object *f*, held between the centers of the lathe and rotated in the usual manner.

My improved tool can be used when the articles are held in a weight-lathe—that is, one where the carriage is held down by a weight, without any tendency to cause the work to lift; and it is of course equally applicable to work held in a gib-lathe.

My improved tool may be held in the tool-holder, as shown, or in the hand, and the pressure necessary to do the work is adjusted by the swinging of the carrier-block, so that the pressure of each cutter, and therefore the depth of the cuts made, is uniform and equal; and this result is gained automatically and with the exertion of no great skill on the part of the workman.

I claim as my invention—

1. In a knurling-tool, a stock pivoted to a carrier-block bearing rotary cutters, all substantially as described, and for the purposes set forth.

2. In combination, tool-holder *e*, stock *a*, pivoted carrier-block *b*, bearing cutters *c d*, all substantially as described, and for the purposes set forth.

3. In combination, a carrier-block bearing rotary cutters, and attached to a stock or handle by a pivot or equivalent device, whereby pressure upon the work in the act of cutting is automatically equalized between the cutters, all substantially as described.

WILLIAM W. TUCKER.

Witnesses:
CHAS. L. BURDETT,
WM. H. MARSH.