

(No Model.)

W. N. BUCKLEY.
MILLING TOOL.

No. 255,589.

Patented Mar. 28, 1882.

fig. 1

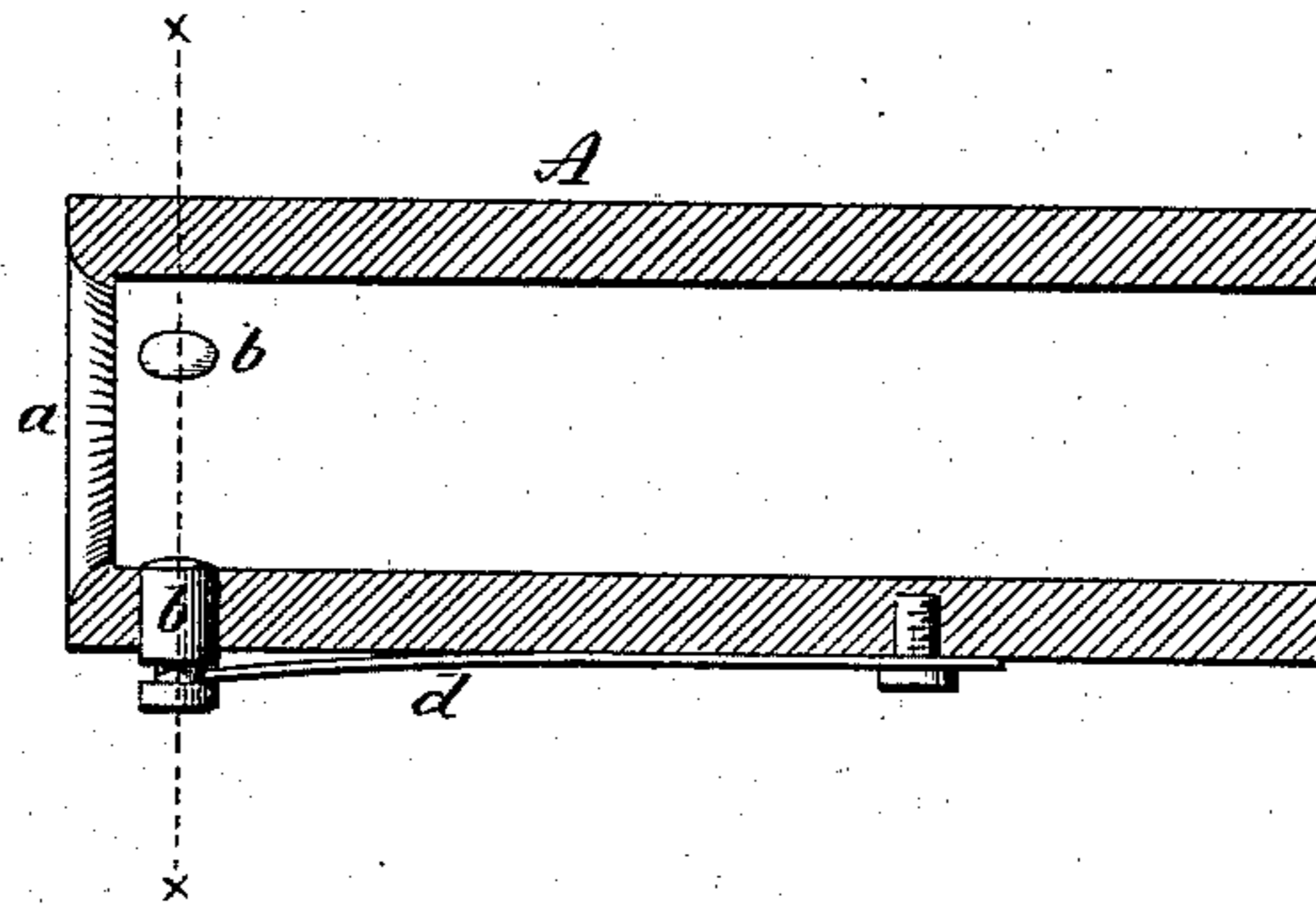


fig. 2

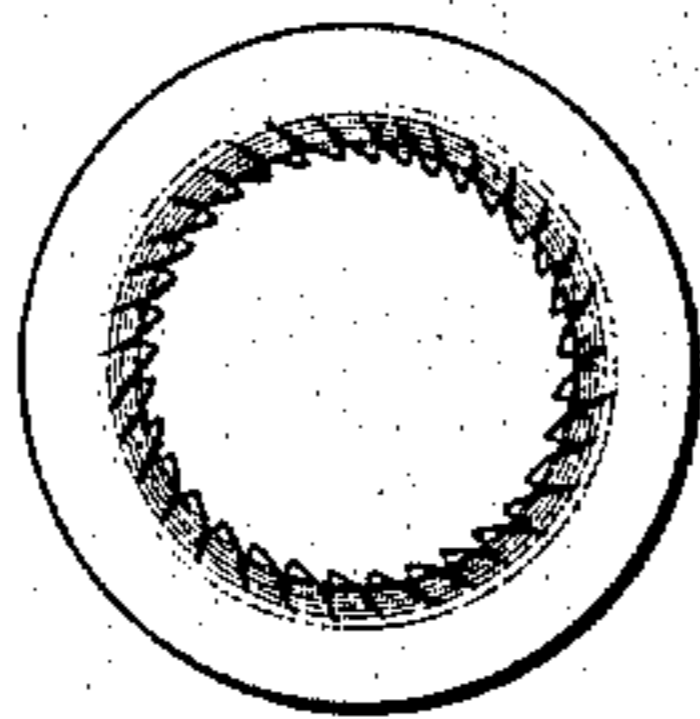
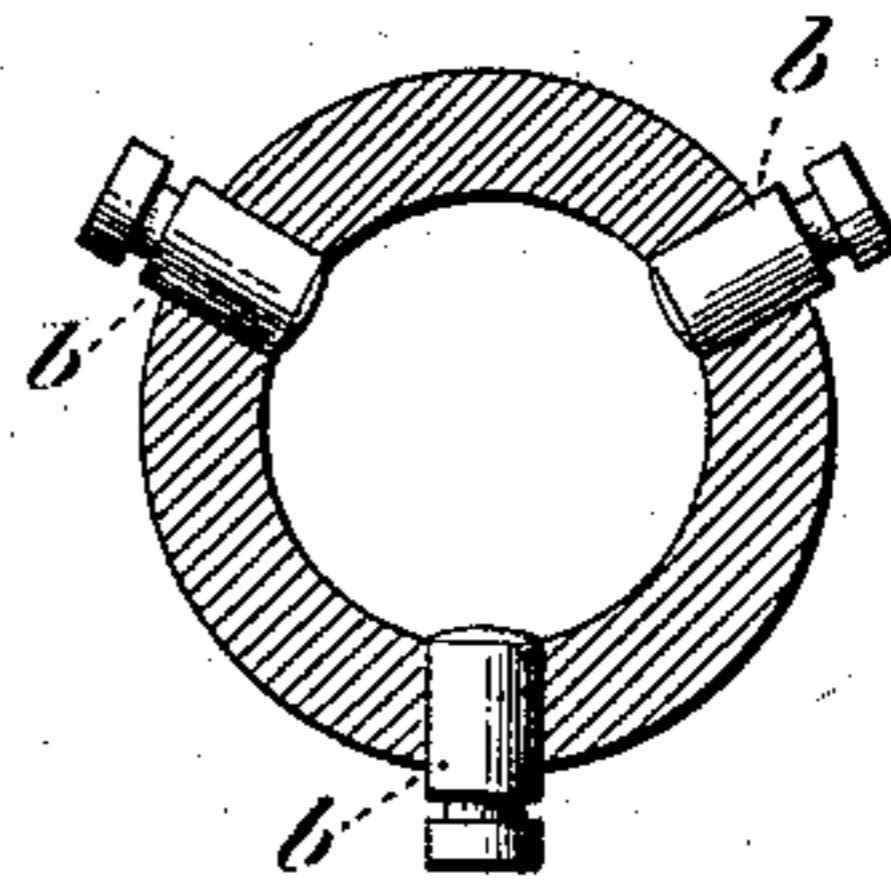


fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM N. BUCKLEY, OF MERIDEN, CONNECTICUT.

MILLING-TOOL.

SPECIFICATION forming part of Letters Patent No. 255,589, dated March 28, 1882.

Application filed November 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, WM. N. BUCKLEY, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Turning and Burnishing Tools; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a longitudinal central section; Fig. 2, an end view; Fig. 3, a transverse section on line *x x*.

This invention relates to an improvement in tools for turning cylinders of soft metal—such as brass, copper, &c.—and applicable to various purposes where cylindrical turning and polishing are desirable. The usual method of turning and polishing and burnishing such cylindrical surfaces has been to first turn the surface either by means of a hollow mill or other turning-tool, and then, after the turning-tool has finished its work, to apply a hand-burnisher to the surface to complete the work, thus making two operations necessary to turn and burnish the one piece.

The object of this invention is to construct a tool which will turn the surface to the required diameter and at the same time burnish the surface when turned; and it consists in a hollow mill the cutting diameter of which corresponds to the cylindrical surface to be turned, combined with one or more burnishers set in the tool immediately behind the cutting portion, as more fully hereinafter described.

A represents the tool, which is preferably of cylindrical shape and made hollow longitudinally, of a diameter slightly larger than the diameter of the article to be turned, and at its outer end fitted with a hollow mill-like cutting-surface, *a*, of substantially the usual form for a hollow mill.

Near to the cutting portion, and in rear of it, I arrange one or more burnishers, *b*, preferably three, at equal distances from each other, set in the holder free for radial movement, with a spring, *d*, attached to the tool and arranged

to bear the burnishers radially inward. The inner ends of the burnishers are shaped so as to give a bearing upon the surface corresponding to the usual burnishing tool. The tool is applied to a turret in the usual manner for such tools or for other devices, so that the tool may rotate rapidly, or so that the thing to be turned and burnished will revolve rapidly—that is, the one stationary and the other revolving—or both may revolve in opposite directions.

The thing to be turned is presented to the hollow mill in the usual manner. It enters that tool, and as fast as the surface is turned that turned surface is presented to the burnishers *b*, which burnish that surface as it passes into the tool. Then the article so turned and burnished once over is drawn out from the tool, and in this drawing out the burnishers again pass over the surface, so that the complete work of turning and burnishing is performed in the single operation—that is, no additional time is required for the burnishing, as in the method heretofore practiced.

I represent the spring *d* as a flat spring bearing upon the burnisher; but the spring may be otherwise arranged, it only being essential that there shall be a spring-pressure applied to the burnishers.

While I prefer the mill as being the best for cutting or turning the surfaces, it will be understood by those skilled in the art that means may be introduced at the mouth to perform the same work. I therefore do not wish to be understood as limiting my invention to a mill or toothed cutting-edge; but

What I do claim is—

The herein-described turning, polishing, or burnishing tool, consisting of the hollow tool presenting a cutting device at its mouth, combined with one or more burnishers arranged in rear of the cutting portion and movable radially in the tool, with a spring to apply inward pressure to the said burnisher or burnishers, substantially as described.

WM. N. BUCKLEY.

Witnesses:

HENRY DOWNES,
ELIZABETH DOWNES.