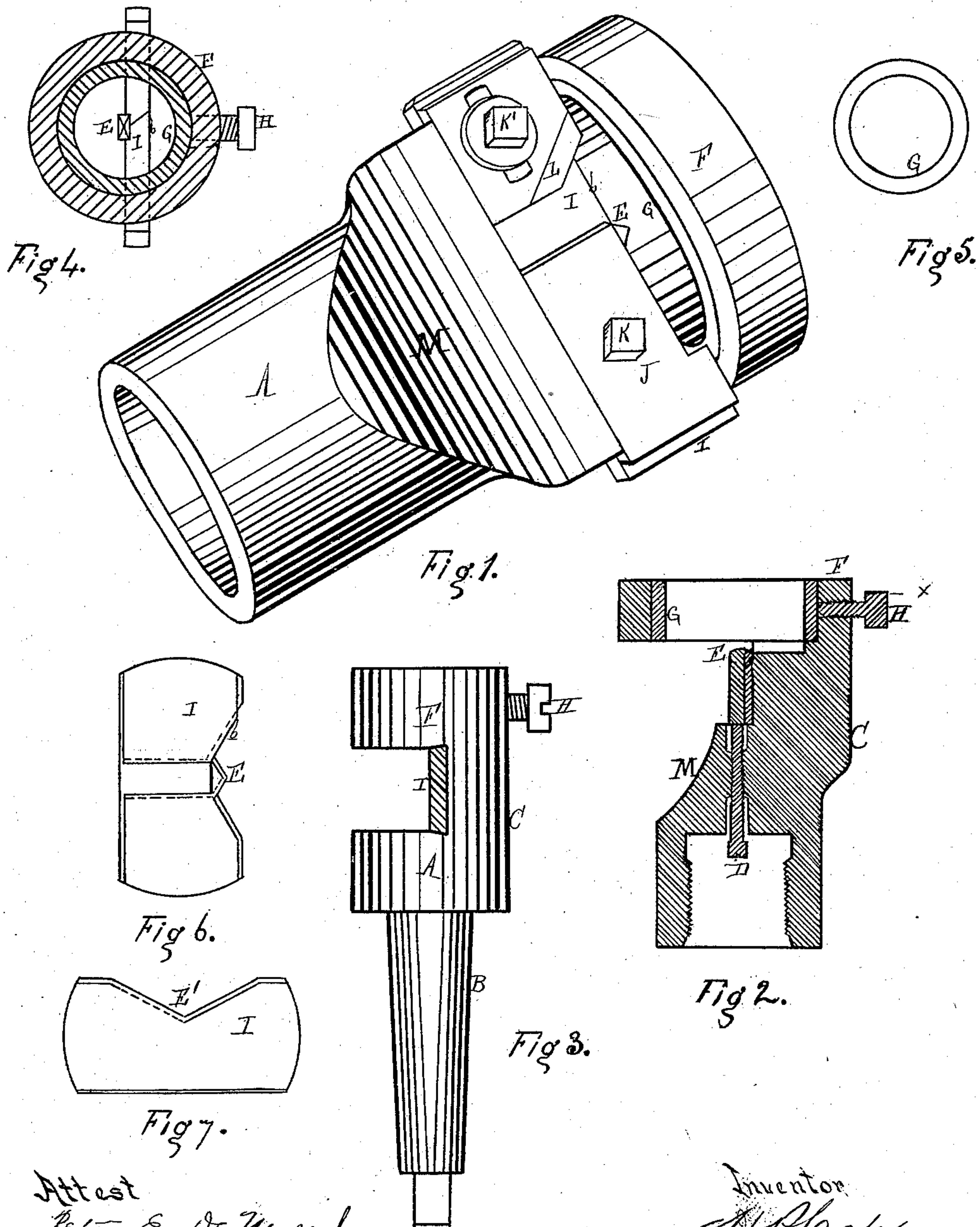


H. P. CASE.
Chuck.

No. 209,459.

Patented Oct. 29, 1878.



Attest
Peter E. De Muel Jr.
Charles J. Munk

Inventor
H. P. Case
By Atty
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

HIRAM P. CASE, OF DETROIT, MICHIGAN.

IMPROVEMENT IN CHUCKS.

Specification forming part of Letters Patent No. **209,459**, dated October 29, 1878; application filed April 13, 1878.

To all whom it may concern:

Be it known that I, HIRAM P. CASE, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Chucks, of which the following is a specification:

The nature of my invention relates to new and useful improvements in that class of chucks which are employed, in combination with a lathe or other device, for holding and centering shafting or other articles; and the invention consists in the peculiar construction and arrangement of the various parts, and their combination with a cutter, by means of which the end of the shaft is finished, as more fully hereinafter described.

Figure 1 is a perspective of my device. Fig. 2 is a vertical central section. Fig. 3 is a side elevation of a modification of Fig. 1. Fig. 4 is a cross-section on the line *xx* in Fig. 2. Fig. 5 is a plan view of the loose centering-ring. Figs. 6 and 7 are modifications of the centering-point.

In the drawings, A represents a cylinder, which forms the base of my tool, and by its means the tool is secured to the mandrel B or shank of a lathe or drilling-machine. This cylindrical portion is short, and terminates in a solid portion, C, which is centrally tapped, as shown in Fig. 2, to receive the set-screw D, the end of which rests against the bottom of the centering-bit E, and by means of said set-screw the bit is made to project more or less, as may be desired. The outer end of the tool terminates in a guide-ring, F, within which may be inserted any loose centering-ring, G, of any required thickness, and this ring is held in place by the set-screw H. This bit E is inserted in the plate I in the front edge thereof, as shown in Fig. 4, and the clamp-plate J holds said bit in place. These plates are secured in place by the bolts K K'; or the bit may be held in place by dovetailing it into the edge of the plate I, as shown in Fig. 6, which is preferable in small tools. L is a cutter, of the form shown, which is adjustably attached to the plate I by means of a longitudinal slot, *a*,

and the bolt K'. M is a cut-away portion from the solid part C of the tool, forming a throat which gives easy access to the hereinbefore-named working parts for the purpose of adjusting them. In Fig. 7 another form of the plate I is shown to be employed when it is desired to round off or taper the end of a bolt accurately. To this end the plate is provided with cutting-edges E', and the center-bit is not required. The plate I, employed with the centering-bit, is provided with a cutting-edge at *b*, to finish the end of the shaft or bolt, while the cutter L cuts off and finishes the edge.

In practice the operation of this tool is as follows: We will suppose the bore of the guiding-ring F to be two inches in diameter, and it is desired to work a shaft or bolt of one and a half inch in diameter. A reducing-ring, G, is inserted within F, so as to reduce the diameter nearly to the size of the bolt to be operated upon, and secured by the set-screw H. The bolt is then inserted and the lathe started. The cutter L is first brought into contact with the end edge of the bolt, and commences cutting that off, and, feeding up, the centering-bit cuts its way into the exact center of the bolt, and when thus centered the cutting-edge *b* of the plate I finishes the end of the bolt flat, as shown in Fig. 1, or slightly conical or rounded, as shown in Fig. 6. The cutter L is adjustable, as described, to enable the operator to adjust it to bolts of different sizes.

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

In a tool for finishing the ends of shafts or bolts, the combination, with the body A, of the guide-ring F on the end of body, provided with a set-screw, H, to hold a centering-ring, the plate I in the throat of the body, carrying the centering-bit E, which rests on an adjusting-screw, D, the clamping-plates J, and cutters L, substantially as described and shown.

HIRAM P. CASE.

Witnesses:

H. S. SPRAGUE,
CHARLES J. HUNT.