

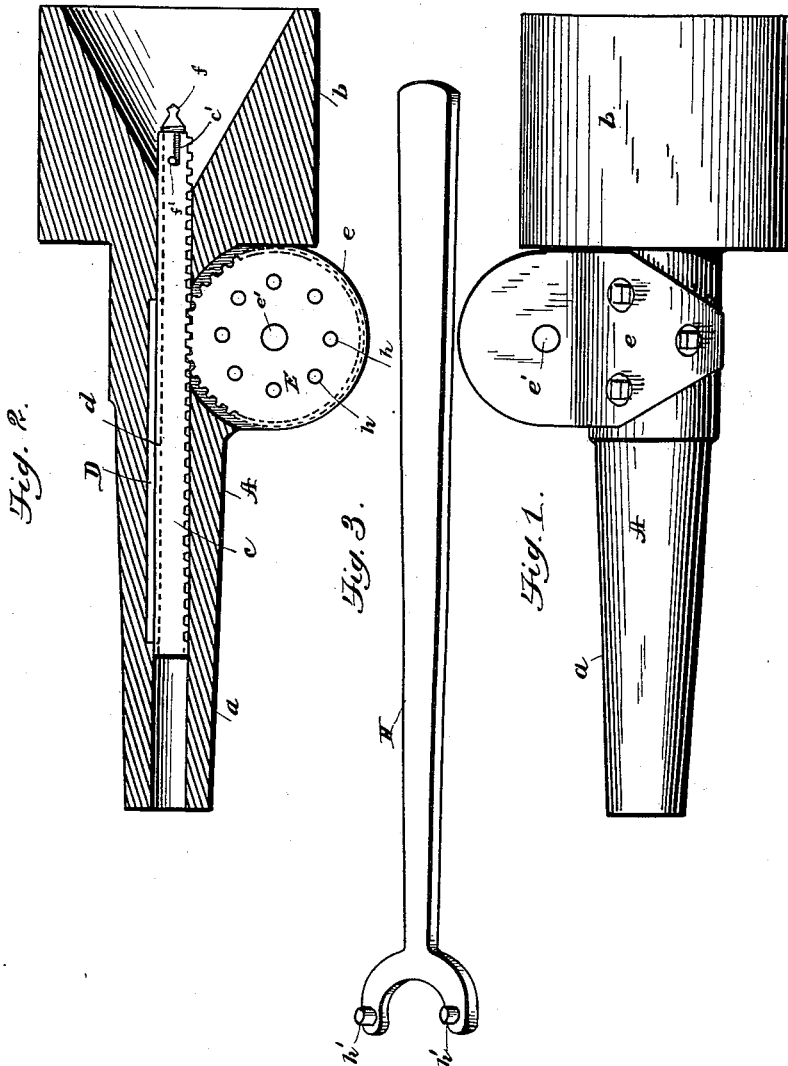
No. 606,985.

Patented July 5, 1898.

R. C. WREGE.  
CENTERING TOOL FOR LATHES.

(Application filed Dec. 8, 1896.)

(No Model.)



WITNESSES  
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# UNITED STATES PATENT OFFICE.

RICHARD C. WREGE, OF DETROIT, MICHIGAN.

## CENTERING-TOOL FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 606,985, dated July 5, 1898.

Application filed December 8, 1896. Serial No. 614,957. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD C. WREGE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Centering-Tools for Lathes; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an improved centering-tool for the tail-stock of lathes, and has for its object an improved form of tool which automatically finds the center, countersinks it for the reception of the lathe-center, and bores a clearance-hole in front of the center-seat.

In the drawings, Figure 1 is a side elevation of the tool. Fig. 2 is a vertical longitudinal section of the tool. Fig. 3 shows the spanner-wrench employed to force the drill and countersink forward against the work.

A indicates the body part of the tool, which consists of a tang *a*, adapted to engage in the tail-stock of a lathe, and a bell-mouthed or conical-mouthed head *b*. The tang *a* is hollow, and within it is located a rack *c*, preferably round in cross-section and provided with a feather-way or keyway *d*, in which engages a feather or key *D*, secured to the body of the tool and which projects into the hollow of the tang *a*.

On one side of the body part of the tool is bolted or otherwise secured a bearing-block *e*, provided with a journal *e'*, and on the journal is mounted a gear-wheel *E*, that engages with the rack *c*. In order to make the engagement, a segment of the wheel extends through the walls of the neck between the head *b* and the tang *a*, and the walls through which it extends serve to hold the gear-wheel from escaping from the journal *e'*.

The forward end of the rack *c* is provided with a seat for the short tang and the drill-bit *f*. This drill-bit *f* has two cutting-bits of

different diameter. The front or smaller one of these serves to bore the advance or clearance hole at the bottom of the center-seat and the rearmost serves to bore the center-seat itself.

From the tang of the bit *f* projects a pin *f'*, and this pin engages in a bayonet-slot *c'* at the end of the rack.

The wheel *E* is provided with a number of holes *h h*, in which engage the spurs *h'* of the spanner-wrench *H*.

To use the tool, it is placed in the tail-stock of a lathe, and the work to be centered is caught by the chuck of the lathe, and the end that is to be centered is inserted in the bell-mouthed opening of the head *b*. The work to be centered is rotated, and the tool remains stationary. The rack and the bit *f* are retracted or drawn back into the tang, and the tool is advanced until the work to be centered engages as snugly as possible in the mouth of the tool, and the work is rotated by means of its engagement with the rotating parts of the head-stock.

When the tool has been brought into close engagement with the piece to be centered, the rack and the bit carried by it are forced forward by means of the spanner-wrench, and the work is centered with the proper countersunk hole and with the proper pilot or clearance hole.

What I claim is—

In a centering-tool the combination of a shank adapted to engage the tail-stock of a lathe, said shank being hollow and provided with a flaring opening adapted to engage the end of the work to be centered, a bit provided with a rack extending lengthwise of it and a pinion journaled in the shank engaging the rack and adapted to actuate the bit, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

RICHARD C. WREGE.

Witnesses:

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