

No. 764,609.

PATENTED JULY 12, 1904.

W. LODGE.  
BORING TOOL.

APPLICATION FILED MAR. 21, 1904.

NO MODEL.

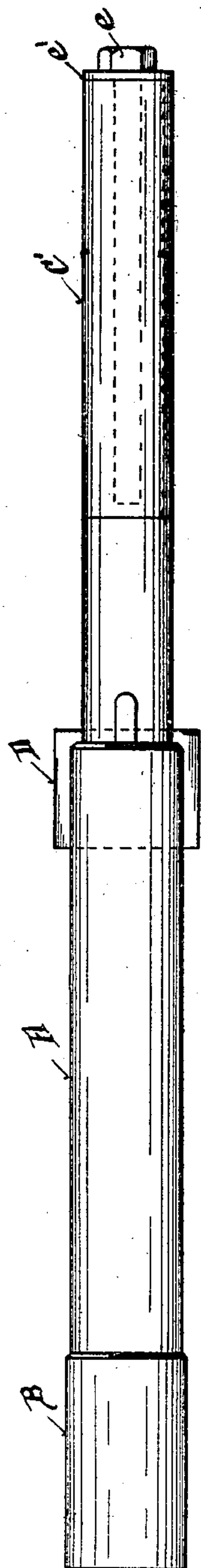


Fig. 1.

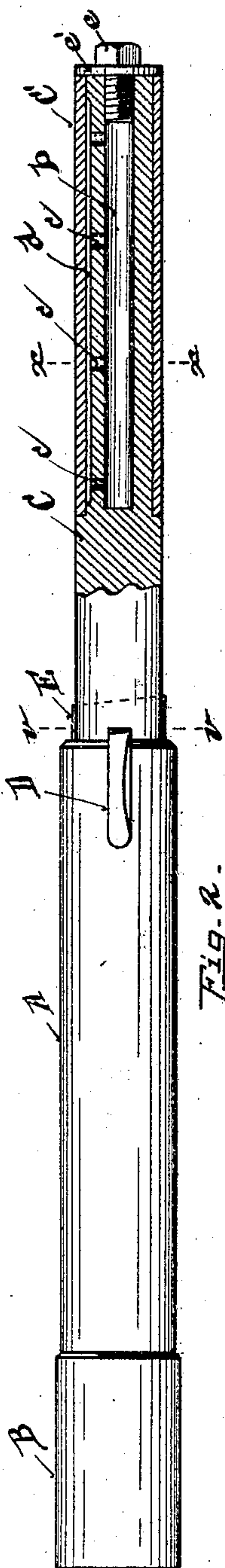


Fig. 2.

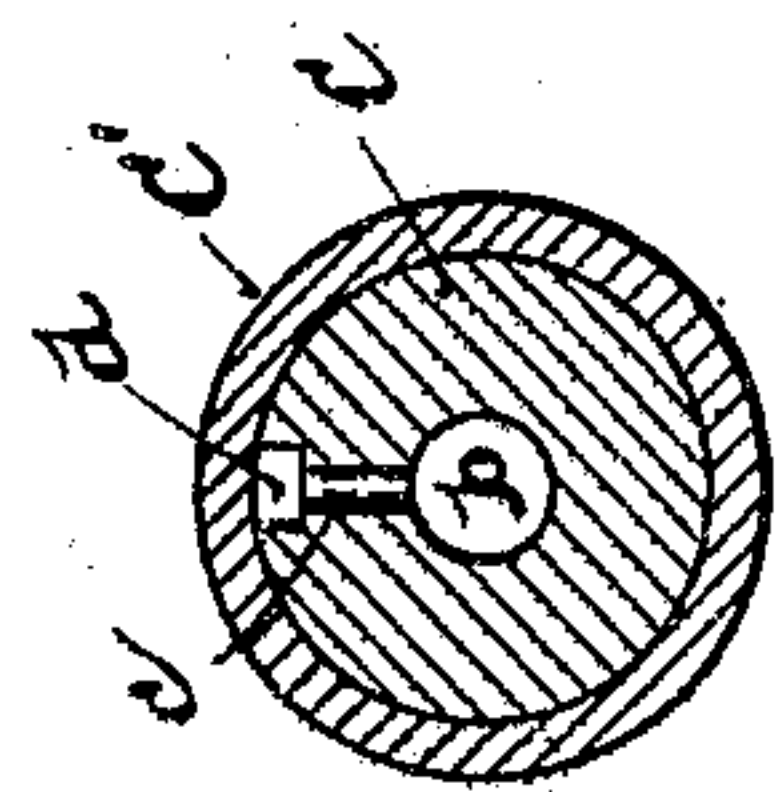


Fig. 4.

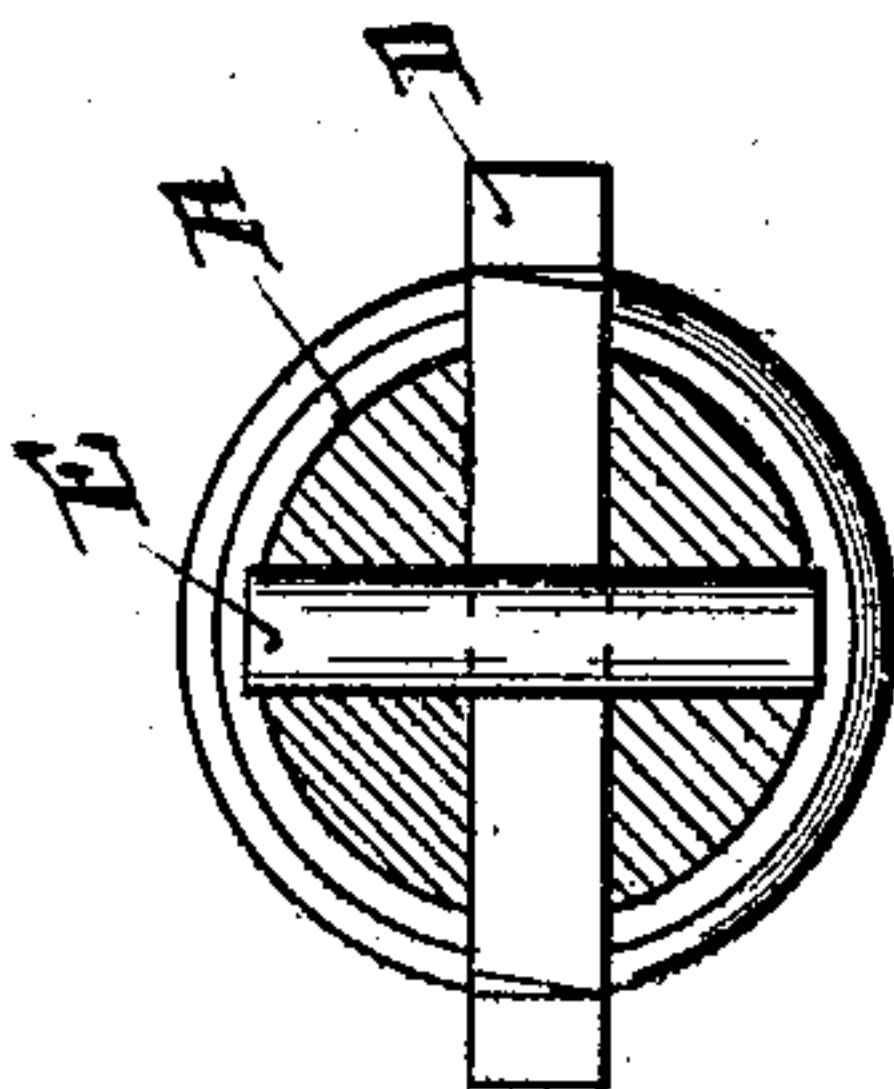


Fig. 3.

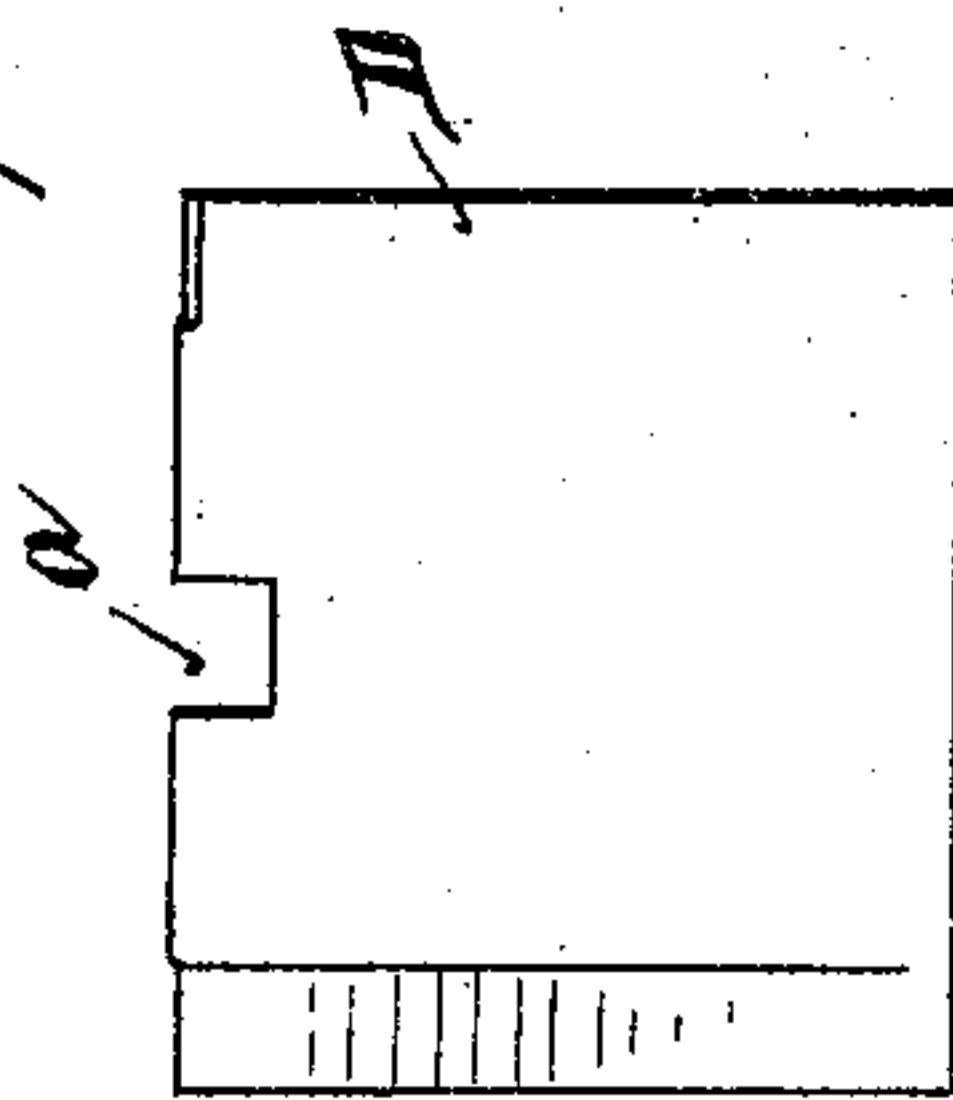


Fig. 5.

Witnesses

Oliver B. Kaiser  
Leo O'Donnell

Inventor

William Lodge

By

Thomas W. Brown

Attorneys

## UNITED STATES PATENT OFFICE.

WILLIAM LODGE, OF CINCINNATI, OHIO, ASSIGNOR TO THE LODGE & SHIPLEY MACHINE TOOL COMPANY, OF CINCINNATI, OHIO, A CORPORATION.

## BORING-TOOL.

SPECIFICATION forming part of Letters Patent No. 764,609, dated July 12, 1904.

Application filed March 21, 1904. Serial No. 199,252. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM LODGE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Boring-Tools, of which the following is a specification.

My invention relates to a new and improved boring bar or tool or a boring-machine particularly adapted to support a cutting-tool of high-speed steel.

The features of my invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my improved tool. Fig. 2 is a top plan view of the same, partly in section. Fig. 3 is a section on line *x x*, Fig. 2. Fig. 4 is a section on line *x x*, Fig. 2. Fig. 5 is a plan view of the boring-tool blade.

A represents the two-part tool-stock, one end of which, B, is adapted to be secured to the live element of the boring-machine, the other end, C, being a sleeve in which the part B turns, said sleeve being adapted to be supported by the dead element of the boring-machine. The intermediate portion of the stock is provided with a diametrical slot, in which is inserted the cutter D, and it is also provided with a transverse diametrical slot into which is driven a fastening-pin E, which engages into the notch *a* at one end of the cutter D. The end C of the stock is bored endwise to form the oil-well *b*.

*c* represents ducts from the oil-well *b* to a longitudinal groove *d* in the periphery of the

part C. The sleeve C' fits onto the reduced end of the stock C and is secured by a bolt and washer *e'*, engaging into the outer end of the outer well *b*. By this means a small cutter of high-speed steel may be securely inserted in the stock and may be conveniently changed. Where in a boring-tool of this class one end of the tool-stock has a bearing against the dead-center of the tool, the drillings get into the said bearing and have a grinding action on the tool and on the support. With my invention this difficulty is obviated. The tool can be perfectly alined between centers, and it freely turns on a lubricated journal-bearing. In other words, the stock in which the cutter is secured carries its own journal, the stock having a driving engagement with the live-center and the journal being supported by the dead-center.

Having described my invention, I claim—

A boring-tool for a suitable actuating-machine, comprising a tool-stock provided with a cutter, one end of the tool-stock being adapted to be held by the live element of the actuating-machine, the other end of the stock being provided with a journal-sleeve adapted to be engaged by the dead element of the actuating-machine, whereby the tool-stock is rotated in a self-supported journal-bearing, substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM LODGE.

Witnesses:

OLIVER B. KAISER,  
LEO O'DONNELL.