

No. 770,052.

PATENTED SEPT. 13, 1904.

J. W. FAESSLER.  
FLUE CUTTER.

APPLICATION FILED MAR. 3, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

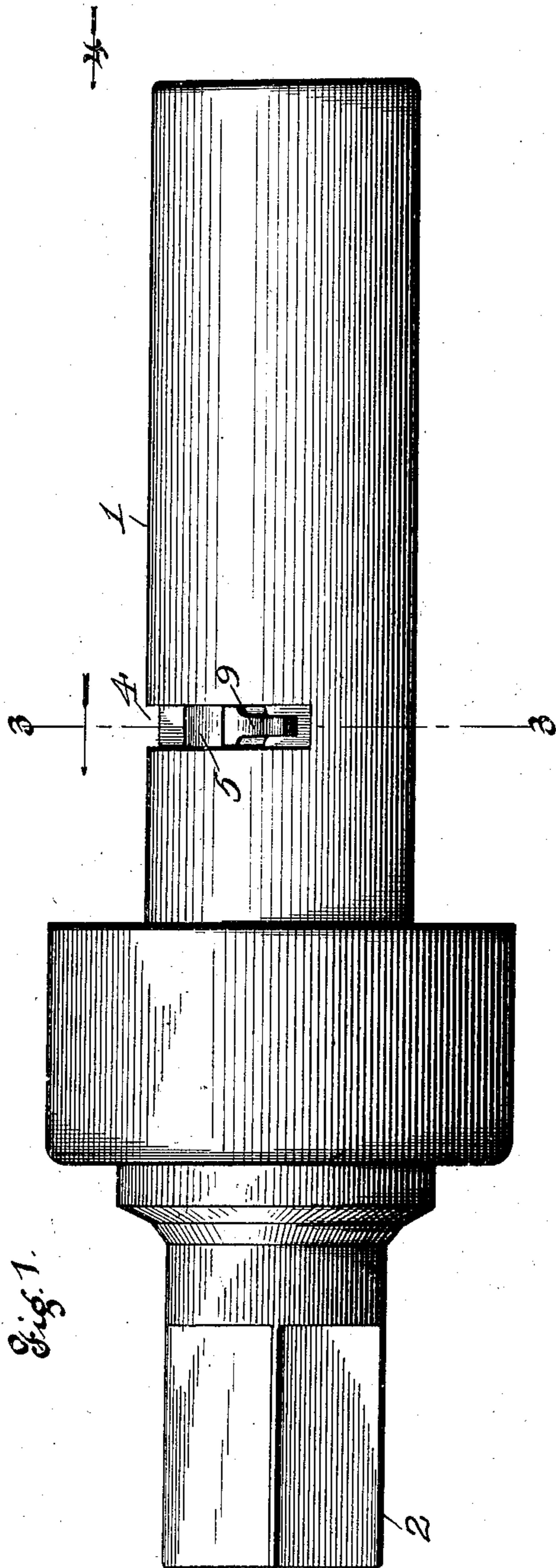


Fig. 1.

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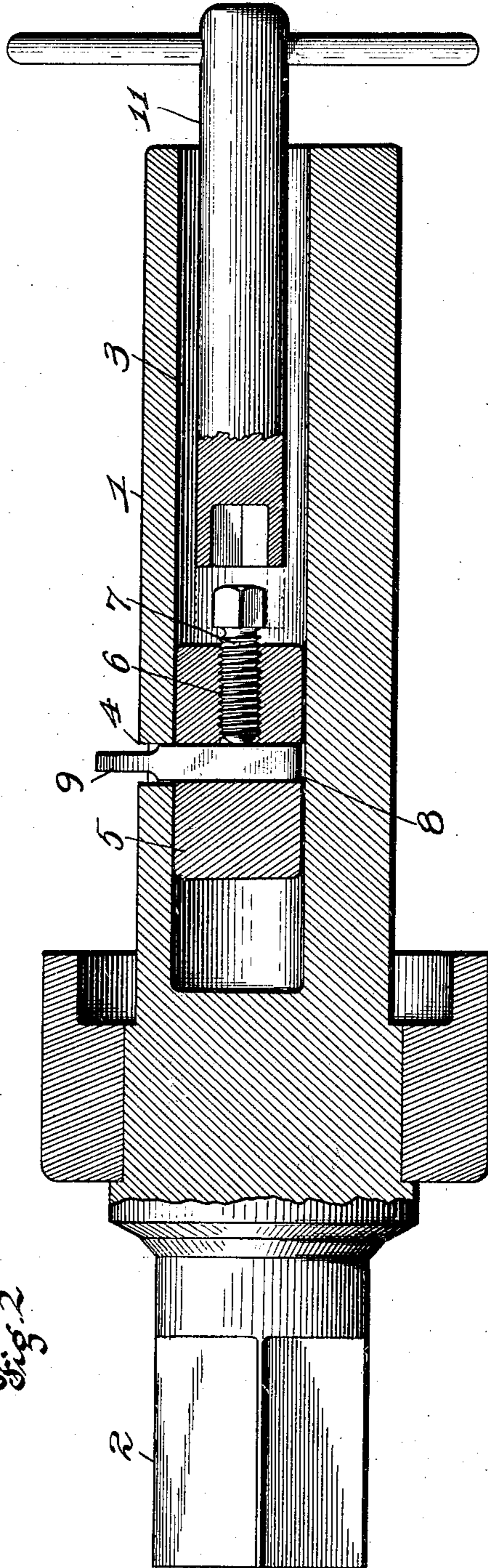


Fig. 2.

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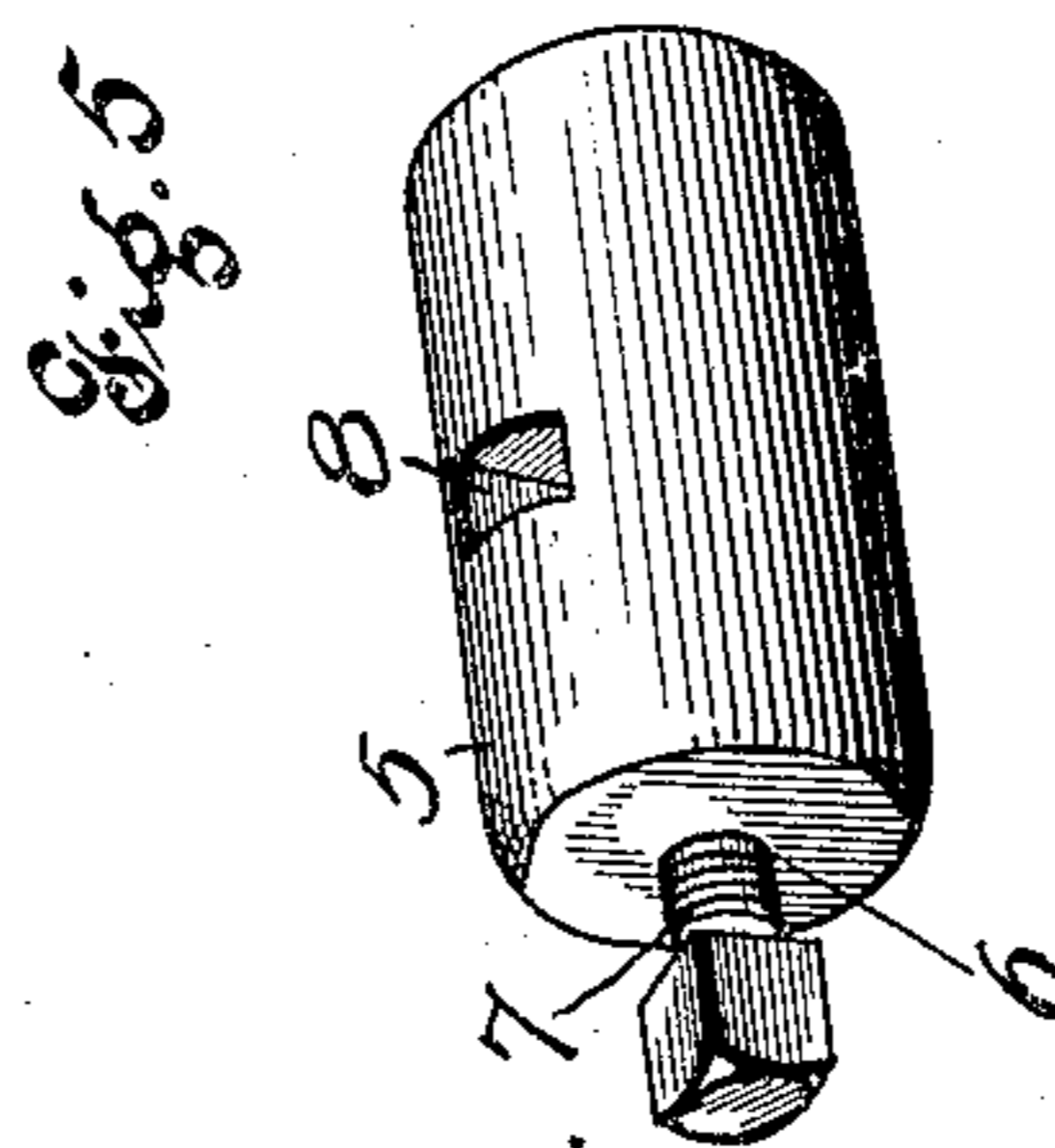
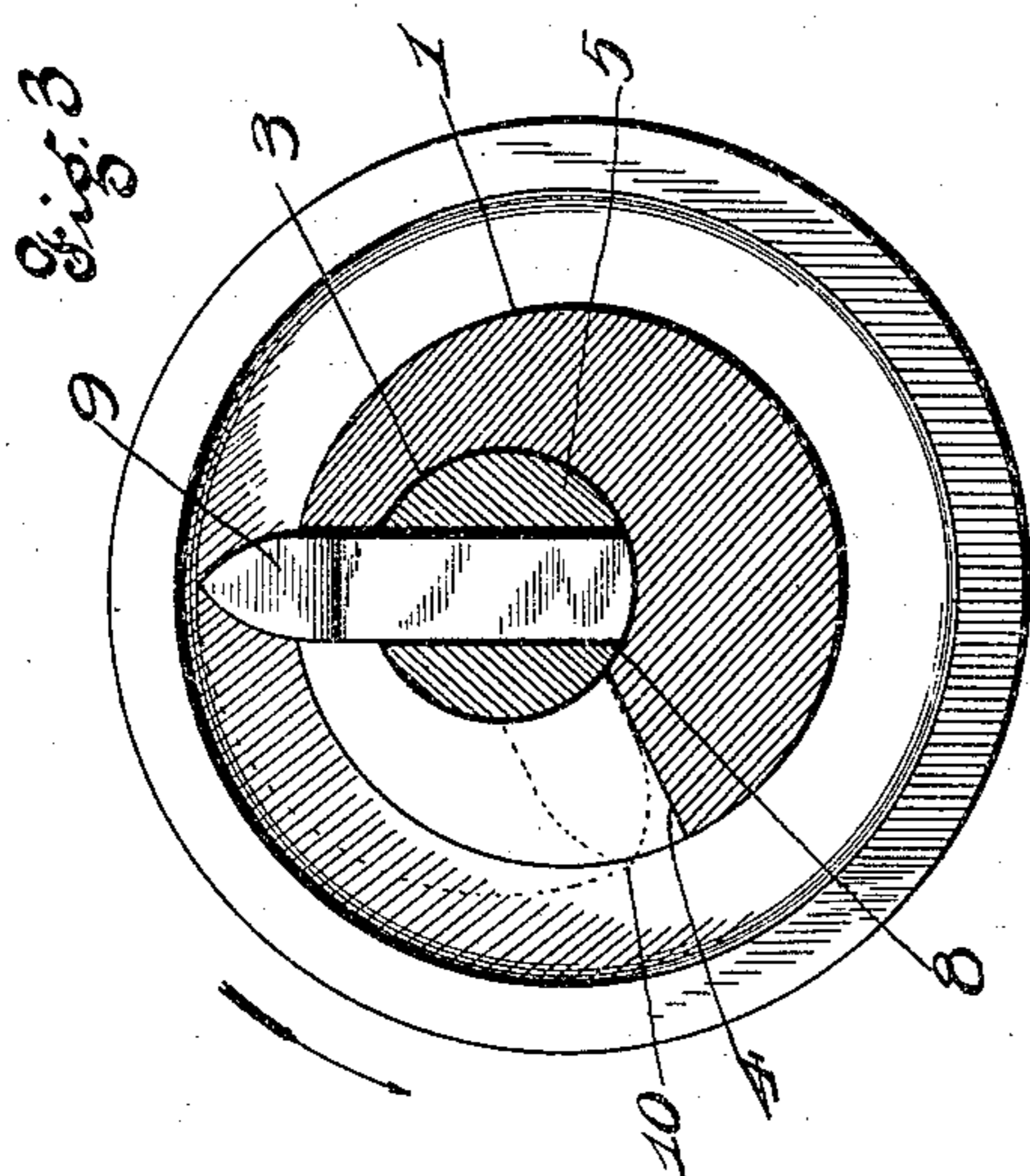
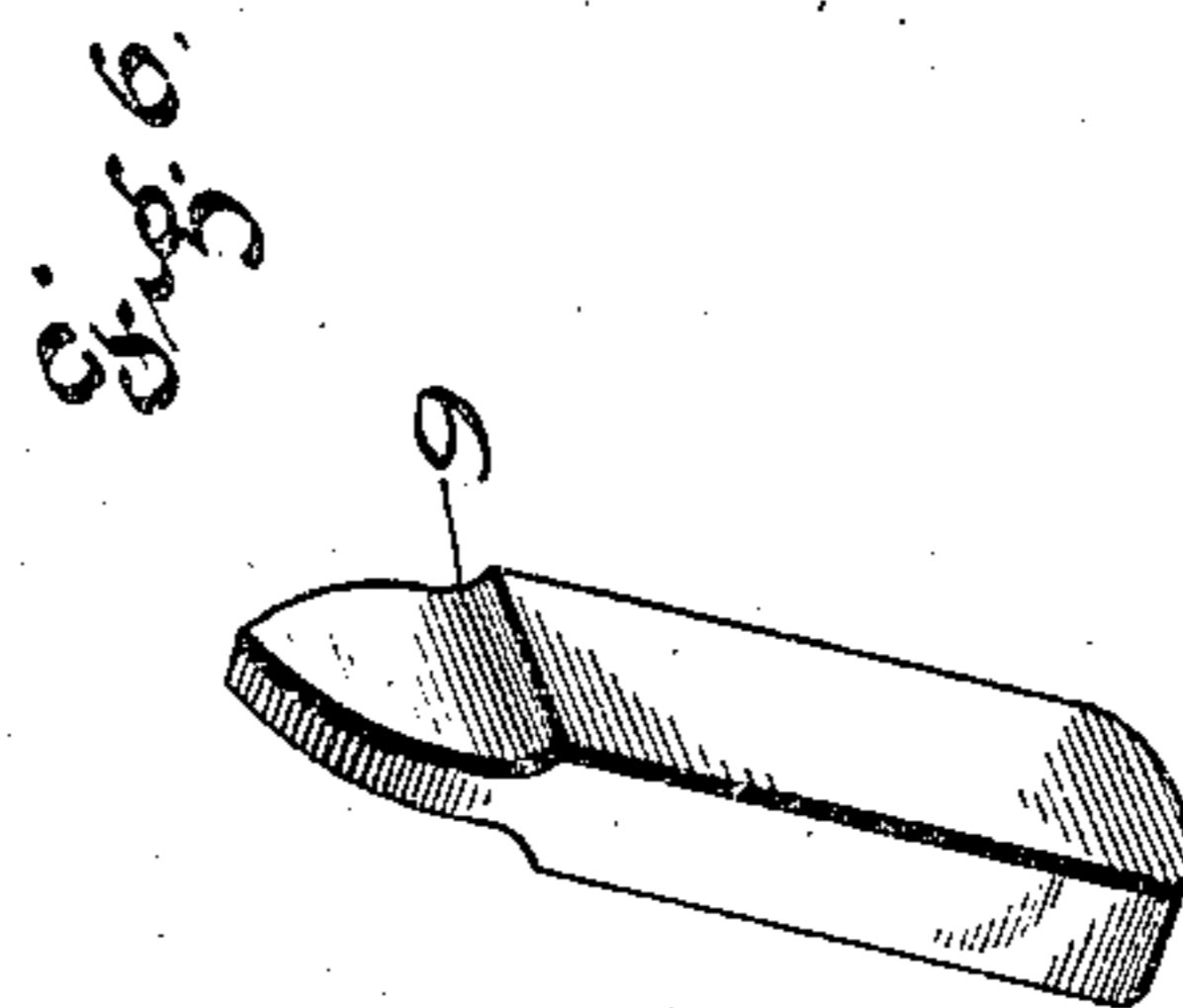
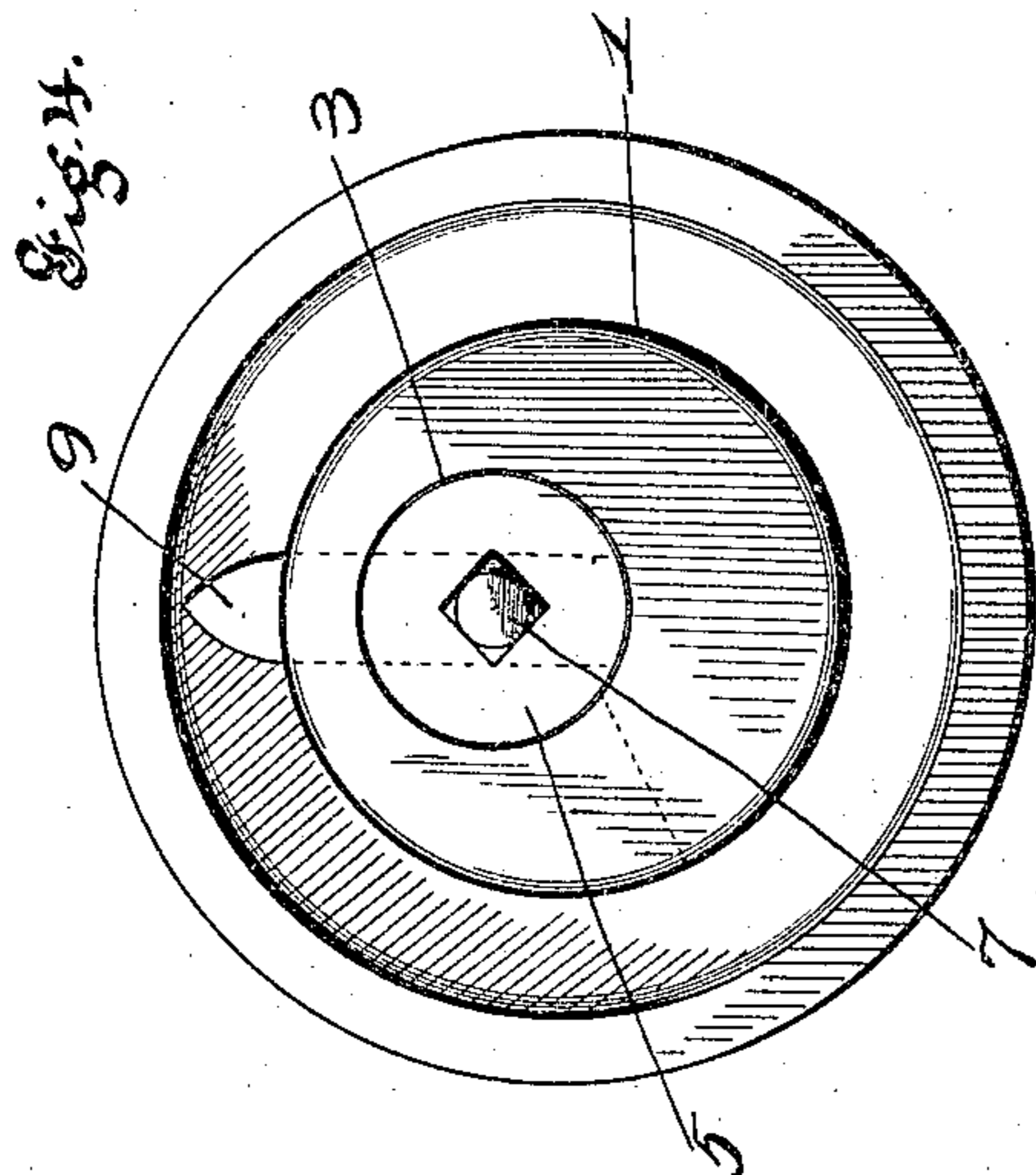
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

JOHN W. FAESSLER, OF MOBERLY, MISSOURI.

## FLUE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 770,052, dated September 13, 1904.

Application filed March 3, 1904. Serial No. 196,443. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. FAESSLER, a citizen of the United States, residing at Moberly, Randolph county, Missouri, have invented certain new and useful Improvements in Flue-Cutters, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved boiler-tube cutter, and has for its object to provide a cutter adapted to cut the tube from its inner side and in which the cutter-blade is readily removable for purposes of replacement and repairs.

In the drawings, Figure 1 is a top view of a device embodying my invention. Fig. 2 is the same, showing a portion of my device in section. Fig. 3 is a cross-sectional view of the same along the line 3 3 in Fig. 1. Fig. 4 is an end view of the same from the direction indicated by the arrow in Fig. 1. Fig. 5 is a perspective view of the inner cylinder. Fig. 6 is a perspective view of the cutting-blade.

The outer cylinder 1 is adapted to be revolved by any suitable power applied to its head 2 and is provided with a longitudinal eccentric bore 3. The circumferential slot 4 extends from the inner side of the bore 3 to the outer face of the cylinder 1 upon the side where the eccentric bore 3 is nearest to the surface of the cylinder 1. The slot 4 is of a length approximately one-third of the circumference of the cylinder 1. An inner cylinder 5 is provided with the hole 6, which is threaded to receive the screw 7, and the inner cylinder 5 is provided with the transverse slot 8 to receive the cutting-blade 9. A wrench 11 is of a length permitting manipulation of the screw 7 by its means when the cutting-blade 9 is in position. By means of the bite of the wrench 11 upon the head of the screw 7 the screw and inner cylinder 5 may be readily inserted in position within the bore 3 or withdrawn therefrom.

In assembling the above-described parts for use the inner cylinder 5 is inserted in the bore 3 until the slot 8 coincides with the slot 4. The cutting-blade 9 is then inserted through the slot 4 into the slot 8 until its inner end rests against the inner wall of the bore 3. The

screw 7 is then turned until its inner end exerts sufficient pressure against the side of the cutting-blade 9 to hold the cutting-blade 9 in place. By reason of its mounting being eccentric to the outer surface of the cylinder 1 the cutting-blade 9 in its inoperative position (as indicated by the numeral 10 in Fig. 3) does not extend beyond the outer surface of the cylinder 1. The cutting-blade being in said inoperative position, the cylinder 1 is inserted within the tube to be cut, which tube is held stationary during the operation of cutting. The cylinder 1 being slowly revolved in the direction shown by the arrow in Fig. 3, the end of the cutting-blade 9 is gradually thrust outward to and beyond the plane of the surface of the cylinder 1 and first engaged with, is then thrust through, and then completely cuts around the said tube.

When it is desired to remove the cutting-blade 9 for purposes of substitution, repair, sharpening, or replacement, the wrench 11 is applied to the screw 7 to disengage the screw 7 by withdrawing its inner end from the hole 6. The cutting-blade 9 being thus released may be withdrawn or will drop by its own gravity if the cylinder 1 is held in the proper position. By means of the engagement between the wrench 11 and screw 7 the inner cylinder 5 may then be withdrawn, if desired.

I claim—

In a flue-cutter, the outer cylinder 1 having the head 2 forming a wrench-seat to which power may be applied upon its outer end, and having a longitudinal eccentric bore 3 formed from the other end, and having a circumferential slot 4 extending through its thin side; the inner cylinder 5 mounted in the bore 3 and revoluble independently of the outer cylinder, and having a screw-threaded hole 6, and having a transverse slot 8; the screw 7 in the hole 6, and the cutting-blade 9 in the slot 8 and held in position by the screw, substantially as described.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

JOHN W. FAESSLER.

Witnesses:

ALFRED A. EICKS,  
JOHN C. HIGDON.