

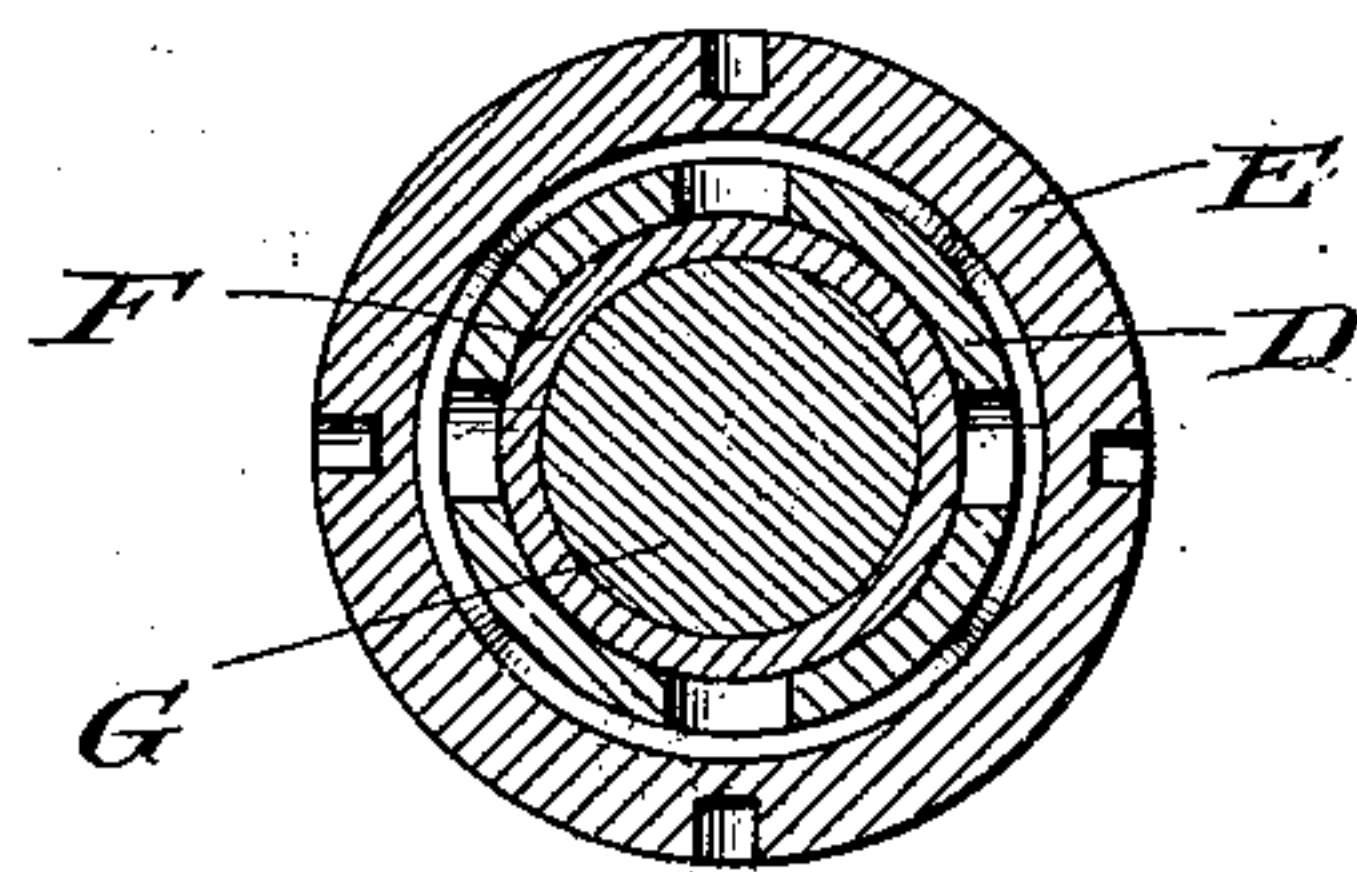
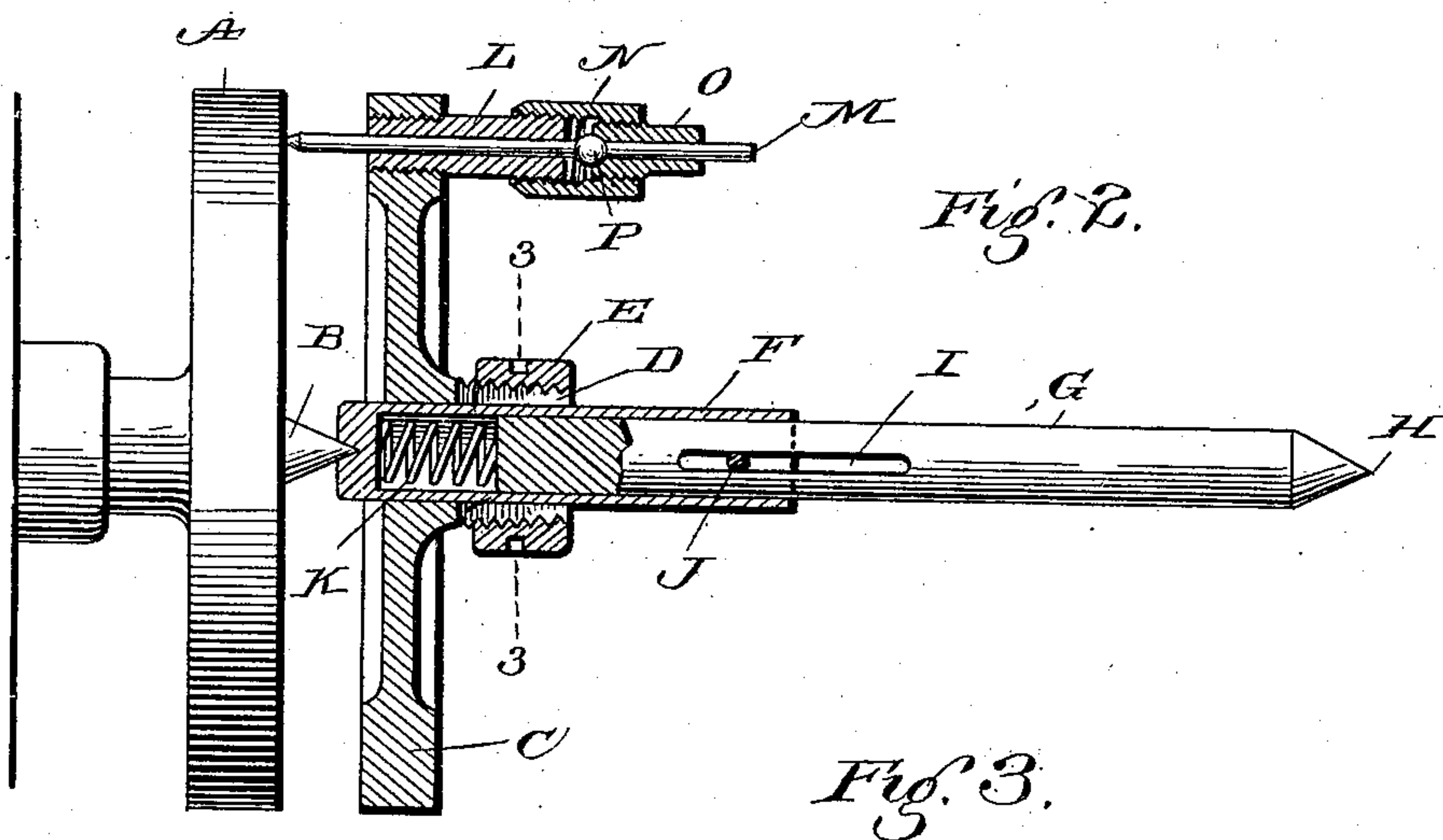
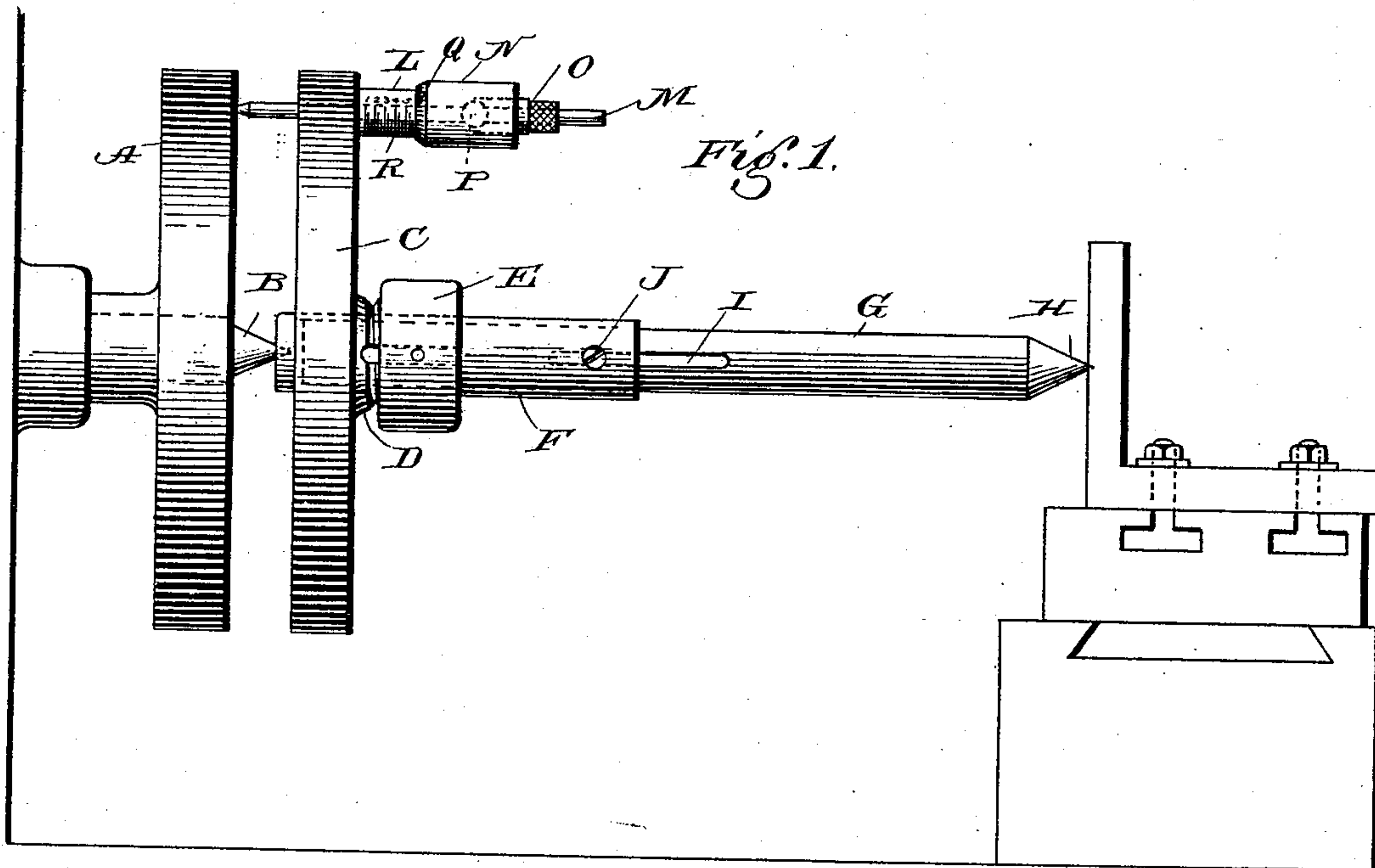
No. 685,288.

Patented Oct. 29, 1901.

J. C. MILLER.
INDICATOR FOR LATHES.

(Application filed Mar. 9, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN C. MILLER, OF BLOOMFIELD, NEW JERSEY.

INDICATOR FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 685,288, dated October 29, 1901.

Application filed March 9, 1901. Serial No. 50,461. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. MILLER, a citizen of the United States, residing at Bloomfield, in the county of Middlesex and State of New Jersey, have invented a new and useful Indicator for Lathe-Machines, of which the following is a specification.

This invention relates to adjusting-tools for use in connection with lathes and milling-machines, the object being to provide a simple and convenient tool which may be accurately adjusted to bring the center of the work to be operated upon by the machine in line with the spindle of the machine.

With the above object in view the invention consists in the novel features of construction hereinafter fully described, particularly pointed out in the claims, and clearly illustrated by the accompanying drawings, in which—

Figure 1 is a view in side elevation showing my improved tool in operative position. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a transverse sectional view on the line 3 3 of Fig. 2.

Referring now more particularly to the accompanying drawings, A designates the face-plate of a lathe or milling-machine, B the centering-spindle thereof, and A² is the work-holder, all of the ordinary construction and forming no part of my invention.

My improved tool consists of a disk C, which is turned accurately and has a split hub D, which is exteriorly screw-threaded to receive a clamping-nut E, which when adjusted thereon contracts the split portions thereof and causes the same to tightly grip a sleeve F, which extends through a central bore formed in the hub and disk. Said sleeve has its inner end closed and formed with a depression which is disposed in the center thereof to receive the end of the centering-spindle B. Movable in the sleeve and projecting therefrom is an arbor G, having its outer end turned to form a centering-point H, adapted to engage the center-mark of the work. Said arbor G is formed with a longitudinally-extending groove I to receive a retaining-screw J, which is carried by the sleeve. This screw and groove serve to limit the movement of the arbor in the sleeve and prevent the former from disengaging the latter.

A coil-spring K is placed in said sleeve and exerts a pressure against the inner end of the arbor. The disk is formed near its periphery with a screw-threaded perforation which extends parallel with the central bore and in which the fixed member L of a micrometer is positioned. This fixed member has a central bore which is also parallel with the central bore of the disk in which a rod M is movable, said rod projecting beyond the inner face of the disk and contacting with the face-plate.

N designates the movable member of the micrometer, which is interiorly screw-threaded to receive a nut O, formed with a central bore in line with the central bore of the fixed member of the micrometer and in which the rod is also positioned. Said nut is formed on its inner end with a hemispherical depression to afford a bearing for a spherical shoulder or enlargement P, formed on the rod immediately of its ends. The movable member of the micrometer is formed with the usual scale Q and the fixed member with a scale R. By adjusting said rod by the micrometer the adjustment of the arbor G is effected. The coil-spring K exerts sufficient pressure against the arbor to hold the centering-point H of the latter in contact with the work while the same is being raised or lowered or otherwise adjusted to bring its center punch-mark in line therewith.

In operation, the parts being in the position shown in Fig. 1 of the drawings, it being understood that the point H of the arbor G is then in the center-mark of the work, by adjusting the work-holder while the face-plate is revolving until the micrometer-rod M contacts with the face-plate throughout its entire surface the work will be brought into engagement with the spindle of the machine.

By means of the micrometer adjustment the work may be adjusted with the greatest accuracy.

By the use of my improved tool the work may be trued to the smallest fraction of an inch, as will be apparent.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device of the character described comprising a disk having a central depression to receive the centering-spindle of the machine,

an arbor projecting from said disk and having a centering-point in line with the depression, and means carried by the disk for bringing said disk into parallel relation with the face-plate of the lathe, substantially as described.

2. A device of the character described comprising a disk having a central depression to receive the centering-spindle of the machine, a centering member carried thereby, and an adjustable member disposed near the periphery of said disk and adapted to contact with the face-plate of the machine, substantially as described.

3. A device of the character described comprising a disk formed with a central depression to receive the centering-spindle of the machine, a centering member projecting from the outer face of said disk, a member movable transversely of the disk and disposed near the periphery thereof and adapted to contact with the face-plate of the machine, and a micrometer-screw for effecting the adjustment of said member, substantially as described.

4. A device of the character described comprising a disk having a central depression to receive the centering-spindle of the machine, a longitudinally-movable member projecting upon the outer face thereof and formed at its outer end with a centering-point, a spring pressing said member normally outward, and means carried by the disk for adjusting and maintaining the same in parallel relation with the face-plate of the machine, substantially as described.

5. A device of the character described, comprising a disk having a central depression to receive the centering-spindle of the machine, a hollow member projecting centrally from the outer face thereof, an arbor movable in said member and having its outer end formed with a centering-point, means for limiting the movement of said arbor, elastic means pressing said arbor normally outward, and means carried by the disk for adjusting and maintaining the same in parallel relation with the face-plate of the machine, substantially as described.

6. A device of the character described, comprising a disk formed with a central bore, a sleeve positioned in said bore and having its inner end closed and formed with a central depression to receive the centering-spindle of the machine, clamping means for holding said disk from movement upon the sleeve, an arbor movable longitudinally in said sleeve and formed at its outer end with a centering-point, elastic means pressing said arbor normally outward, and means carried by the disk for adjusting and maintaining the same in parallel relation with the face-plate of the machine, substantially as described.

7. A device of the character described comprising a disk having a central bore and a

split exteriorly-screw-threaded hub, a sleeve in said bore having its inner end closed and formed with a central depression to receive the centering-spindle of the machine, a clamping-nut upon said screw-threaded hub for contracting the split portions thereof, an arbor movable longitudinally in said sleeve and formed at its outer end with a centering-point, elastic means for pressing said arbor normally outward, and means carried by the disk for adjusting and maintaining the same in parallel relation with the face-plate of the machine, substantially as described.

8. A device of the character described comprising a disk having a central depression to receive the centering-spindle of the machine, a centering member projecting centrally from the opposite face of the disk, a fixed micrometer member carried by the disk near its periphery and formed with a central bore, a rod movable in said bore and projecting from the inner face of the disk and adapted to contact with the face-plate of the machine, a movable micrometer member, and a connection between said movable member and the rod, substantially as described.

9. A device of the character described comprising a disk formed with a central depression to receive the centering-spindle of the machine, a centering member projecting centrally from the opposite face of the disk, a fixed micrometer member carried by the disk near its periphery, a rod movable through said fixed member and projecting upon the inner face of the disk and adapted to contact with the face-plate of the machine, a movable micrometer member, and means for movably connecting said rod with said movable member of the micrometer, substantially as described.

10. A device of the character described comprising a disk formed upon its inner face with a central depression to receive the centering-spindle of the machine, a centering member projecting centrally from the opposite face of the disk, a fixed micrometer member carried by said disk near its periphery, a rod movable longitudinally through the fixed member and rotatable therein and projecting upon the inner face of the disk to contact with the face-plate of the machine, a movable micrometer member formed with a screw-threaded passage, a nut positioned in said screw-threaded passage and formed with a bore receiving said rod and with a hemispherical cavity in its inner end, and a spherical shoulder formed upon the rod immediately of its ends and engaging in said hemispherical cavity of the nut, substantially as described.

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