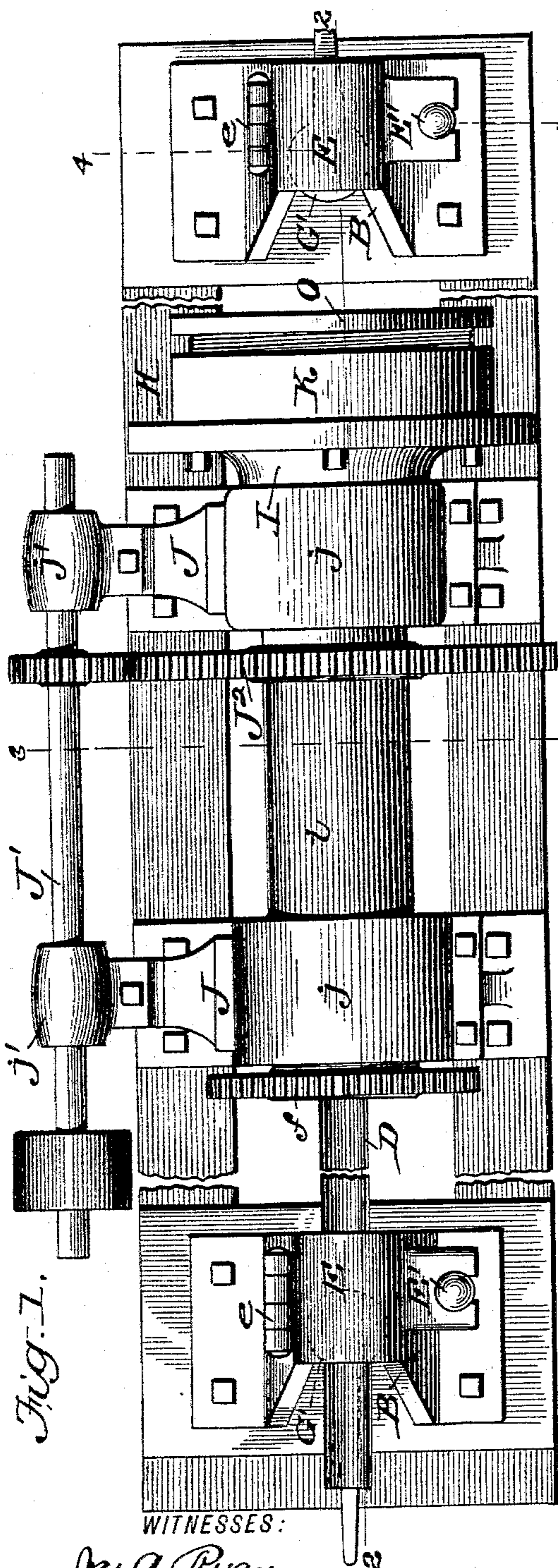


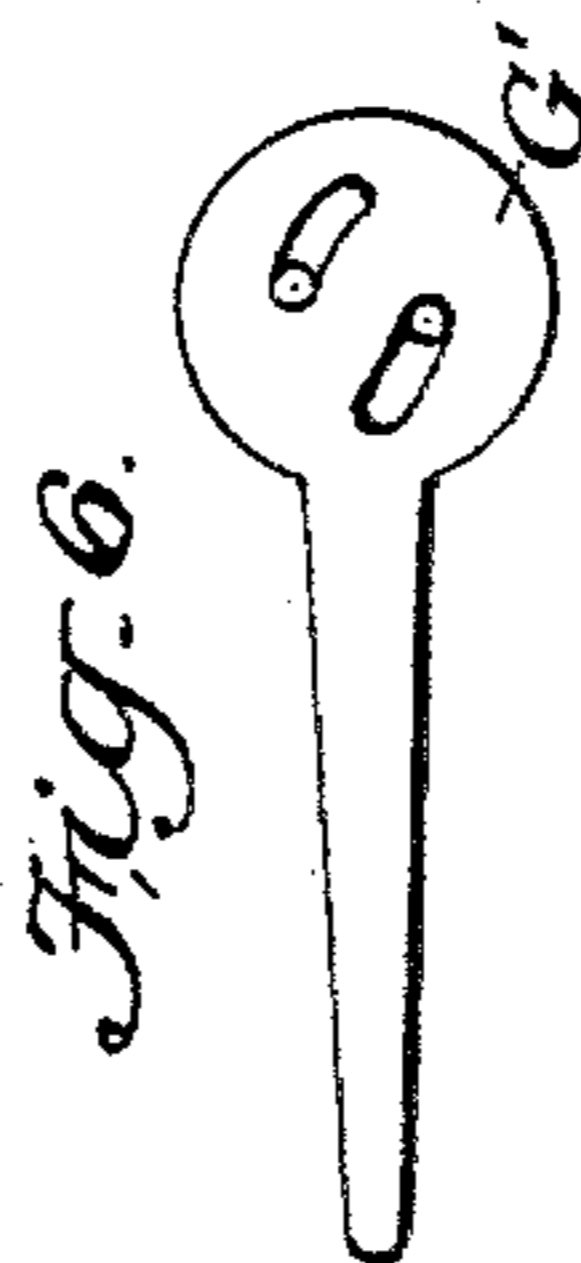
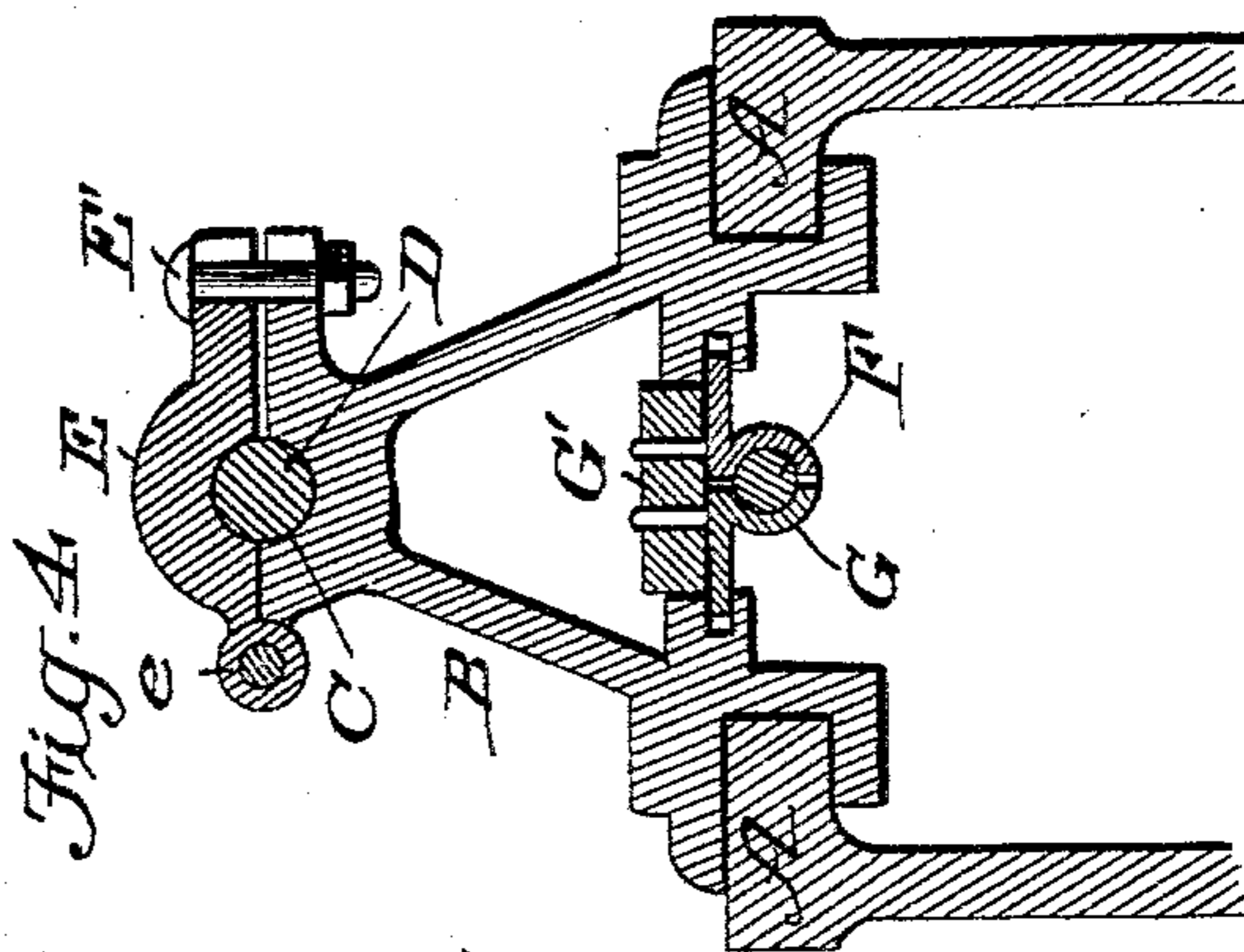
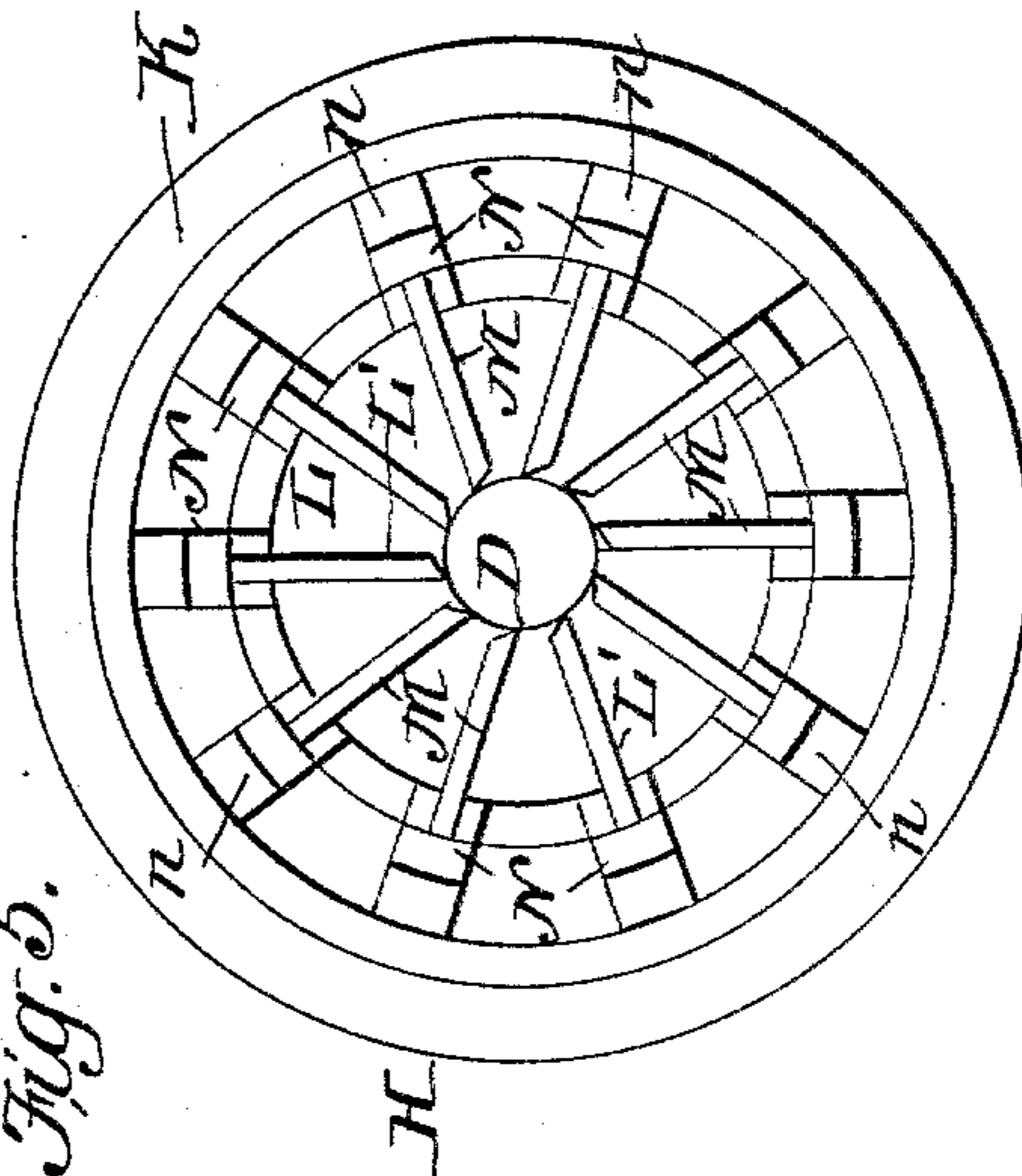
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BAR AND SHAFTING TURNING MACHINE.

Patented June 8, 1897.



Jos. A. Ryan
P. B. Furpin.



Jacob Fitz

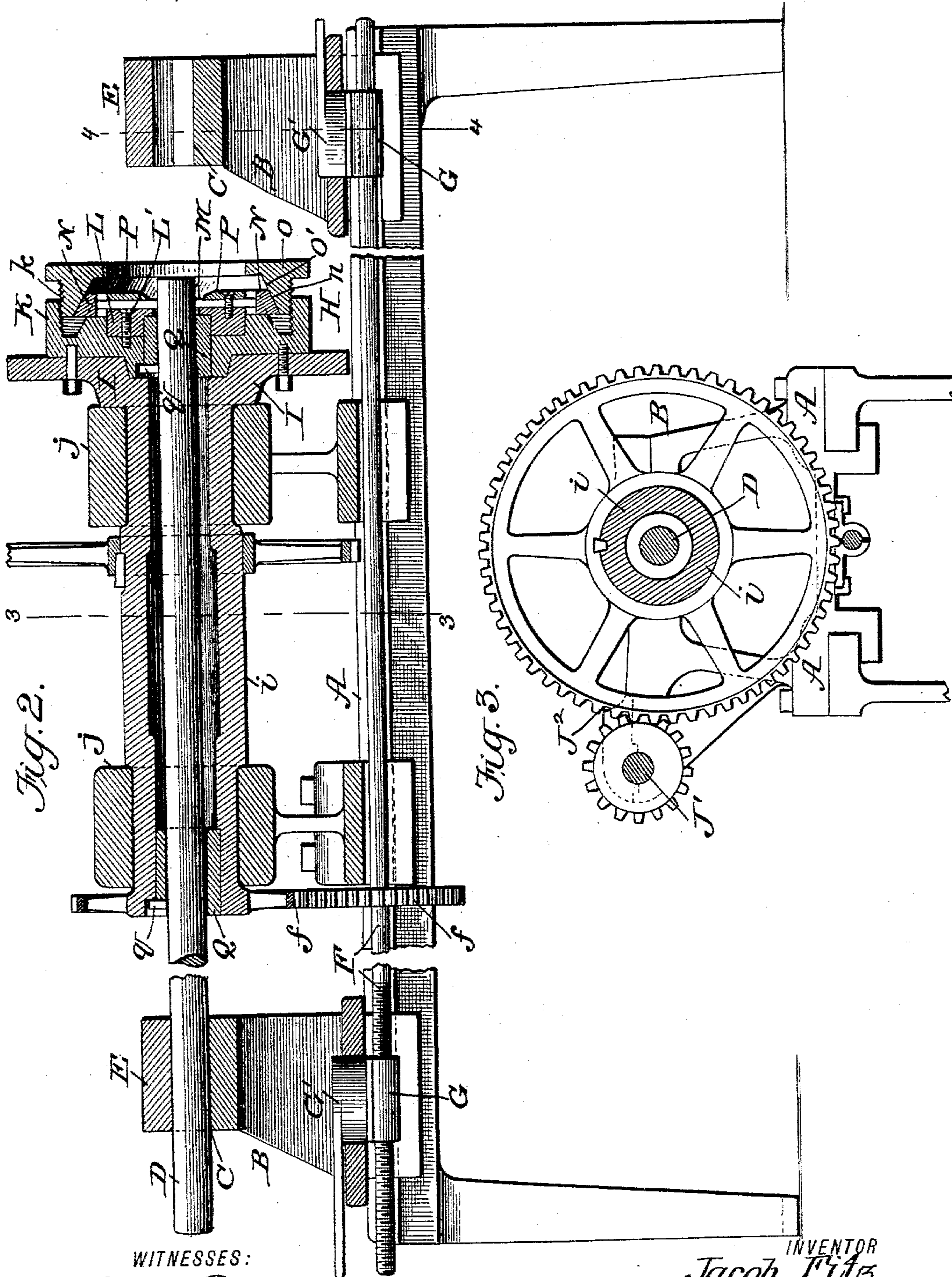
BY *Munn & Co*

ATTORNEYS.

2 Sheets—Sheet 2.

BAR AND SHAFTING TURNING MACHINE.

Patented June 8, 1897.



WITNESSES:

Jos. A. Ryan
 P. B. Turpin.

INVENTOR

Jacob Fitz

BY *Munn & Co.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JACOB FITZ, OF HANOVER, PENNSYLVANIA.

BAR AND SHAFTING TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 584,213, dated June 8, 1897.

Application filed July 23, 1896. Serial No. 600,228. (No model.)

To all whom it may concern:

Be it known that I, JACOB FITZ, of Hanover, in the county of York and State of Pennsylvania, have invented a new and useful Improvement in Bar and Shafting Machines, of which the following is a specification.

My invention is an improvement in machines for turning bars and shafting, and has for an object to provide simple means by which to accurately turn the bar or shaft; and the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a top plan view of my machine. Fig. 2 is a vertical longitudinal section thereof on about line 2 2, Fig. 1. Fig. 3 is a cross-section on about line 3 3 of Fig. 2. Fig. 4 is a cross-section on about line 4 4 of Fig. 1. Fig. 5 is a face view of the cutter-head with the tool-clamping ring and the adjusting-band removed, and Fig. 6 is a detail view of the eccentric lever.

The main frame comprises a suitable stand having shears or ways A upon which certain of the parts are supported and slide, as presently described.

The carrier or carriers B, of which I preferably employ two, are supported on the ways A, as shown in Figs. 1, 2, and 4, and may slide along said ways, as will be best understood from Fig. 4. I make the carrier with the seat C for the rod or shaft D to be turned and provide a clamping-cap E, hinged at e and provided with a clamping-bolt E', so the rod or shaft can be held firmly in the seat C, and thus be fed into contact with and past the cutting devices or tools by the movement of the carrier.

In operating the carrier along the ways A, I provide a feed-screw F, turned by suitable gearing at f. This screw is engaged by the sections of a split nut G on the carrier B, which sections may be adjusted by the eccentric lever G' into and out of bearing or mesh with the feed-screw, so the carrier may be quickly thrown into or out of operation, as may be desired. It is preferred to employ two carriers and to arrange them on opposite sides of the turning head, as shown in Figs. 1 and 2, so one carrier may be used to push

the bar or shaft as far as possible through the turning head, when such carrier may be freed from both the bar and the feed-screw and the other carrier be clamped to the bar and engaged with the feed-screw, so it may operate to draw the bar entirely through and free of the turning devices. These carriers B are alike, so the description of one will answer for both.

The head H may be arranged to turn, as shown in the accompanying drawings, or may be used stationary and put on the ordinary lathe-carriage, in which case the shaft might be on centers and be turned in the usual or other desired manner. The head is provided with the body I, having a tubular stem i, which fits and turns in the bearings j of the stands J, such stands also having bearings j' for the back shaft J', which is geared at J² with the tubular stem of the body I, to properly turn the head when the back shaft is operated, which may be accomplished by any desired connection with the power. The tubular stem i is geared at f with the feed-screw F, so the latter is operated as the turning head is revolved. To the body I is held the face-plate K, having a threaded seat k near its outer edge, and to this face-plate is held the tool-holder L, having ways L' for the tools M. At their outer ends the tools M are pressed upon by individual blocks N, the outer ends of which are beveled at n and are pressed upon by the adjusting-band O, whose inner edge is beveled at O' to bear upon the blocks N, while its outer edge is threaded and turns into the threaded seat of the face-plate, so the adjusting-band as it is turned into the face-plate will force the tools into the desired position. When the tools have been adjusted as desired, they may be held by the clamping-ring P, which bears against the tools and is bolted to the tool-holder L or is otherwise securely held. The tools M may be of any suitable turning pattern and will, as the head is revolved, operate to turn the bar or shaft to the desired form, the bar being carried through the cutting-head by the feeding-carriers before described.

At the ends of the tubular stem I provide removable bushings Q, held by keys or pins q. These bushings turn with the stem and

form guides for the rod or shaft and may be removed and replaced by others to adapt the machine for larger or smaller rods.

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

1. In a machine substantially as described, the herein-described head comprising the face-plate, having a threaded seat, the tool-holder held to said face-plate and having ways for the tools, the tools and their inclined blocks, the adjusting-band having an inner beveled edge engaging the tool-blocks and a threaded portion entering the threaded seat of the face-plate, and the tool-clamping ring bearing against the tools and suitably held, substantially as shown and described.

2. The improved machine herein described

consisting of the tubular stem having a face-plate, the tools held to and movable in and out on said face-plate, the tool-blocks one for each of said tools, the adjusting-band engaging said blocks, a beveled surface being provided whereby the band may force the blocks inward and so adjust the tools correspondingly, the carriers on opposite sides of said stem and provided with means for clamping the shaft, the feed-screw and means whereby the carriers may be engaged with or freed from the feed-screw substantially as shown and described.

JACOB FITZ.

Witnesses:

H. W. BEAN,

M. H. WATSON.