

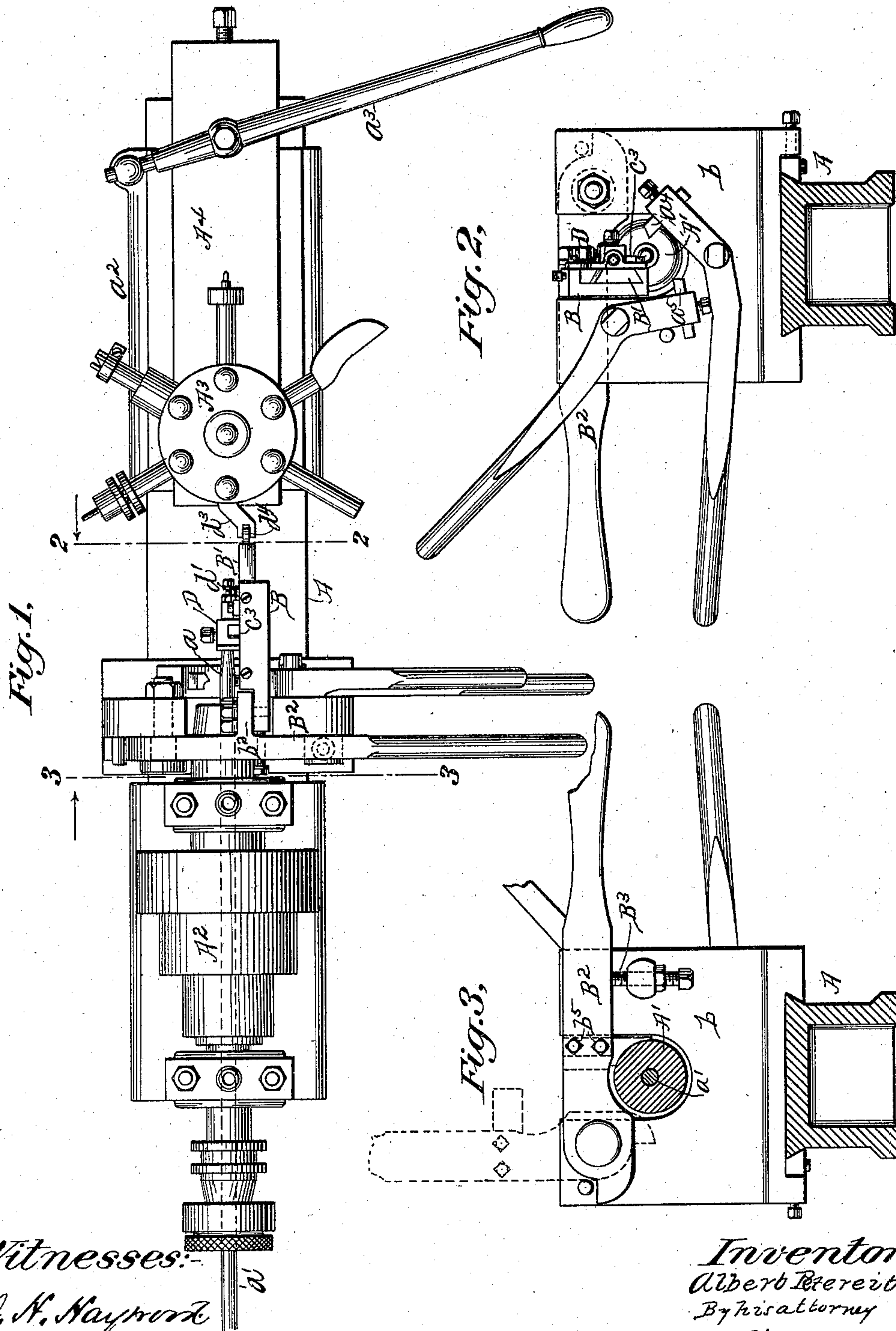
(No Model.)

2 Sheets—Sheet 1.

A. PETEREIT.
TAPER TURNING MACHINE.

No. 567,549.

Patented Sept. 8, 1896.



Witnesses:
W. H. Maynard
L. L. Deaton

Inventor:
Albert Petereit
By his attorney
C. F. Ferguson

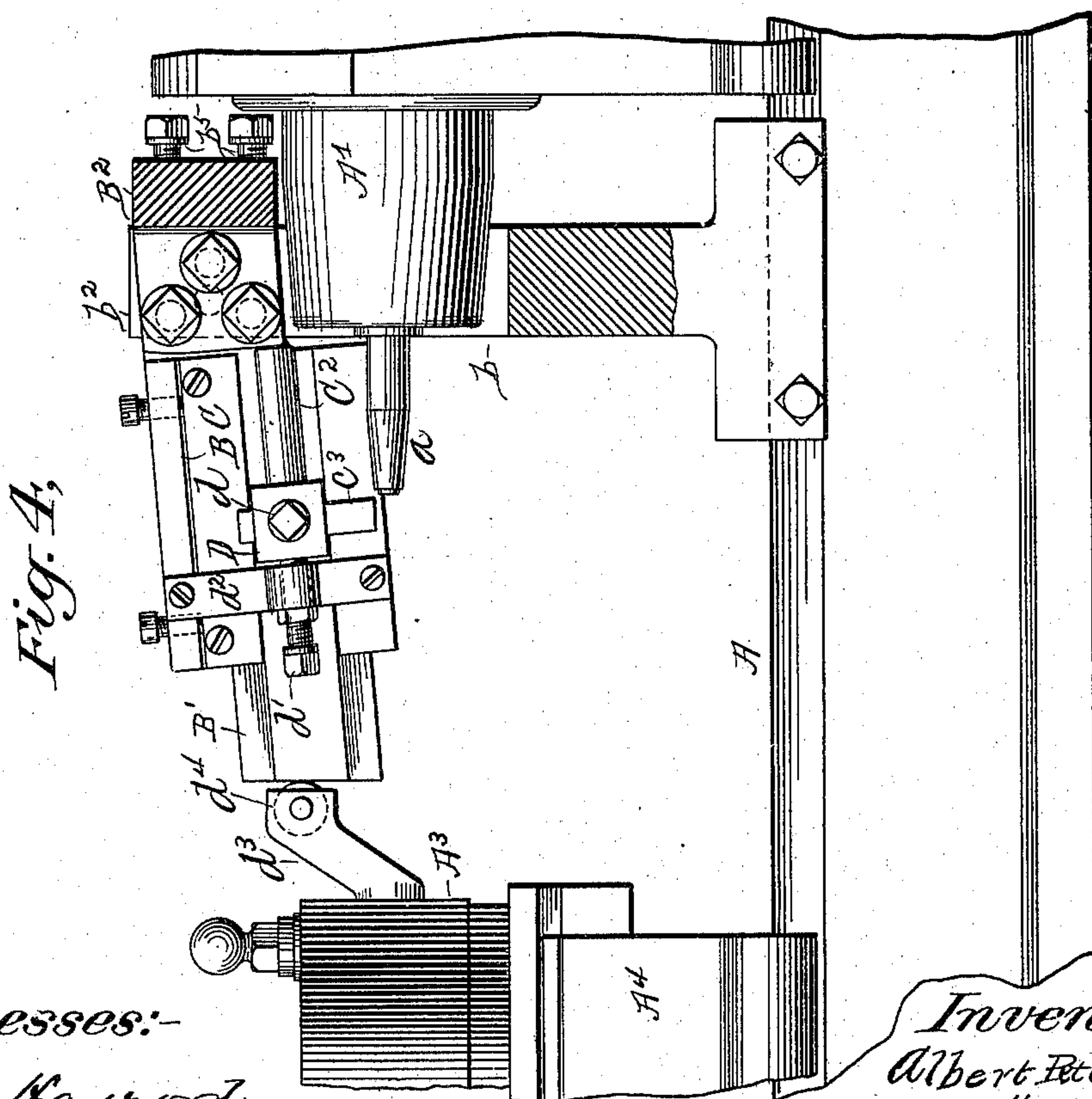
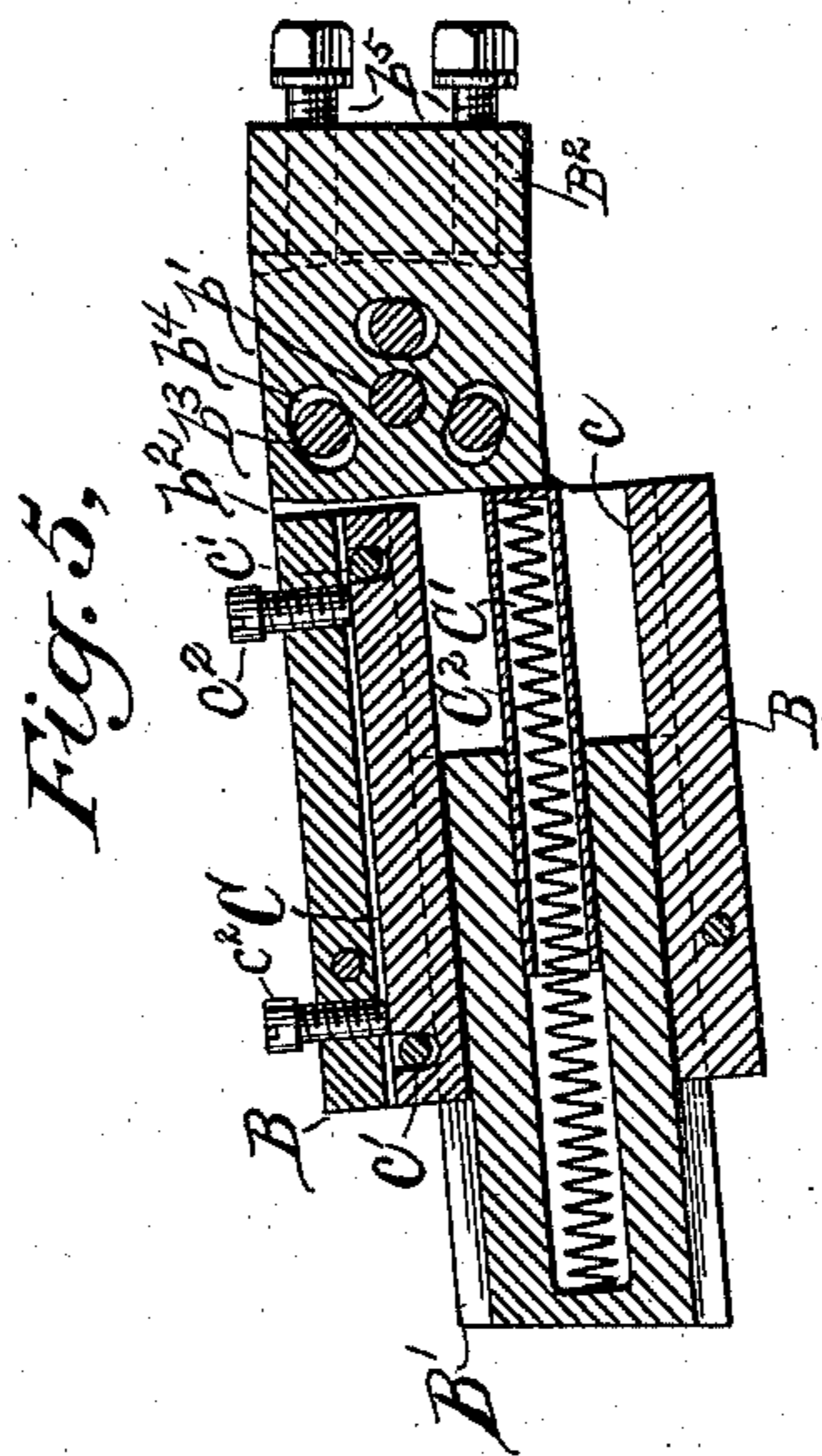
(No Model.)

2 Sheets—Sheet 2.

A. PETEREIT.
TAPER TURNING MACHINE.

No. 567,549.

Patented Sept. 8, 1896.



Witnesses:-

W. N. Hayward
C. L. Denton

Inventor:-
Albert Peterleit
By his attorney
C. P. Ferguson

UNITED STATES PATENT OFFICE.

ALBERT PETEREIT, OF NEW YORK, N. Y., ASSIGNOR TO THE PETEREIT MANUFACTURING COMPANY, OF NEW YORK.

TAPER-TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 567,549, dated September 8, 1896.

Application filed July 25, 1894. Serial No. 518,594. (No model.)

To all whom it may concern:

Be it known that I, ALBERT PETEREIT, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Taper-Turning Machines, of which the following is a specification.

This invention relates to turning and truing attachments for valve-plug-forming machines; and it consists in the construction and novel arrangement of parts as hereinafter set forth.

I will describe a machine embodying my invention, and then point out the novel features in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of a plug-forming machine embodying my invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a section on the line 3 3 of Fig. 1. Fig. 4 is a side elevation, on an enlarged scale, of my invention as attached to the machine. Fig. 5 is a longitudinal section of said attachment, and Fig. 6 shows a valve-plug as formed and ready to be cut from the rod.

Referring by letter to the drawings, A designates the bed-plate of the machine, upon which is mounted the chuck A', its spindle, and the driving-band pulleys A².

The valve-plugs *a* are formed and cut from a metal rod *a'*, which is fed through the hollow spindle and chuck in the usual manner.

A³ is a rotary tool-holder mounted on a longitudinally-reciprocating carrier A⁴, mounted in a guideway *a*², adjustably attached to the bed-plate A. Motion is imparted to the carrier A⁴ by means of a hand-lever *a*³, having pivoted connection with the guideway *a*² and with the carrier. The tool-holder A³ is designed to hold the tools successively brought into play for forming a plug, such, for instance, as a beveling or tapering tool, a boring-tool, a tapping-tool, and a shouldering-tool.

The machine has attached to it the usual head-forming and cutting-off tools *a*⁴ *a*⁵.

I will now describe my planing or turning attachment. It is to be understood that my attachment is designed to true-up the previously formed taper of a valve-plug.

B designates an adjustably-fixed guide-plate for the tool-carrier B'. The guide-plate is secured by means of a pivot *b'* to a forwardly-extending tongue on a lever B², which is pivotally attached to a standard *b*, extended from the bed-plate A, the pivot *b'* engaging with the tongue of the lever and passing through a hole in the stem portion *b*² of the guide-plate. It is obvious that the plate B may be maintained in a position to cause the planing-tool to operate in a horizontal plane, or that it may be turned on its pivot to cause the tool to cut at any desired angle or taper relatively to the vertical standard *b*. To secure the plate as adjusted, I may employ a set-bolt or number of set-bolts *b*³, which pass through holes in the stem portions *b*² and through elongated or enlarged openings *b*⁴ in the tongue of the lever, as plainly shown in Fig. 5. Jam-bolts *b*⁵, passing through tapped holes in the lever B² and engaging against the end of the stem portion *b*², may be employed in adjusting the holder.

A principal feature of my invention resides in means for adjusting the turning or cutting tool vertically to cut on or below the center of a plug. This adjustment is necessary to accommodate the tool to the varying hardness of metals, that is, with a soft metal the tool may be placed to cut below the center and may be raised toward or to the center for harder metal to make a finer cut. Heretofore it has been necessary to grind the tool to a bevel for the purpose. My adjusting device consists in a screw B³, extended vertically through a tapped hole in a lug extended from the standard *b*, and upon the upper end of which the lever B² may be rested. Obviously, by manipulating the screw the lever may be raised or lowered and the tool consequently adjusted.

The tool-carrier B' has its lower edge seated in a groove *c* in the lower portion of plate B, and its upper edge is seated in the channel or groove of a plate C. The channeled plate C is vertically adjustable relatively to the plate B, so that it may be caused to bear more or less on the carrier B'. It is guided in its movements and held in position by means of bolts *c'*, passing through notches in the plate C, and set-screws *c*² may be em-

employed for forcing the channel-plate upon the tool-carrier. The tool-holder B' is moved or returned to its outward or normal position by means of a spring C'. At one end this spring
 5 is shown as abutting against the end wall of a longitudinal hole in the tool-carrier, and the other end is shown as abutting against the end wall of a tubular guide C² in the guide-plate B. The hole in the tool-carrier
 10 is sufficiently large to allow the tube C² to pass into it as the carrier is moved inward. The cutting-tool C³ is secured by means of a set-screw d to a projection D on the carrier B'. The length of outward movement of the
 15 carrier B' may be adjusted or regulated by means of a set-screw d', passing through a tapped hole in a bracket d², screwed to the plate B. Inward movement is imparted to the tool-holder B' by an inward movement of
 20 the tool-holder carrier A⁴. An arm d³ extends from the tool-holder A³ and is designed to bear against the outer end of the carrier B'. It does not bear directly against the carrier, but has an antifriction-roller d⁴, which bears
 25 against the carrier.

The operation is as follows: After using the tapering-tool on the holder A³ to roughly turn the plug to a taper, and after certain others of the tools have been operated, the
 30 tool-holder is rotated to bring the arm d³ into position to engage the carrier B'. Then, by moving the carrier A⁴ forward, the carrier B' is moved longitudinally, and consequently the tool C³ is moved over the plug from its
 35 small end to its large end. Upon returning the carrier A⁴, the spring C² will move the carrier B' and tool in the opposite direction. The tool C³ cuts on each of its movements. Of course, during the operation the rod a' is
 40 in rapid rotation.

Having described my invention, what I claim is—

1. In a valve-plug-forming machine, the combination with the work-holder or chuck thereof, of the guide-piece, the lever having a
 45 tongue to which said guide-piece is pivoted, a longitudinally-movable tool-holder mounted in said guide-piece, the lever for moving said holder in one direction and the spring for moving it in the opposite direction, substan-
 50 tially as specified.

2. The combination with the guide-piece and the lever to which it is pivoted and the adjusting-screw extending laterally from the standard to which the lever is fulcrumed,
 55 whereby said lever may be adjusted to vary the angle at which the edge of the cutting-tool is presented to its work, substantially as specified.

3. An attachment for machines for forming
 60 valve-plugs, the same consisting of a lever having adjustably pivoted thereto, a guide-plate B, and a tool-carrier, movably located therein and the lever and spring for moving
 65 said tool-carrier in opposite directions, substantially as specified.

4. The combination with the lever of the guide-plate, adjustably fastened thereto, and carrying a movable tool-carrier, of the binding-bolts b⁵, whereby the device is held in
 70 adjusted position, substantially as specified.

5. In a valve-plug-forming machine, the combination with the lever B² and the standard b to which it is pivoted of the binding-bolts b³ passing through elongated apertures
 75 b⁴ and the feed-guide adjustable by means of said binding-bolts, substantially as specified.

Signed at New York, in the county of New York and State of New York.

ALBERT PETEREIT.

Witnesses:

CLARENCE R. FERGUSON,
 CHARLOTTE C. DENTON.