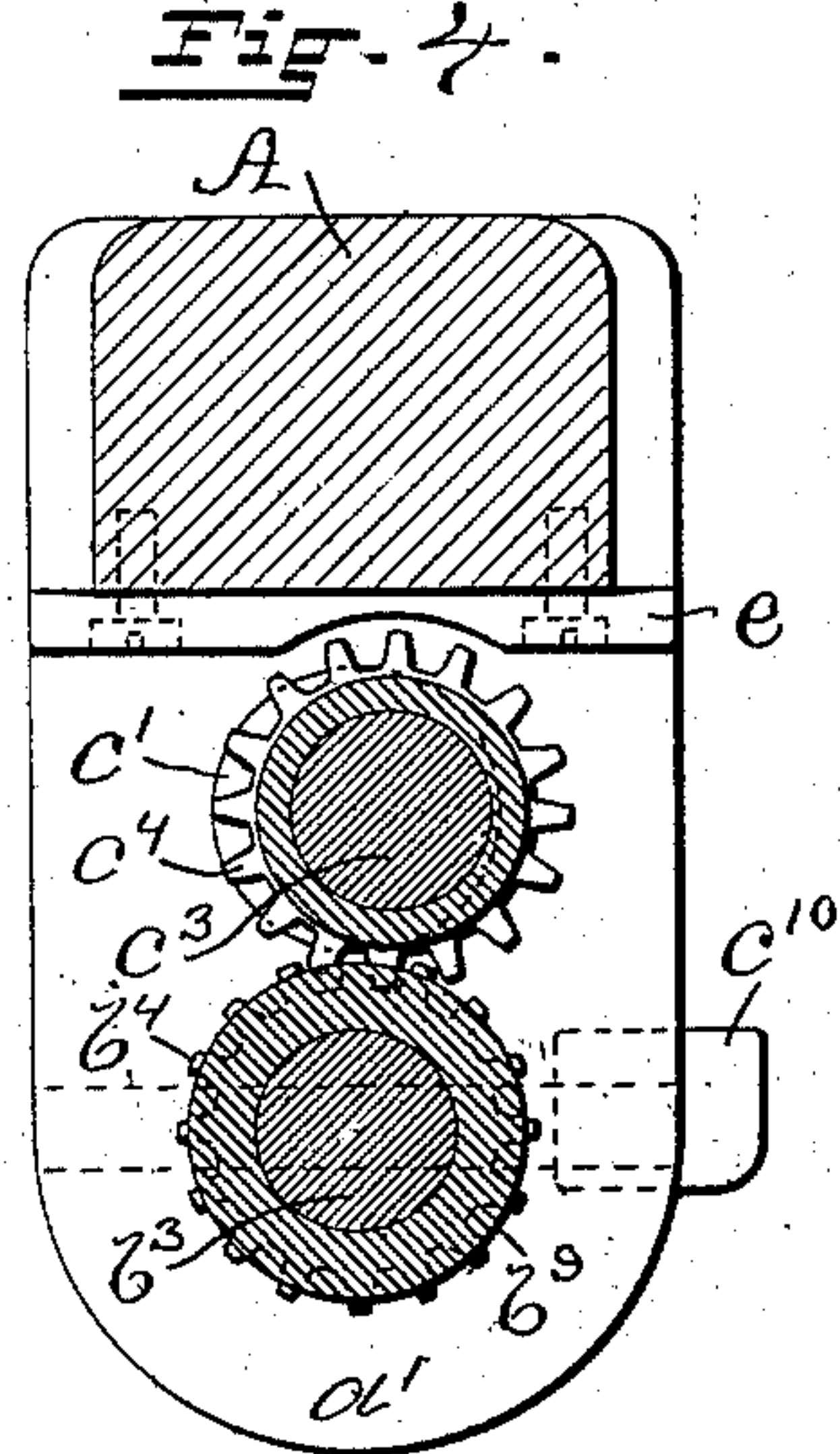
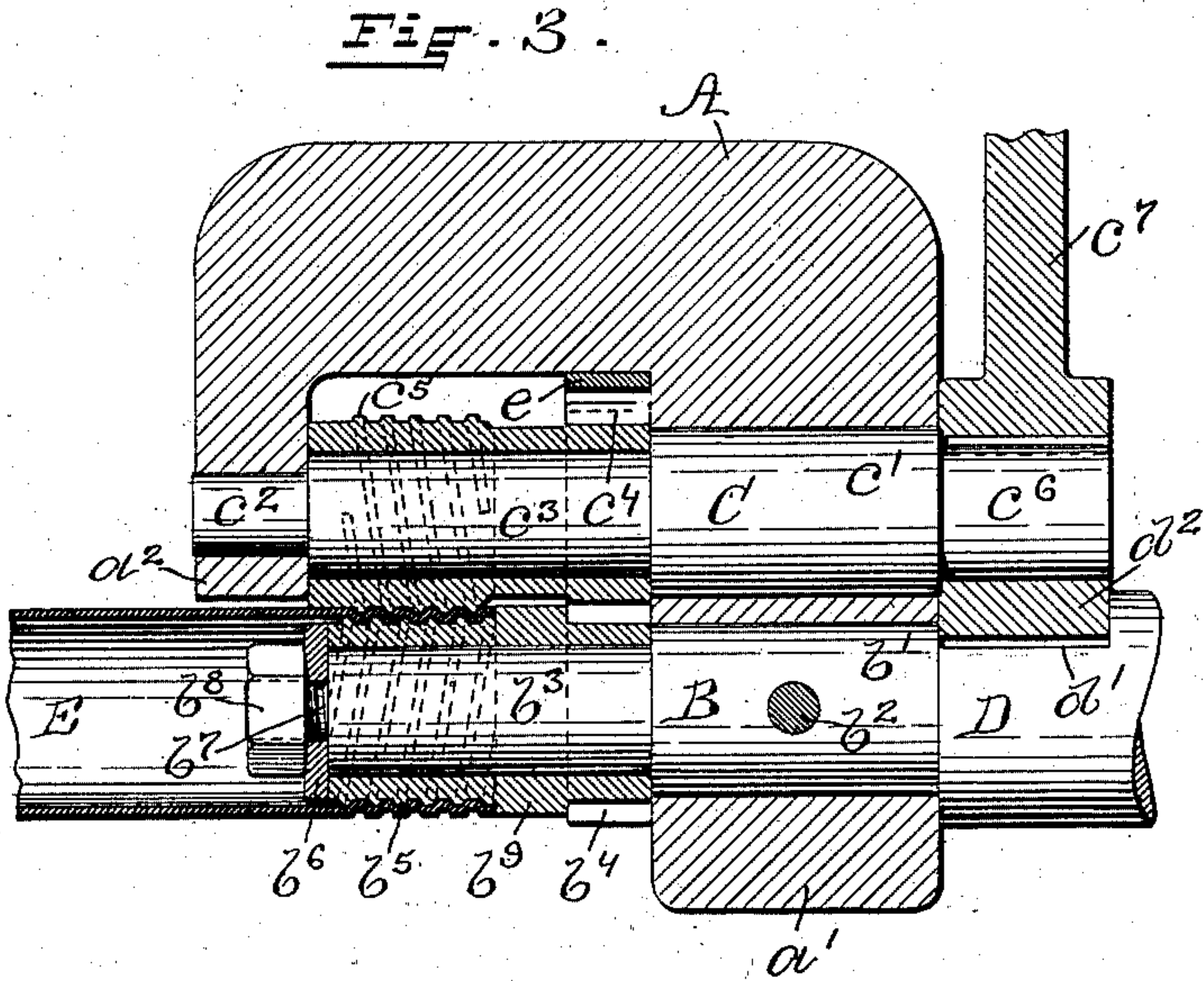
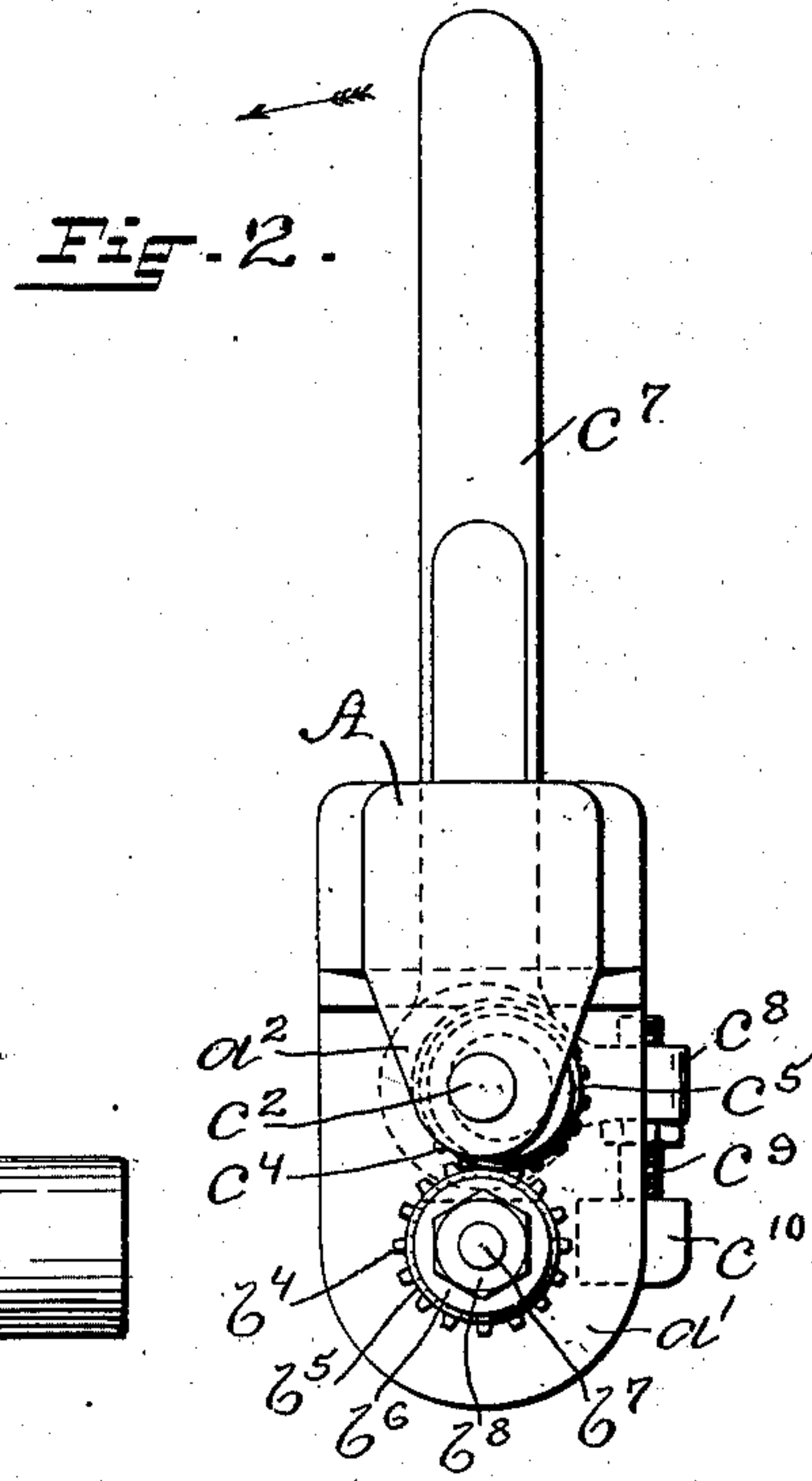
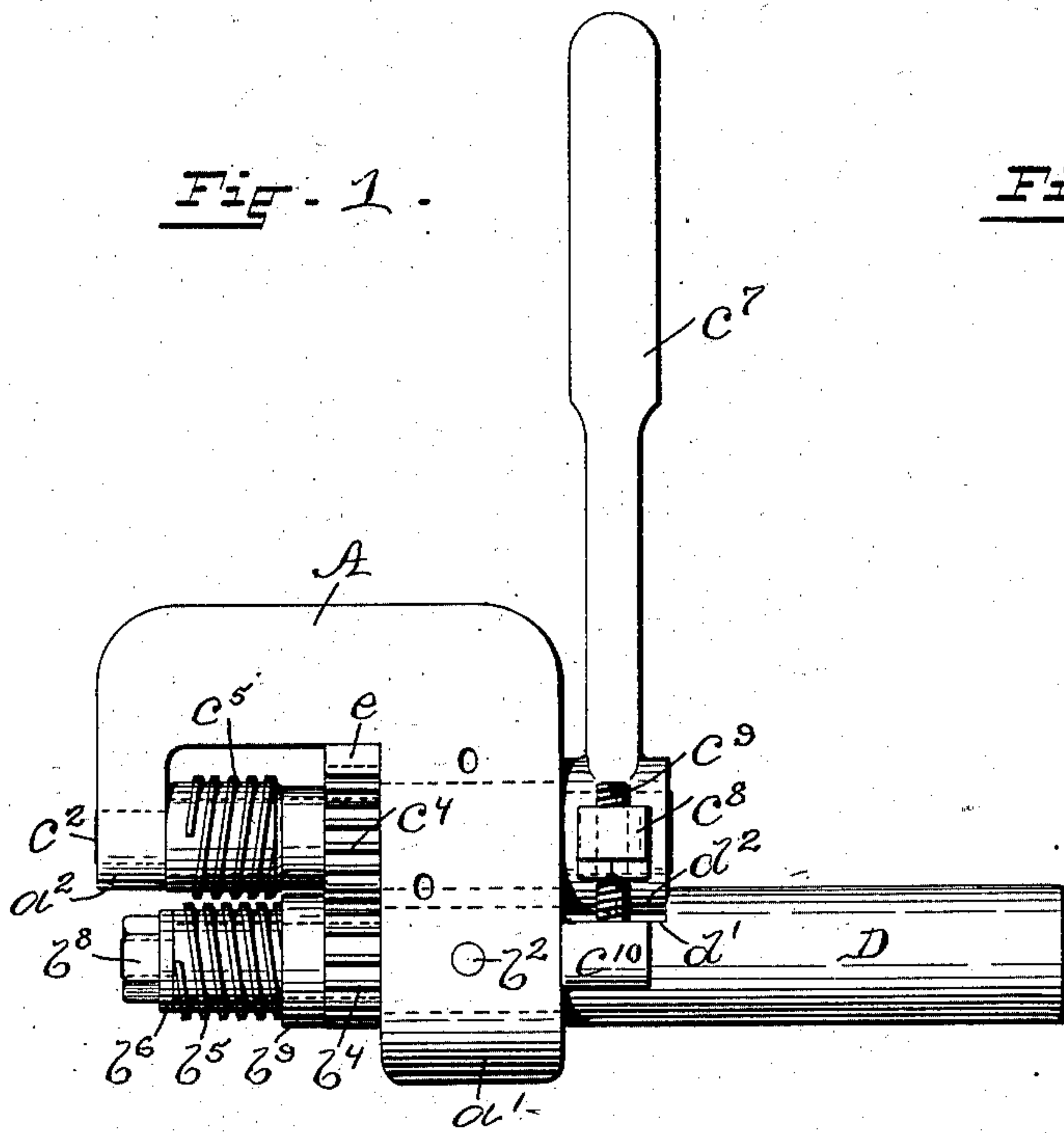


No. 748,276.

PATENTED DEC. 29, 1903.

C. R. GABRIEL.
SCREW THREADING TOOL.
APPLICATION FILED JULY 24, 1902.

NO MODEL.



WITNESSES:

Ada F. Fagerberg
B. S. Webster

INVENTOR:

Charles R. Gabriel
Joseph H. Miller & Co.
ATTORNEYS:

UNITED STATES PATENT OFFICE.

CHARLES R. GABRIEL, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO
GORHAM MANUFACTURING COMPANY, OF PROVIDENCE, RHODE
ISLAND.

SCREW-THREADING TOOL.

SPECIFICATION forming part of Letters Patent No. 748,276, dated December 29, 1903.

Application filed July 24, 1902. Serial No. 116,784. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. GABRIEL, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Screw-Threading Tools, of which the following is a specification.

This invention has reference to an improved tool adapted for use in a lathe for the threading of the ends of metal tubes; and it consists in the peculiar and novel construction illustrated in the drawings and more particularly described hereinafter.

Figure 1 is a side view of my improved tool. Fig. 2 is an end view of the same. Fig. 3 is a longitudinal sectional view of the tool, and Fig. 4 is a transverse sectional view through the pinions connecting the two sleeves of the same.

In the drawings, A indicates the frame, of approximately U-shaped form. The arm a' forms the support of the stud B and the eccentric spindle C, while the arm a^2 supports the end of the eccentric spindle. The stud B has the boss b' at one end secured in the arm a' and held against rotation by the pin b^2 , extending through the frame and the stud, as is indicated in broken lines in Fig. 4. The projecting cylindrical portion b^3 forms the journal-bearing for a sleeve having at one end the pinion b^4 and on the other end the raised spirals b^5 . The washer b^6 is secured to the end of the journal-bearing by the screw b^7 and nut b^8 and holds the sleeve against longitudinal movement. The eccentric spindle has the cylindrical bearing c' journaled in the arm a' and the smaller cylindrical bearing journaled in the arm a^2 . The intermediate cylindrical portion c^3 has its axis offset to one side of the axis of the journal-bearings c' and c^2 . The eccentric cylindrical portion c^3 forms the support of a sleeve, on one end of which is the pinion c^4 . The other end of the sleeve has the raised spirals c^5 . The pinions b^4 and c^4 engage with each other and cause the two sleeves to rotate in unison. The raised spirals b^5 and c^5 are disposed so that the raised ribs of one spiral are between the raised ribs of the other spiral. The stud c^6

projects from the cylindrical bearing c' , and to this stud the lever c^7 is secured. The bracket c^8 projects from the lever and has the screw-post c^9 , by which the rotation of the eccentric spindle C is limited when the screw-post encounters the stop c^{10} . The pin D projects from the frame A and has the recess d' , into which the head d^2 of the lever c^7 enters to form a thrust-stop to prevent the longitudinal movement of the eccentric spindle C.

My improved screw-threading tool, which may be kept on hand, can be used on any lathe having a head-stock and an adjustable foot-stock. When required for use, the pin D is secured in the foot-stock, the tube E is secured in the chuck of the head-stock, and the foot-stock with the tool are moved toward the head-stock until the end of the tube E bears against the collar b^9 on the screw-threaded sleeve. The eccentric spindle is now partially rotated by means of the lever c^7 to bring the two screw-threaded sleeves with sufficient force against the inner and outer surfaces of the shell of the tube and corrugate the same, as shown in Fig. 3. The rotation of the tube imparts rotary motion to the sleeves at the same time, they being connected by the pinions b^4 and c^4 . A true screw-thread is thus formed on the end of the tube. When completed, the lever c^7 is moved in the direction of the arrow shown in Fig. 2, thereby partially turning the eccentric spindle C, raising the sleeve on the same off from the tube E, and bringing the pinion c^4 against the friction-bar e , secured to the frame A, to arrest the rotation of the sleeves. The tube E, which is still rotating, unscrews from the sleeve on the cylindrical portion b^3 and acts to push the tool and the foot-stock backward ready to repeat the same operation on another tube.

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

1. A portable screw-threading tool having an eccentric rotatable spindle and a fixed cylindrical bearing provided with screw-threaded sleeves connected by gears, in combination with means for operating the same, as described.

2. In a portable screw-threading tool, the combination with the frame and the cylindrical bearings supported in the frame, of a pair of sleeves rotatably mounted on the cylindrical bearings, raised screw-threads on the sleeves, pinion-gears on the sleeves, means for securing the tool to a sliding part of the lathe, and means for controlling the operation of the tool, as described.
3. In a portable screw-threading tool, the combination with the frame A, the pin D on the frame, the stud B secured in the frame and the eccentric spindle C rotatably supported in the frame, of a sleeve rotatably supported on the stud B, the raised spirals b^5 and the pinion b^4 on the sleeve, a sleeve rotatably supported on the eccentric spindle C, the raised spirals c^5 and the pinion c^4 on the sleeve, and the lever c^7 secured to the eccentric spindle, as described.

4. In a portable screw-threading tool, the combination with the frame A, the arm a^1 and the arm a^2 on the frame, the stud B secured in the frame and the eccentric spindle C rotatably supported in the frame, of a sleeve supported on the eccentric spindle, the raised spirals c^5 and the pinion c^4 on the sleeve, the friction-bar e on the frame, a sleeve on the cylindrical portion b^3 of the stud B, the raised spirals b^5 , the collar b^9 , and the pinion b^4 on the sleeve, the pin D projecting from the frame, and the lever c^7 secured to the eccentric spindle C, as described.

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

CHARLES R. GABRIEL.

Witnesses:

JOSEPH A. MILLER,

BELLE SIMMS WEBSTER.