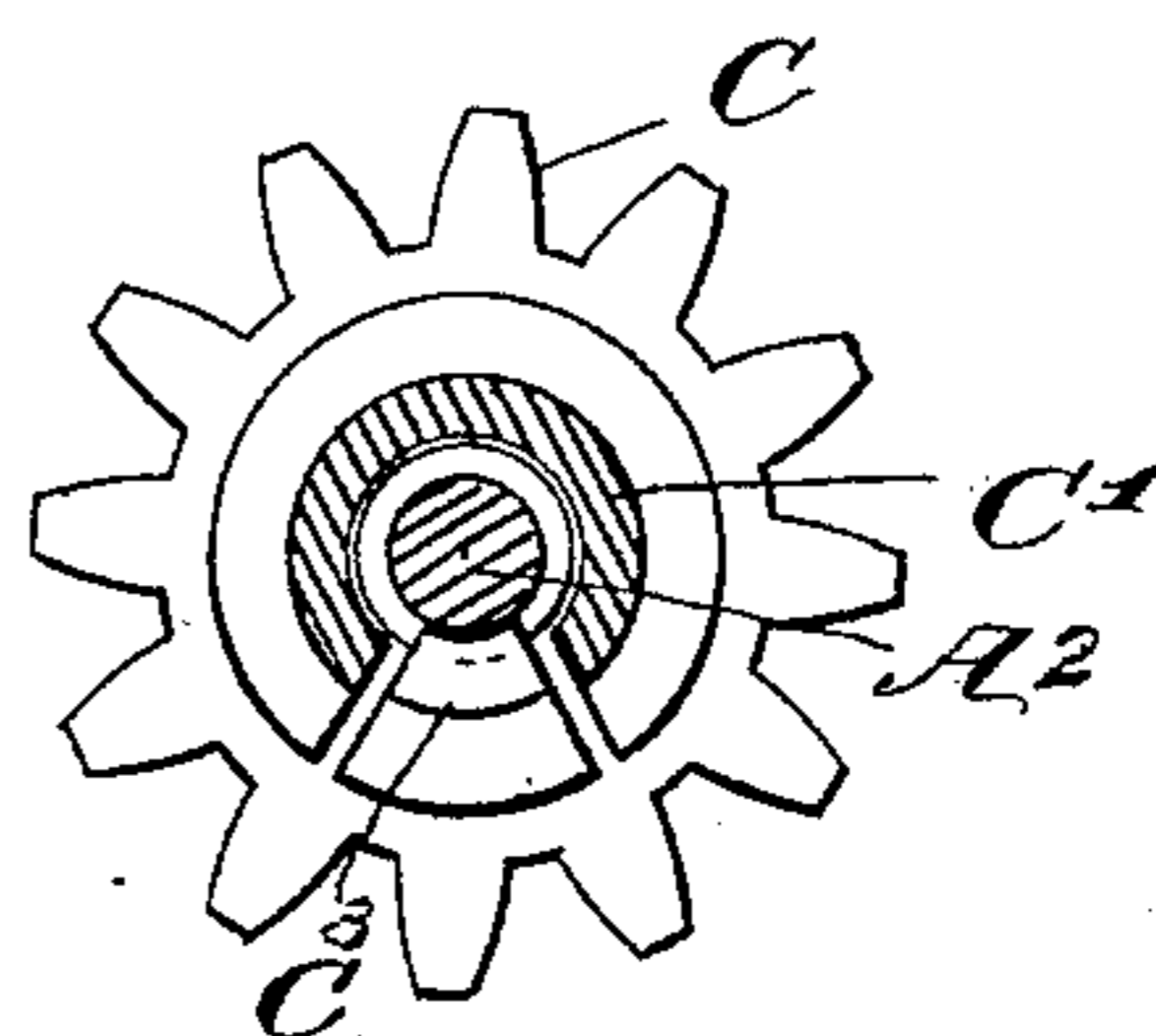
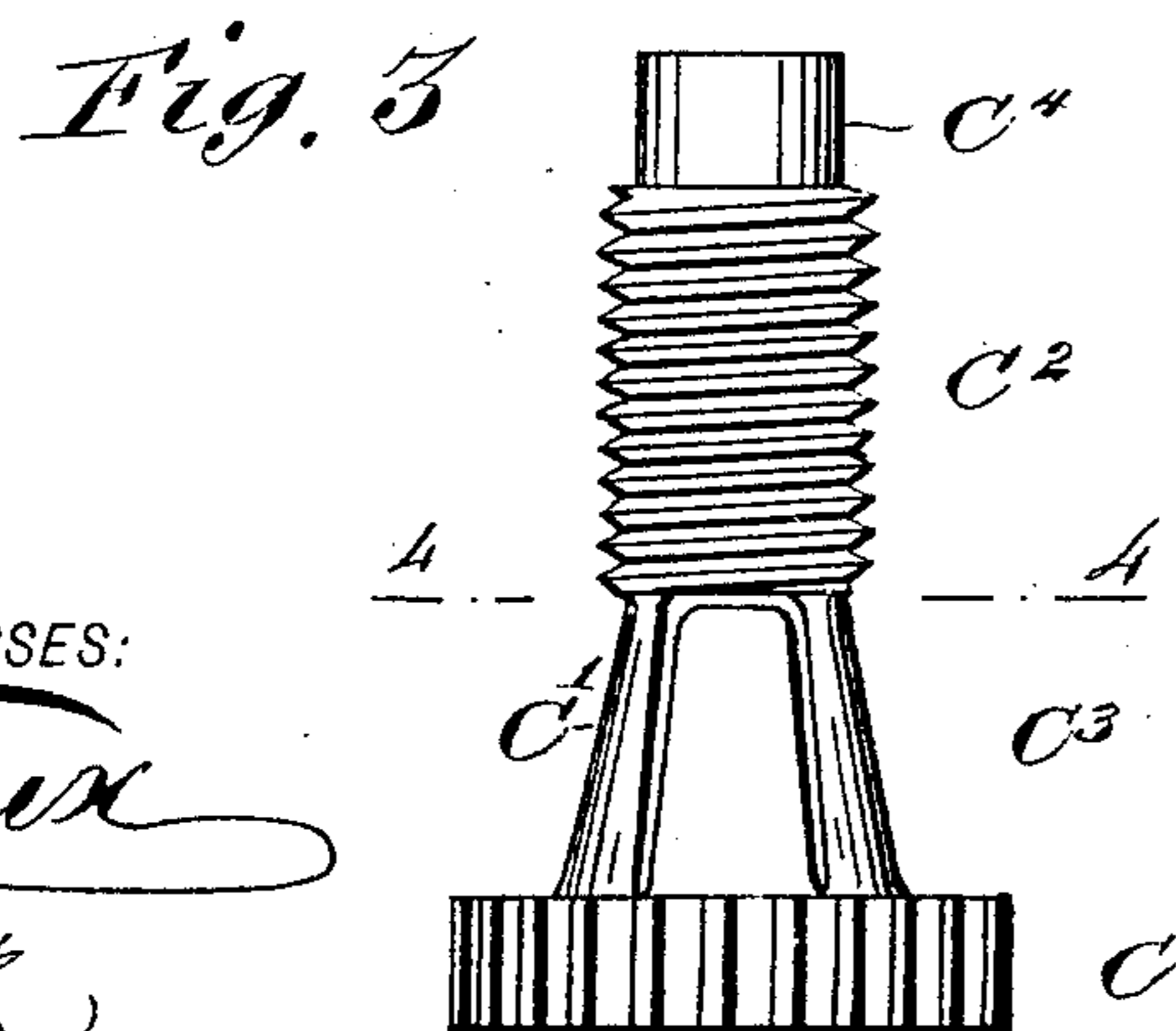
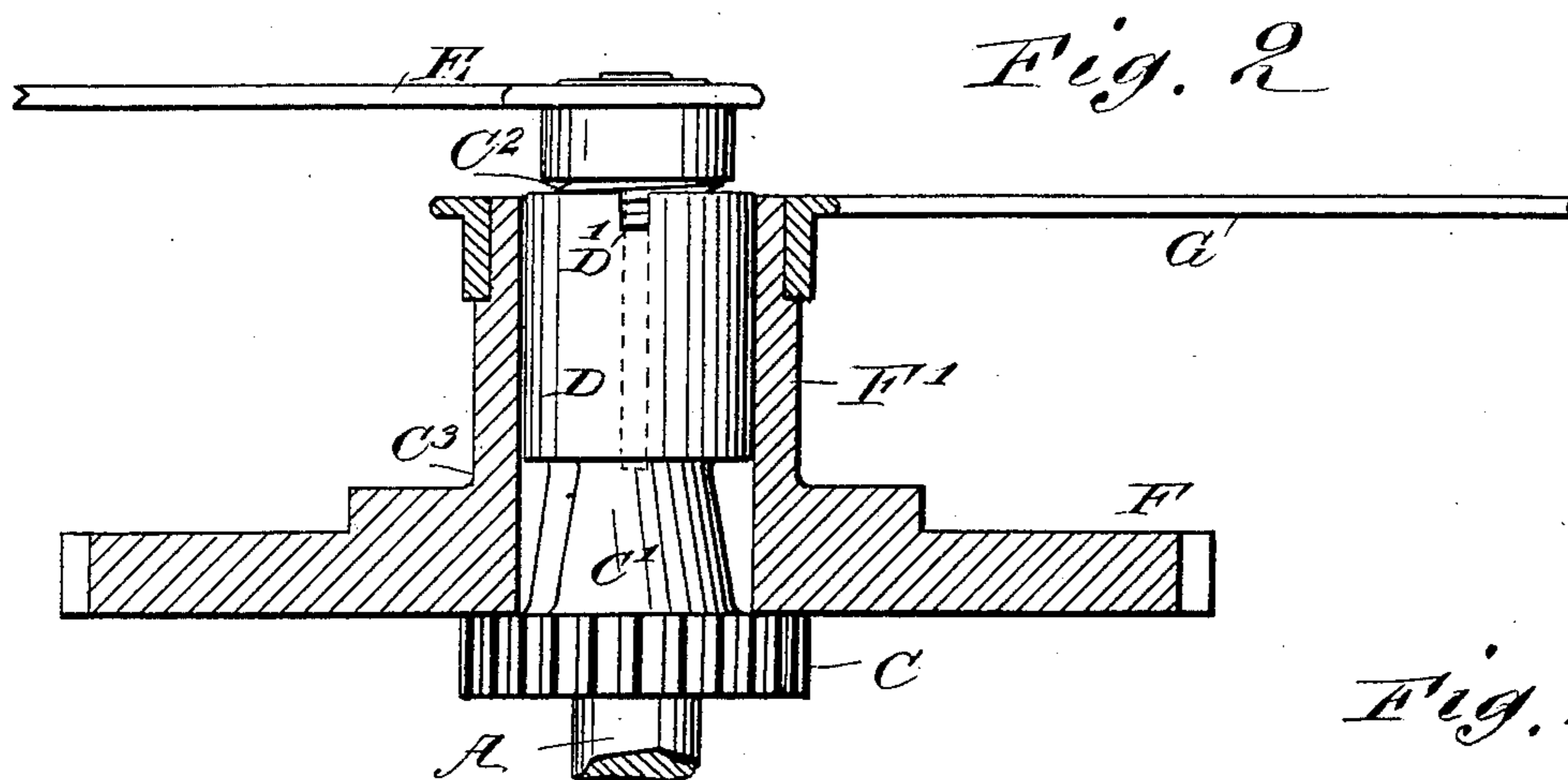
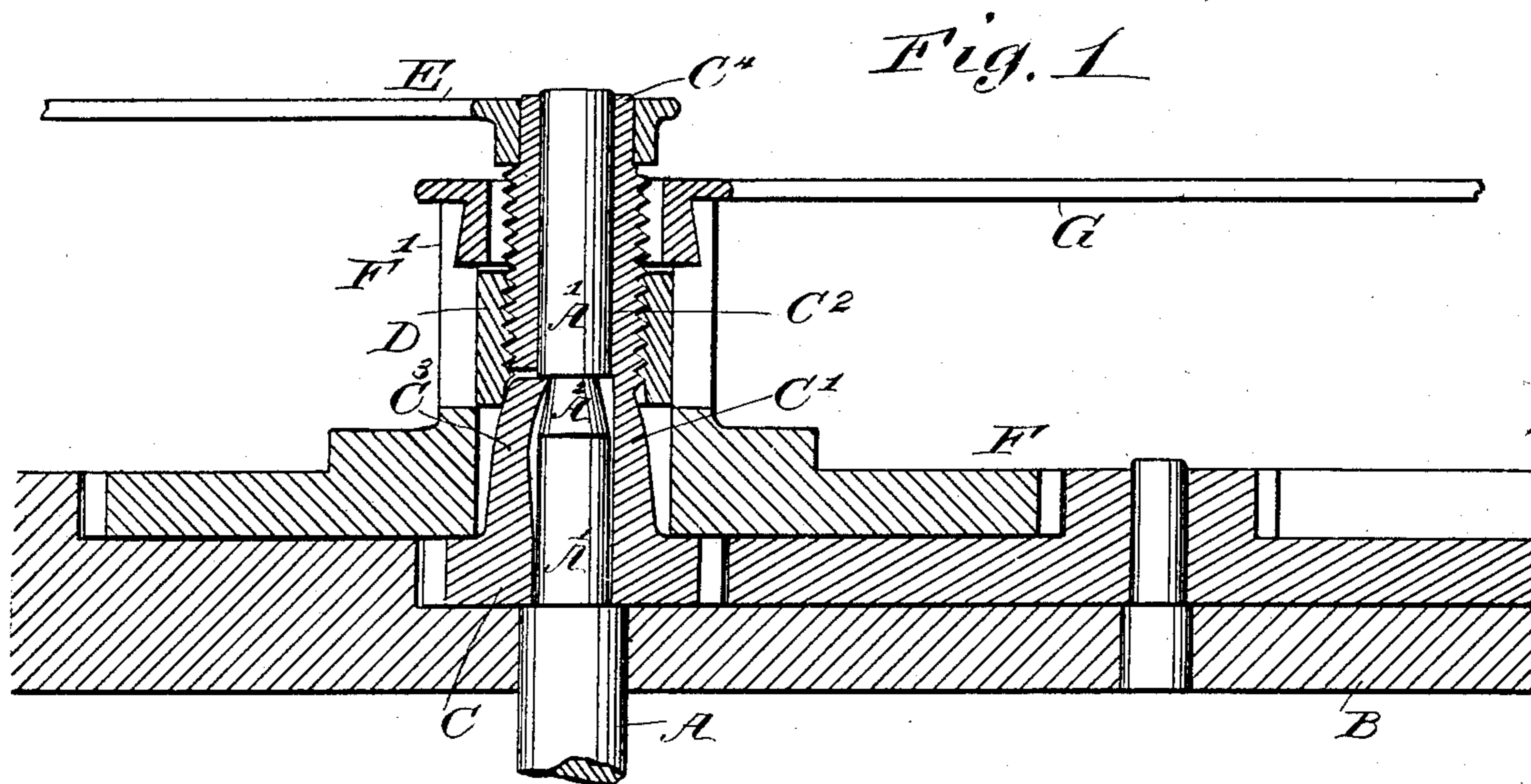


(No Model.)

J. V. COATS.  
CANNON PINION FOR WATCHES.

No. 520,298.

Patented May 22, 1894.



WITNESSES:

*C. Neveu*  
*C. Sedgwick*

INVENTOR

*J. V. Coats*  
BY *Munn & Co*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN V. COATS, OF DELHI, NEW YORK.

## CANNON-PINION FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 520,298, dated May 22, 1894.

Application filed November 16, 1893. Serial No. 491,107. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN V. COATS, of Delhi, in the county of Delaware and State of New York, have invented a new and useful Improvement in Watches, of which the following is a full, clear, and exact description.

My invention is an improvement in that class of cannon pinions which are provided with spring tongues that engage a groove, or shoulder, of the center post, whereby the pinion and post are securely held together.

The novelty consists in the construction and arrangement of parts as hereinafter specified.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement. Fig. 2 is a side elevation of the improvement with the hour wheel and hour hand in section. Fig. 3 is a side elevation of the cannon pinion; and Fig. 4 is a sectional plan view of the same on the line 4—4 of Fig. 3, and with the center post in position.

The center post A, of the watch is journaled at its lower end in the usual plate B, and the said center post is formed beyond the plate with the reduced portions A', on which is fitted the cannon pinion C, provided on part of its hub C', with screw threads C<sup>2</sup>, on which screws a nut D, adapted to engage with its lower end the free end of a spring tongue C<sup>3</sup>, forming part of the hub C', and adapted to press on the reduced end A' of the center post A, so as to lock by frictional contact the said cannon pinion to the center post. As shown in Fig. 1, the reduced end A' is formed with a shoulder A<sup>2</sup> against which abuts the free end of the tongue C<sup>3</sup>, so as to prevent the cannon pinion C from slipping off the center post A whenever a pull is exerted on the outer end C<sup>4</sup> of the hub of the said cannon pinion, the said outer end C<sup>4</sup> carrying the minute hand E in the usual manner. The nut D fits loosely into the hub F' of the hour wheel F arranged concentric to the cannon pinion C and driven in the usual manner.

On the outer end of the hub F' is held the usual hour hand G, the latter being fitted

with its hub either on the inner face of the hub F', as shown in Fig. 1, or on the outer face, as illustrated in Fig. 2. The hub F' is preferably slotted and is provided with a conical bearing for the similarly shaped conical hub of the hour hand G. By this arrangement the slotted hub F' can be pressed so as to securely hold the hour hand G in place. The upper end of the nut D is preferably provided with a screw-driver slot D' to permit the operator to conveniently insert a tool in the said slot to screw up or unscrew the nut on the thread C<sup>2</sup> of the hub C' of the cannon pinion.

It will be seen that when the nut D is screwed down on the threaded portion of the hub C<sup>2</sup> of the cannon pinion, the lower end of the said hub will engage the free end of the spring tongue C<sup>3</sup>, so as to press the said free end inwardly in peripheral contact with the reduced part A' of the center post A, the said free end of the spring tongue engaging the center post under the shoulder A<sup>2</sup>. By this arrangement, the spring tongue C<sup>3</sup> locks the cannon pinion to the center post and at the same time prevents the cannon pinion from being drawn off the center post, as the said spring tongue engages the shoulder A<sup>2</sup>. The spring tongue, C<sup>3</sup>, being located between the pinion proper, C, and the screw-thread, C<sup>2</sup>, it engages the lower end of the cylindrical nut, D, and the latter is in turn so arranged relative to the hands that it cannot affect the position of the latter.

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

1. The combination with the center post, having a circumferential shoulder, of the cannon pinion whose upper portion is screw-threaded, a spring tongue formed integrally with the pinion and engaging said shoulder, and a nut screwing on such threaded portion, and projecting below the latter, as shown and described.

2. As a new article of manufacture, the cannon pinion having the upper portion of its hub screw-threaded and provided with a spring tongue which is located between such threaded portion and a pinion proper, as shown and described.

3. The combination, with a center post, having a shoulder as specified, of a cannon pinion having a spring tongue arranged between the pinion proper and the hub, and  
5 adapted to engage said shoulder, and a cylindrical nut which screws on said hub and engages the upper end of said tongue at a point below the screw-thread, as shown and described.

JOHN V. COATS.

Witnesses:

JAS. E. HARPER,  
WILL H. STURGES.