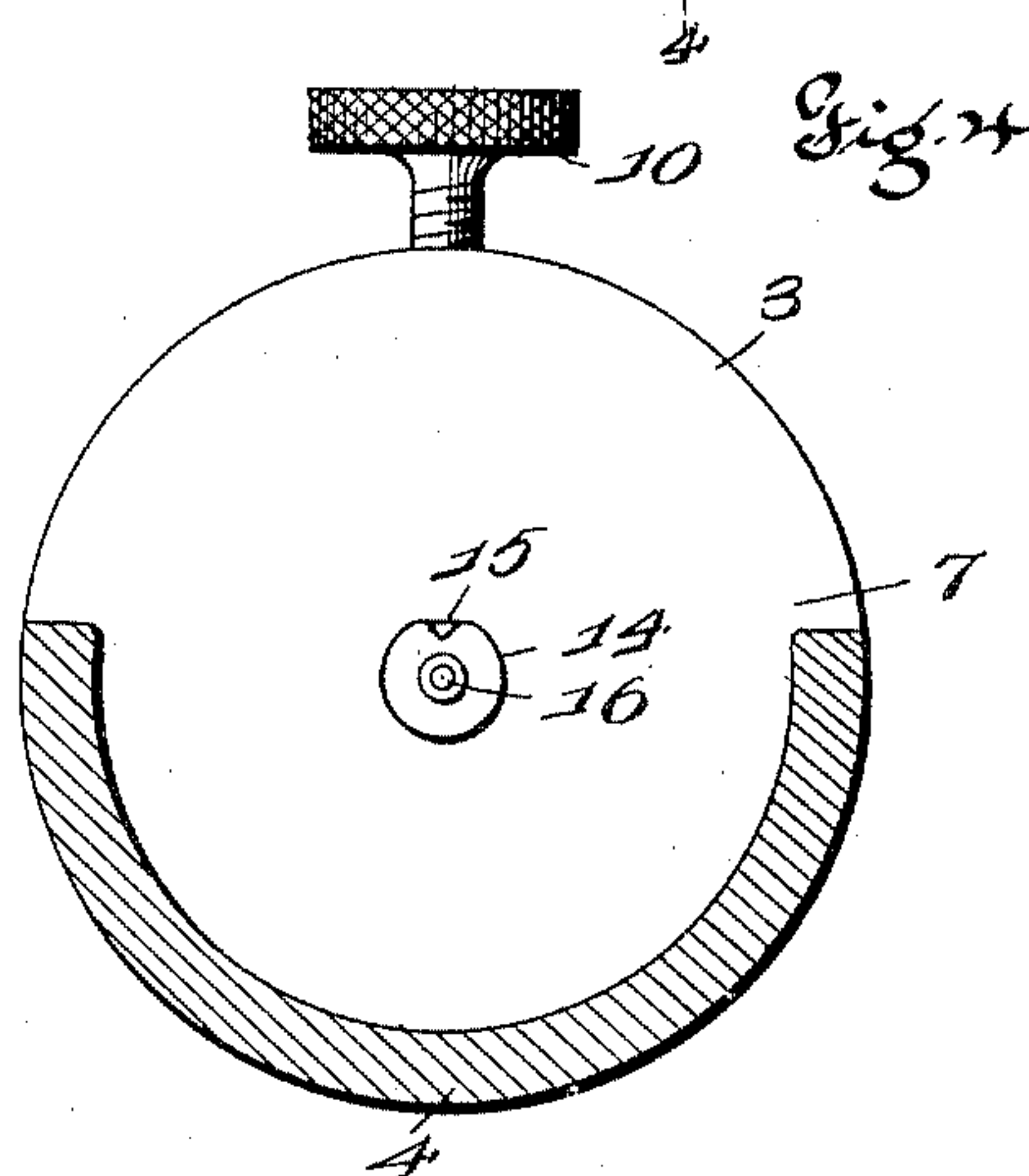
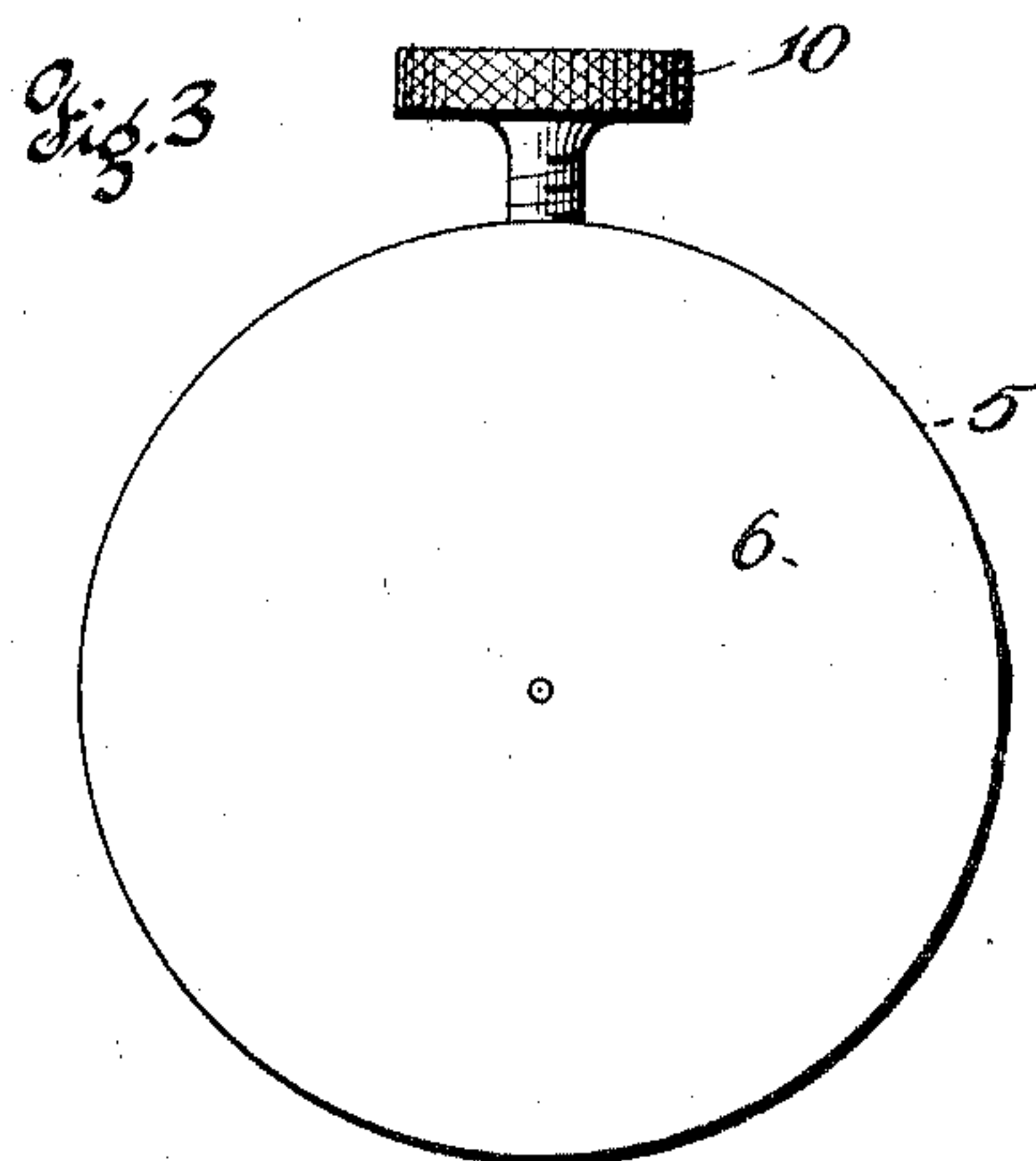
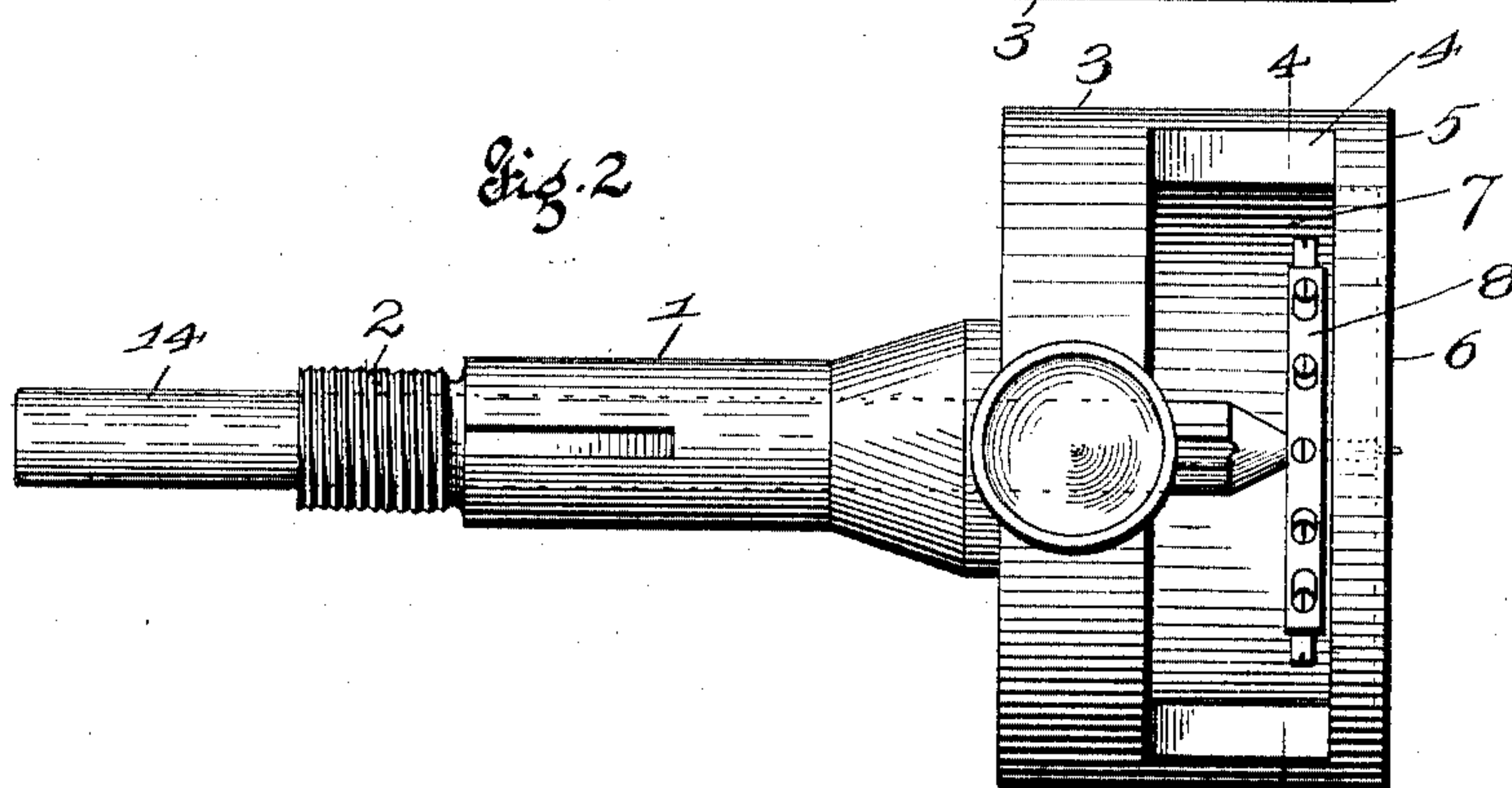
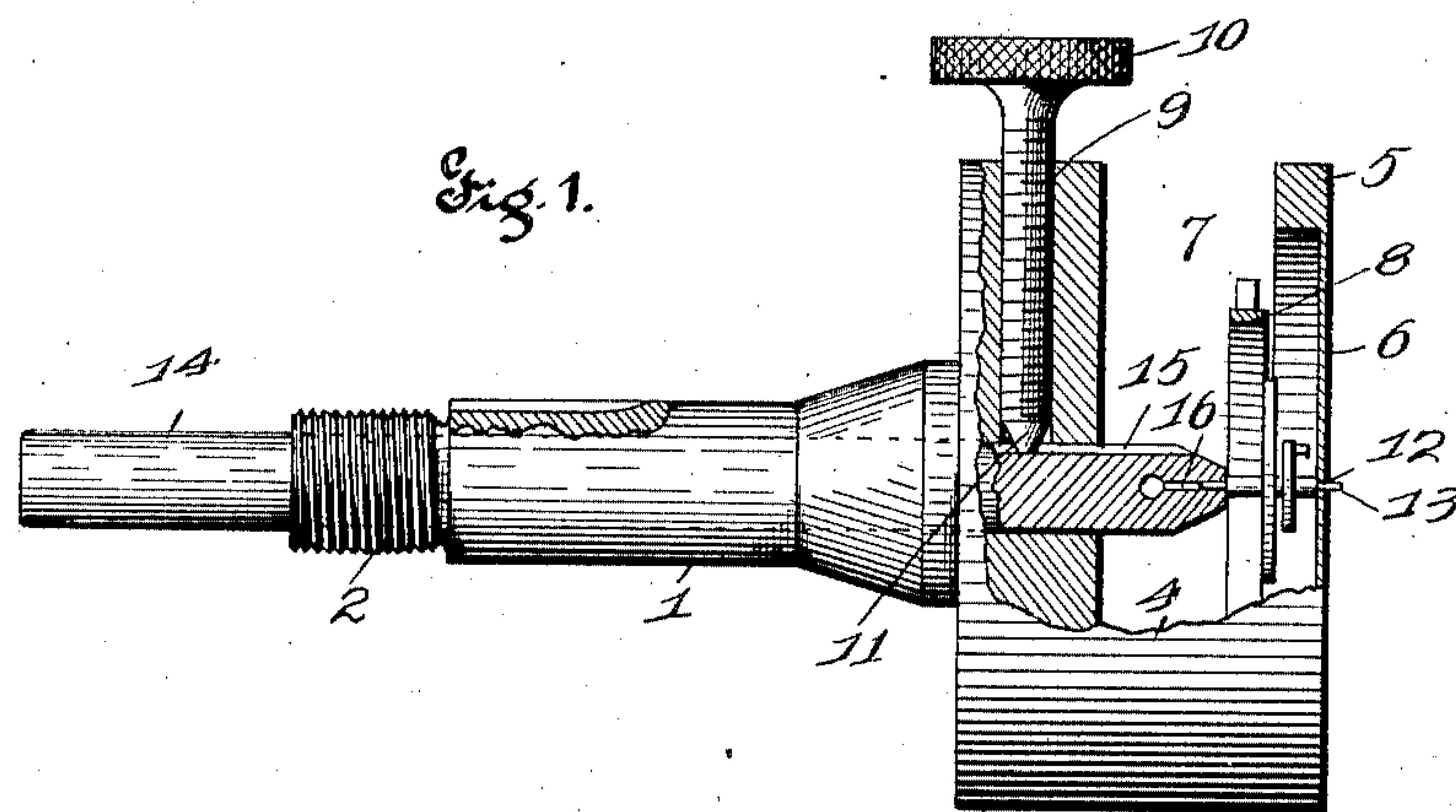


No. 760,314.

PATENTED MAY 17, 1904.

C. CULMAN.
CHUCK FOR REFINISHING STAFF PIVOTS.
APPLICATION FILED NOV. 5, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

CARL CULMAN, OF ST. LOUIS, MISSOURI.

CHUCK FOR REFINISHING STAFF-PIVOTS.

SPECIFICATION forming part of Letters Patent No. 760,314, dated May 17, 1904.

Application filed November 5, 1903. Serial No. 179,947. (No model.)

To all whom it may concern:

Be it known that I, CARL CULMAN, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Chucks for Refinishing Staff-Pivots, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in chucks for refinishing staff-pivots; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

In the drawings, Figure 1 is a side elevation of my invention with parts broken away. Fig. 2 is a top plan view of the same. Fig. 3 is an end view of my invention looking toward the right-hand end of Fig. 2. Fig. 4 is a section taken on the line 4 4 of Fig. 2.

The object of my invention is to construct a chuck especially designed as a watch-repairer's tool for holding the balance-wheel complete with hair-spring and roller in position while refinishing and repolishing staff-pivots which have become rough or worn.

By the use of my invention a great deal of time may be saved by watchmakers and better results obtained than by the old method, where it is necessary to dismount the hair-spring and roller and often the staff in order to repolish the pivots.

Referring to the drawings, 1 indicates the shank, provided with the integral screw-threaded portion 2, which is adapted to be inserted into the chuck of the watchmakers' lathes now in use. Formed integral with the shank 1 is a circular disk 3, and formed integral with said circular disk 3 is a semicircular rim 4, and formed integral with said semicircular rim 4 is an annular ring 5, and formed on the exterior of said annular ring 5 is a resilient head, diaphragm, or disk 6. The designated parts 3, 4, 5, and 6 constitute the head portion of the instrument or chuck, and when formed integral, as heretofore stated, a space 7 is formed, in which may be located and removed whenever desired the balance-wheel 8 and its accompanying parts, hair-spring, &c.

Formed in the circular disk 3 is a screw-threaded hole 9, and located in said hole is a screw-threaded thumb-screw 10, provided with a tapered end 11. Formed in the disk or diaphragm 6 is a small hole or perforation 12, in which the staff-pivot 13 of the balance-wheel 8 is adapted to snugly fit, and when so located therein it projects beyond the face of the disk, as illustrated in Figs. 1 and 2.

The shank 1 is provided with a longitudinal bore, in which is located the pin 14. The pin 14 is provided with a longitudinal V-shaped groove 15, in which the tapered end 11 of the thumb-screw 10 is adapted to snugly fit. By means of the thumb-screw 10 the pin 14 may be adjusted as desired, and by means of the tapered end 11, the thumb-screw 10, and the longitudinal V-shaped groove 15 said pin 14 is prevented from turning. The pin 14 is provided with a hole 16, in which is adapted to be inserted the staff-pivot of the balance-wheel. The resiliency of the disk or diaphragm 6 tends to prevent the staff and the staff-pivots from turning when they are located in the holes 16 and 12.

The operation is as follows: When it is desired to polish the staff-pivots, the pin 14 is properly adjusted, and the staff-pivot 13 is located in the hole 12 of the disk 6, and the other end of the staff-pivot is located in the hole 16 of the pin 14, and then the pin 14 is properly adjusted. The instrument is then attached to the lathe as heretofore described, and by applying the proper tool to the staff-pivots they may be finished and polished as desired.

By the use of my chuck a great amount of time is saved by watchmakers in polishing and refinishing the staff-pivots, and better results are obtained from its use over the old method of accomplishing said work.

Having thus described my invention, what I claim is—

1. A chuck for polishing and refinishing staff-pivots, comprising a shank adapted to be attached to the lathe and a head provided with a circular opening adapted to receive the balance-wheel carried by said shank, an adjustable pin located in said shank and projecting in said opening for supporting one end of the

staff-pivot, and a small hole in the head in alinement with said pin for supporting the other end of the staff-pivot, substantially as specified.

- 5 2. A chuck for polishing and refinishing staff-pivots, comprising a shank adapted to be attached to the lathe, and a head comprising a circular disk and a resilient disk spaced
10 apart so as to form an opening adapted to receive the balance-wheel and its accompanying parts, the said resilient disk being provided with an opening to receive one end of staff-pivot, and the said shank carrying an adjustable pin adapted to receive the other end of the
15 staff-pivot, substantially as specified.

3. A chuck for polishing and refinishing staff-pivots, comprising a shank adapted to be

attached to the lathe, a head comprising a circular disk and a resilient disk spaced apart so as to form an opening adapted to receive the 20 balance-wheel and its accompanying parts, the said resilient disk being provided with an opening to receive one end of the staff-pivot, and the said shank carrying an adjustable pin adapted to receive the other end of the staff- 25 pivot, and a thumb-screw for adjusting said pin; substantially as specified.

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

CARL CULMAN.

Witnesses:

ALFRED A. EICKS,
M. G. IRION.