

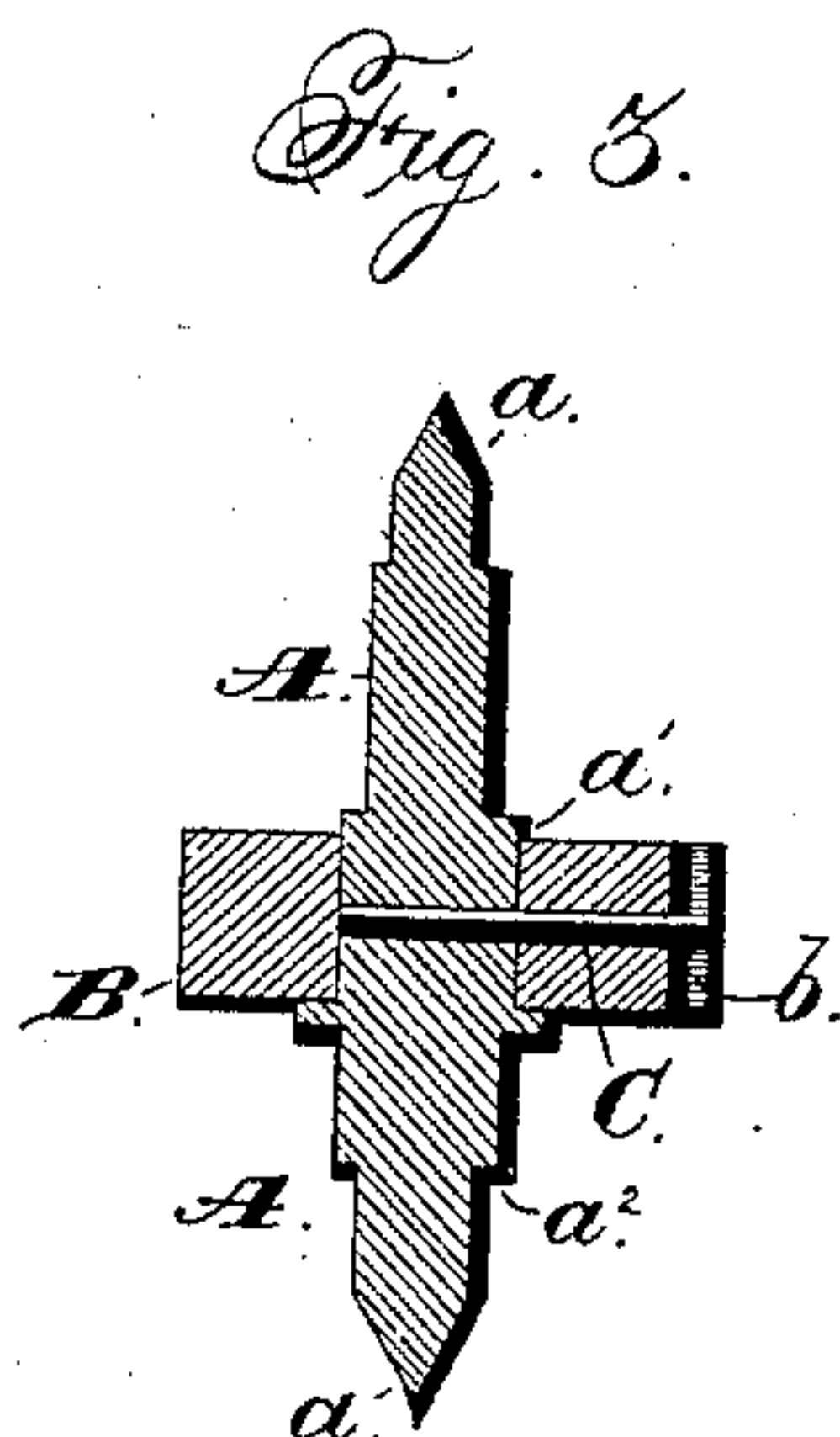
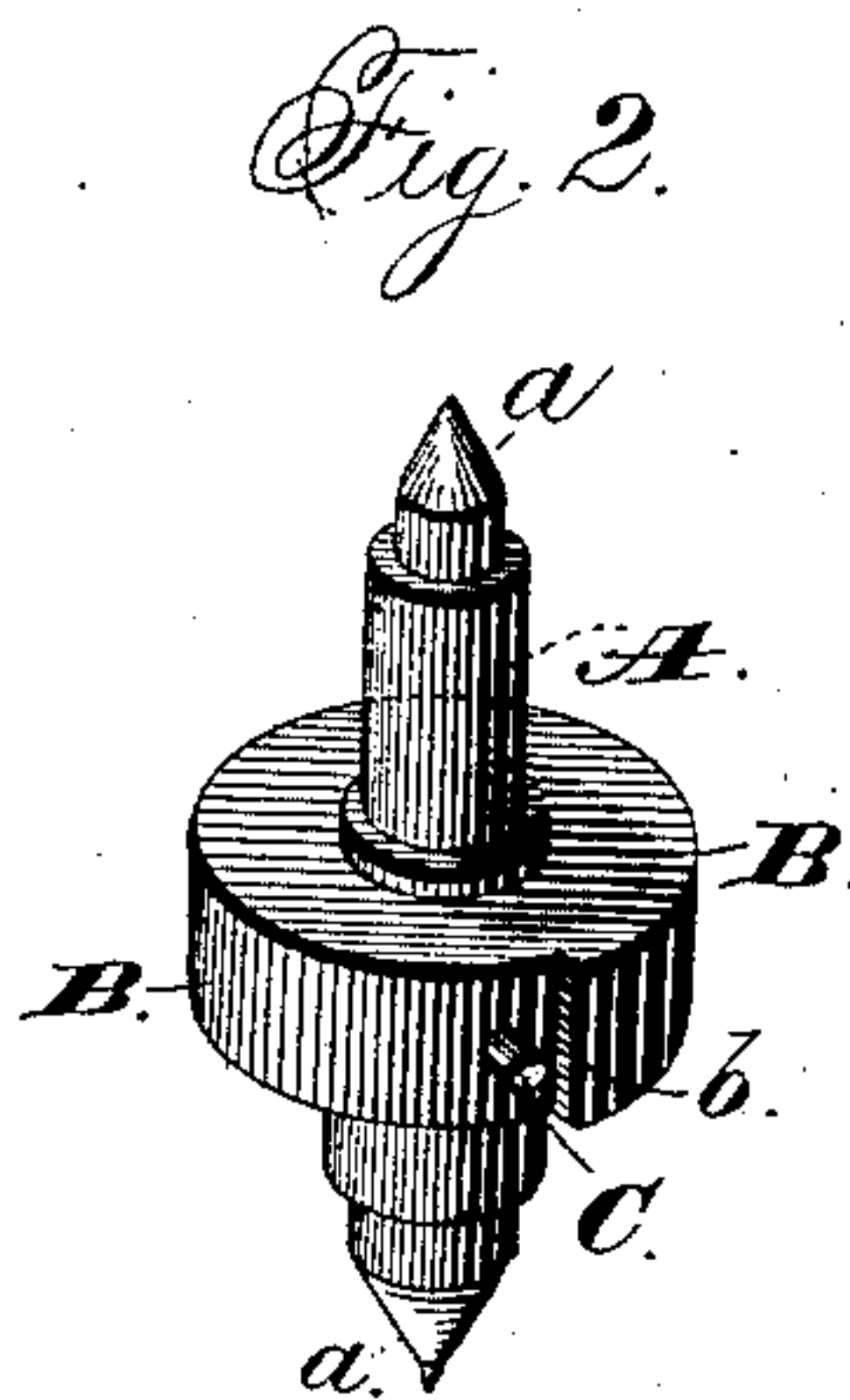
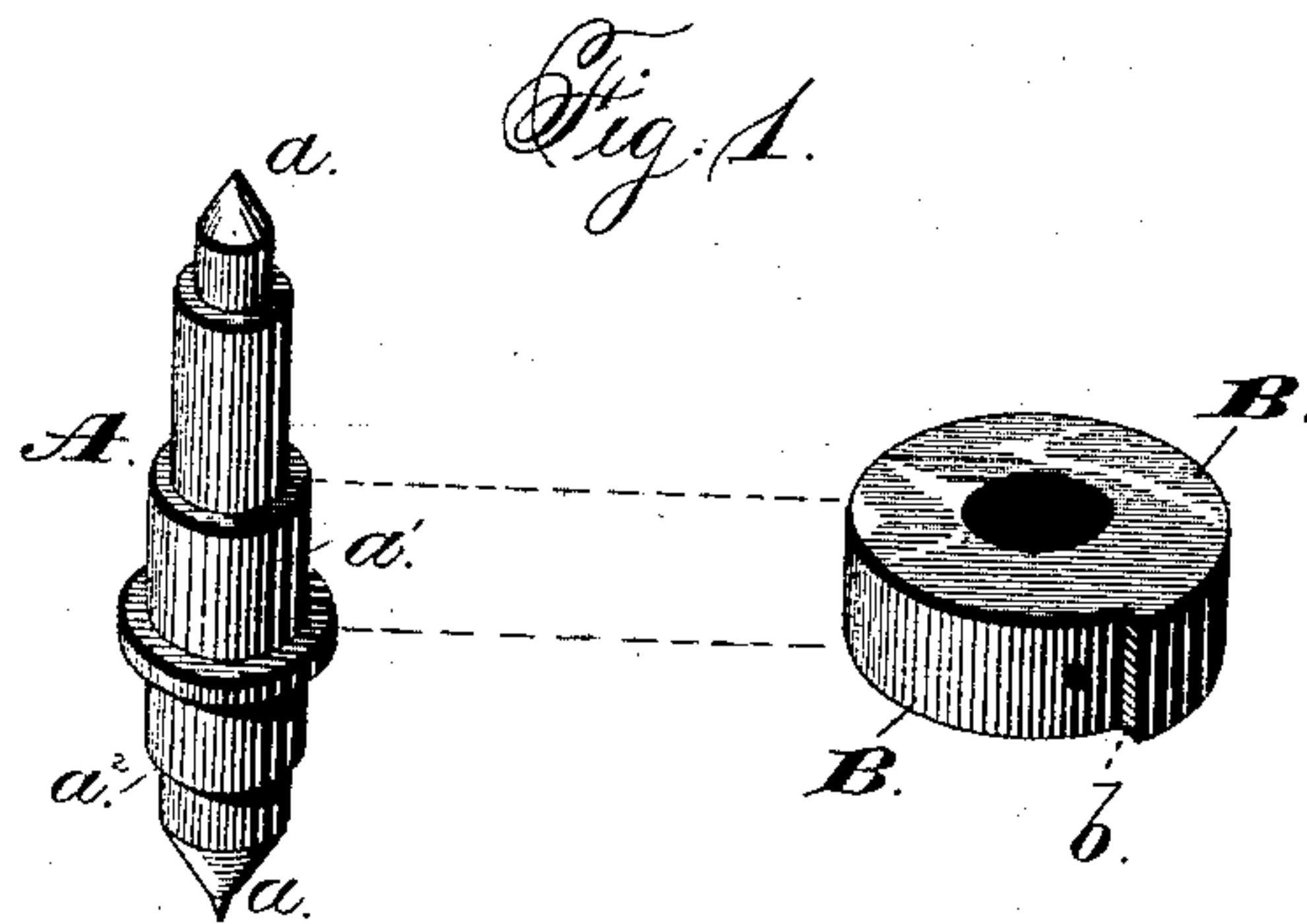
(No Model.)

G. E. HART.

METHOD OF MAKING A COMBINED SPRING ARBOR AND COLLET.

No. 328,308.

Patented Oct. 13, 1885.



Witnesses:
Jas. C. Hutchinson.
Henry C. Hazard.

Inventor.
G. E. Hart, by
Prindle & Russell, his Attys

UNITED STATES PATENT OFFICE.

GEORGE E. HART, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE
WATERBURY WATCH COMPANY, OF SAME PLACE.

METHOD OF MAKING A COMBINED SPRING ARBOR AND COLLET.

SPECIFICATION forming part of Letters Patent No. 328,308, dated October 13, 1885.

Application filed July 30, 1885. Serial No. 173,060. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. HART, of Waterbury, in the county of New Haven, and in the State of Connecticut, have invented certain new and useful Improvements in the Manufacture of a Combined Spring Arbor and Collet; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my spring-arbor and collet separated from each other. Fig. 2 is a like view of the same united, and Fig. 3 is a central section of the same through the axis of said arbor.

Letters of like name and kind refer to similar parts in each of the figures.

The design of my invention is to simplify the construction and to increase the efficiency of mainspring arbors and collets; to which end said invention consists in the method employed, substantially as and for the purpose hereinafter shown.

In the construction of my device I form the arbor A from steel or iron wire, its ends being provided with the usual pivots, *a*, and its center with a collet-bearing, *a'*, which is somewhat larger in diameter than the other parts, and terminates, at its lower end, in a shoulder, *a*².

The collet B is punched from a sheet of metal and has the usual annular form, with a scroll-shaped periphery that furnishes a recess, *b*, for the end of the mainspring. The

interior diameter of said collet is slightly less than the external dimensions of the bearing *a'* of the arbor A, so that when said collet is pressed to place upon the latter, it is firmly held thereon by friction.

A pin, C, for engaging the end of the mainspring, is inserted within the recess *b* of the collet B, and for greater security is caused to pass inward into or through the arbor A.

The device described is in all respects as strong and durable as though made in the usual manner from one piece. It is more perfect in form, so far as the collet is concerned, and can be made for a fraction of the expense heretofore required.

Having thus fully set forth the nature and merits of my invention, what I claim is—

The hereinbefore-described method of producing a mainspring arbor and collet, consisting in the forming of the arbor from wire, the punching of the collet from a sheet of metal, the uniting of said parts by pressing the collet upon the arbor, and, lastly, the inserting of a spring pin or hook through said collet into said arbor, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of July, 1885.

GEORGE E. HART.

Witnesses:

CHARLES S. CHAPMAN,
GEO. E. TERRY.