

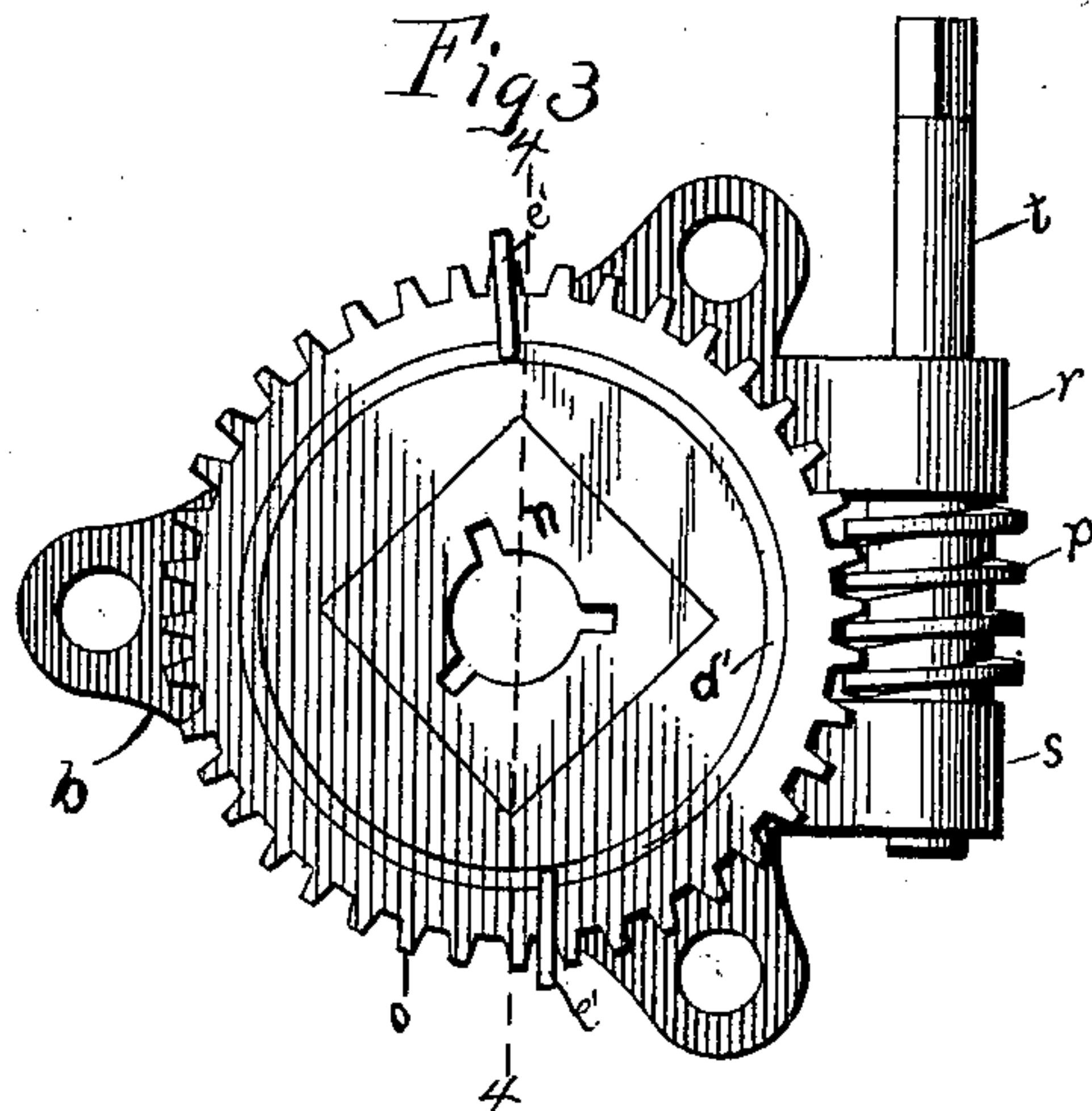
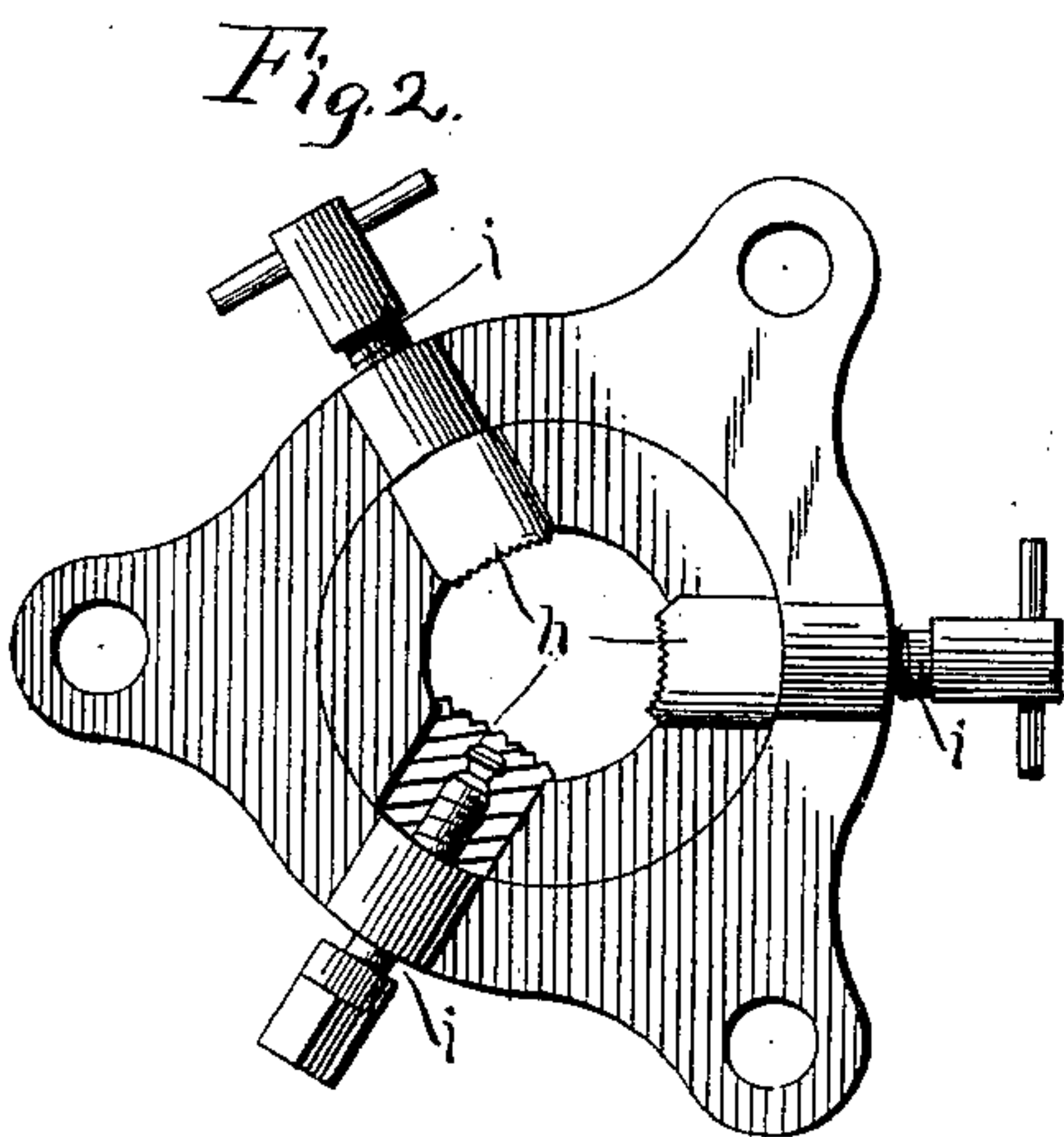
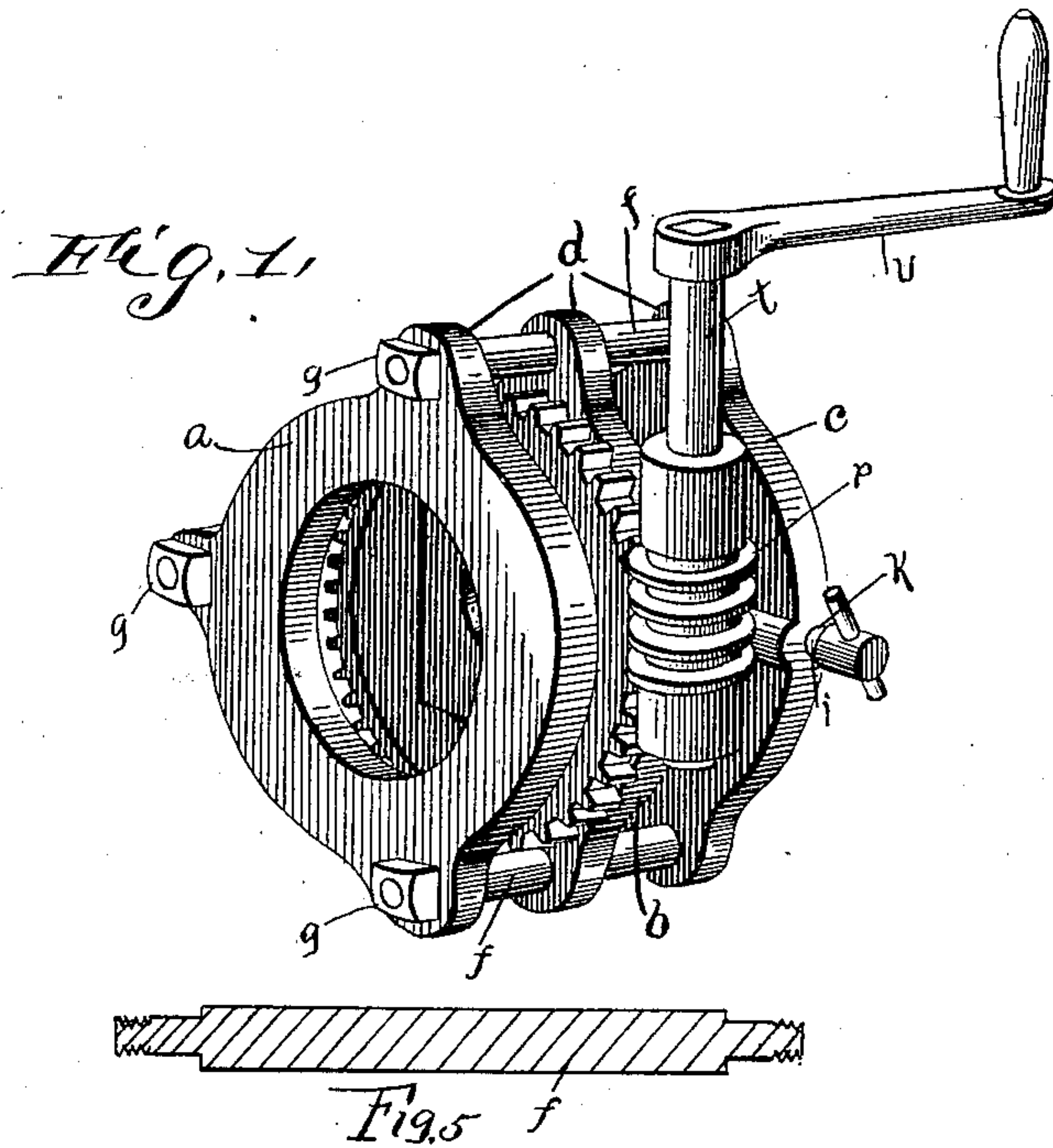
No. 658,232.

Patented Sept. 18, 1900.

O. H. BOLTZ.
THREAD CUTTER.

(Application filed June 30, 1899. Renewed Aug. 2, 1900.)

(No Model.)



Witnesses:

J. L. Mockabee

L. M. Beckmeyer,

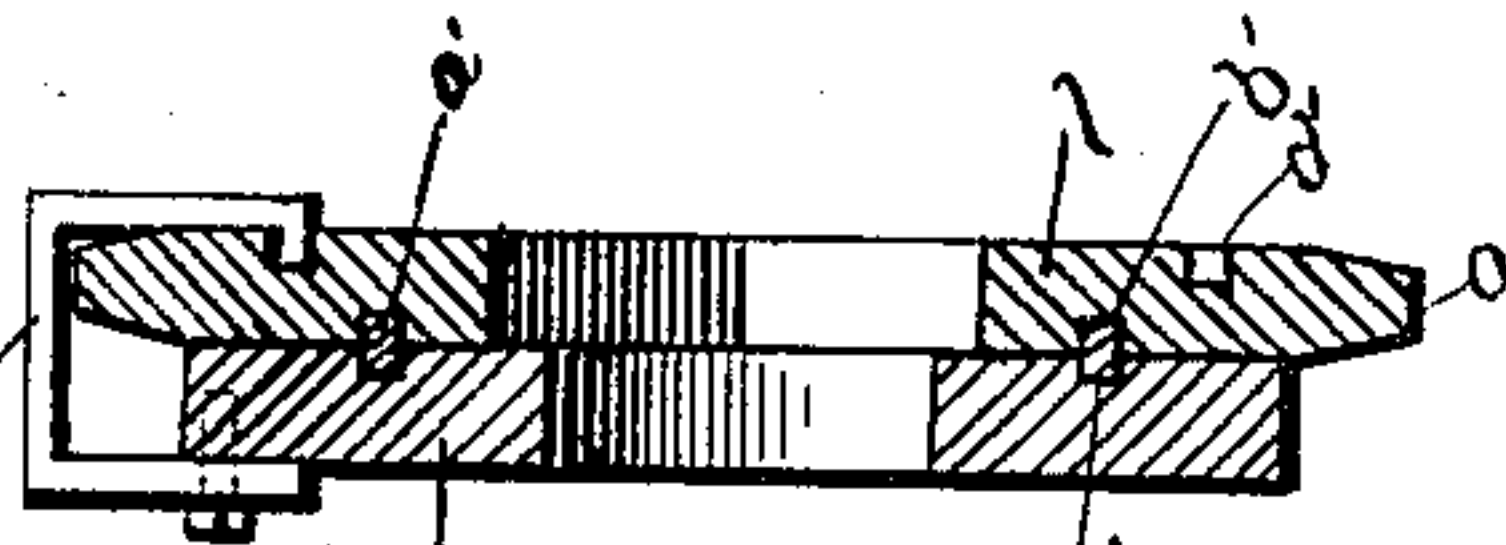


Fig. 4.
By

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THREAD-CUTTER.

SPECIFICATION forming part of Letters Patent No. 658,232, dated September 18, 1900.

Application filed June 30, 1899. Renewed August 2, 1900. Serial No. 25,717. (No model.)

To all whom it may concern:

Be it known that I, OLIVER H. BOLTZ, a citizen of the United States, residing at Sandusky, in the county of Erie, State of Ohio, have invented certain new and useful Improvements in Thread-Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to thread-cutters, and has for its object to provide a cheap and efficient tool that is adapted for "outside" work and which may be easily and quickly adjusted to the pipe to be threaded and which may be readily operated without the assistance of a vise and other heavy and cumbersome machinery usually employed in the operation of thread-cutting.

In the drawings forming a portion of this specification, and in which like letters of reference indicate similar parts in the several views, Figure 1 is a perspective view showing my apparatus complete. Fig. 2 is a rear end view of the apparatus. Fig. 3 is a face view of the die-carrying plate and the means for rotating it, also its supporting-plate. Fig. 4 is a section on line 4 4 of Fig. 3. Fig. 5 shows a clamping-bolt.

Referring now to the drawings, in operating in accordance with my invention I form three disks *a*, *b*, and *c*, each of which has three radially-extending lugs *d*, provided with perforations, as shown. These three disks are connected to lie in parallel planes and upon a common axis by means of bolts *f*. The middle disk *b* is slidably mounted upon the bolts, while the outside disks *a* and *c* are connected rigidly therewith, such rigid connection being secured by reducing the ends of the bolts, as shown in Fig. 5, to form shoulders, against which the disks are clamped by the nuts *g*.

The disk *c* is what I term the "clamping-disk," for the reason that it carries clamping-jaws *h*, mounted radially thereon and adapted to be reciprocated by screws *i*, engaging the threads of radial perforations *k* in the disk *c*. The inner ends of the screws are headed, as shown in Fig. 2 of the drawings, and engage similar sockets in the jaws, whereby said screws may withdraw the jaws, as well as move them toward each other.

As shown in the drawings, two of the screws *i* are thumb-screws, while the other has a squared end to receive a key, I having found it preferable to adjust the thumb-screws to their proper positions and then exert the clamping action entirely with one screw, which can be more easily manipulated by means of the key.

The die-carrying disk *b* is provided with a central circular opening, concentric with which is an annular groove *c'*, carrying a ring *a'*. A die-plate *l*, having a squared central opening to receive a die *n*, lies against the grooved face of disk *b*, which plate has also an annular groove *b'* to receive ring *a'*. In order to hold the plate *l* against the disk *b*, I attach to the latter one end of a U-shaped guide *e'*, the other end of which is turned inwardly and engages a groove *d'* in the outer face of the plate *l*, thus preventing its movement from the disk *b*. In practice any number of such guides may be employed.

In order to rotate the die-plate and thereby with the die, I form teeth *o* upon the plate *l*, resulting in the formation of a gear-wheel, and engaging these teeth is a screw *p*, journaled in perforated alining lugs *r* and *s*, formed upon the disk *b*.

The screw *p* has a shaft *t* extending beyond the lug *r*, the upper end of which shaft is squared, as shown, for the reception of a key or crank *u*, and through the medium of which key or crank the screw may be rotated to rotate the die-plate and die. The key or crank *u* is also adapted to the squared end of screw *i*, so that a single element of this kind is all that is necessary.

In the operation of my invention I adjust my apparatus to a pipe to be threaded by passing the pipe through the opening in the clamp-plate and into engagement with the die in the die-plate, the die-plate being moved away from the clamp-plate. The thumb-screws *i* are then manipulated to bear against the surface of the pipe, after which the crank is fitted to the screw having the squared shaft and it is clamped tightly against the pipe, thus gripping the pipe firmly against movement with respect to the apparatus. The crank is then adjusted to the shaft *t* and the screw *p* is rotated to rotate the die-plate and therewith the die, the threads of the die causing the lat-

ter to run up the pipe, the disk *b* moving therewith upon the bolts *f*. After the threads have been cut for a suitable distance the screw is reversed by means of the crank and the die thus moved backwardly and from the end of the pipe. It will thus be seen that my apparatus is adapted for outdoor and indoor work, and also that it may be readily used in ditch-work, where it is desired to thread the end of a cut pipe for the adjustment of a connection.

It will be readily understood that I may vary the specific form and arrangement of the elements of my device, that in its manufacture I may depart from the specific form and construction herein shown and described, and that I may also use any materials that may be deemed expedient.

Having thus described my invention, what I claim is—

1. A device of the class described comprising an inner and an outer disk rigidly connected, clamping mechanism carried by one of said disks, an intermediate disk slidably connected with respect to the inner and outer disk, a die rotatably mounted on the intermediate disk and means for rotating the die.

2. A device of the class described comprising an inner and an outer disk rigidly con-

nected, clamping mechanism carried by one of said disks, an intermediate disk slidably connected with respect to the inner and outer disks, a die-plate rotatably mounted upon the intermediate disk and having a gear edge, a screw carried by the intermediate disk and engaging the gear edge and means for rotating the screw to rotate the die-plate.

3. A device of the class described comprising an inner and an outer disk upon a common axis, rigid connections between said disks, clamping mechanism carried by one of said disks, an intermediate disk slidably mounted on said rigid connections, a groove in said disk, a ring mounted in said groove, a die-plate having a groove therein and lying against the intermediate disk and receiving said ring in its groove, said plate having a geared edge, a screw carried by the intermediate disk and engaging the geared edge of the die-plate and means for rotating the screw to rotate the die-plate.

In testimony whereof I affix my signature in presence of two witnesses.

OLIVER H. BOLTZ.

Witnesses:

JOHN RAY,

HARRY GILKESSON.