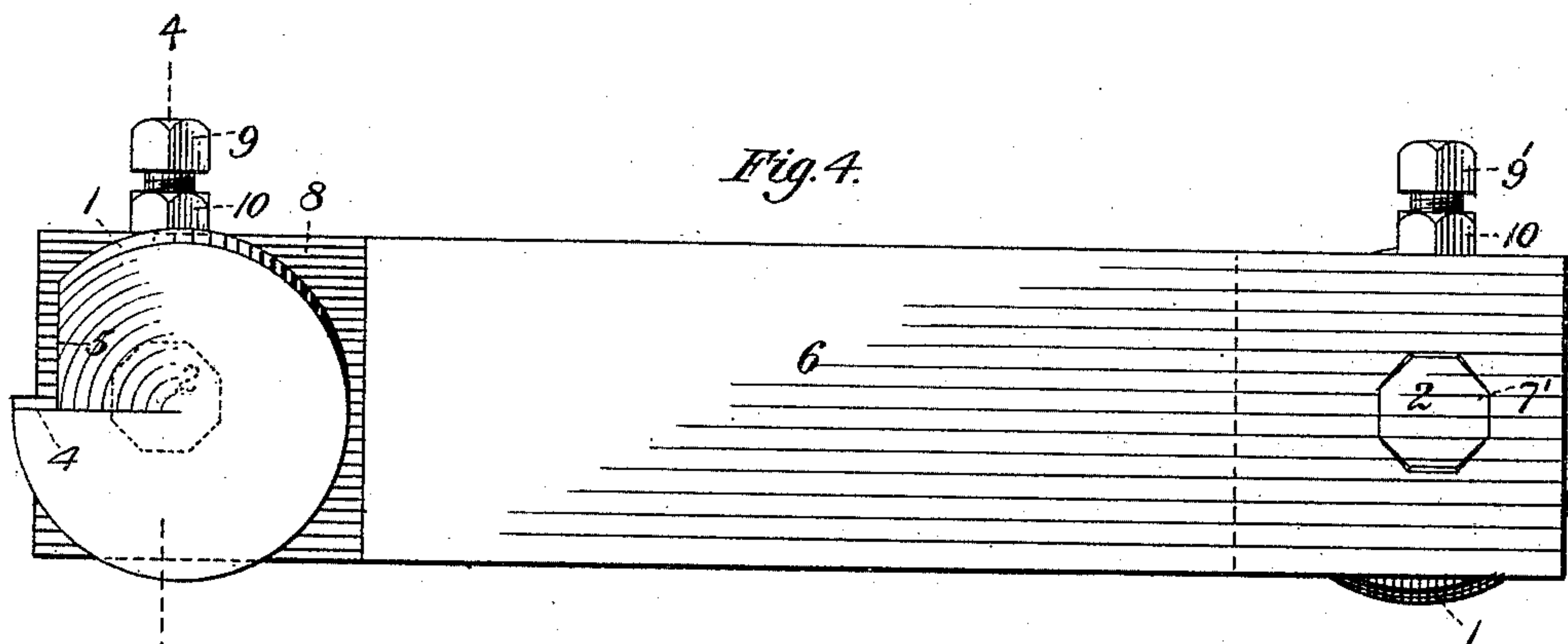
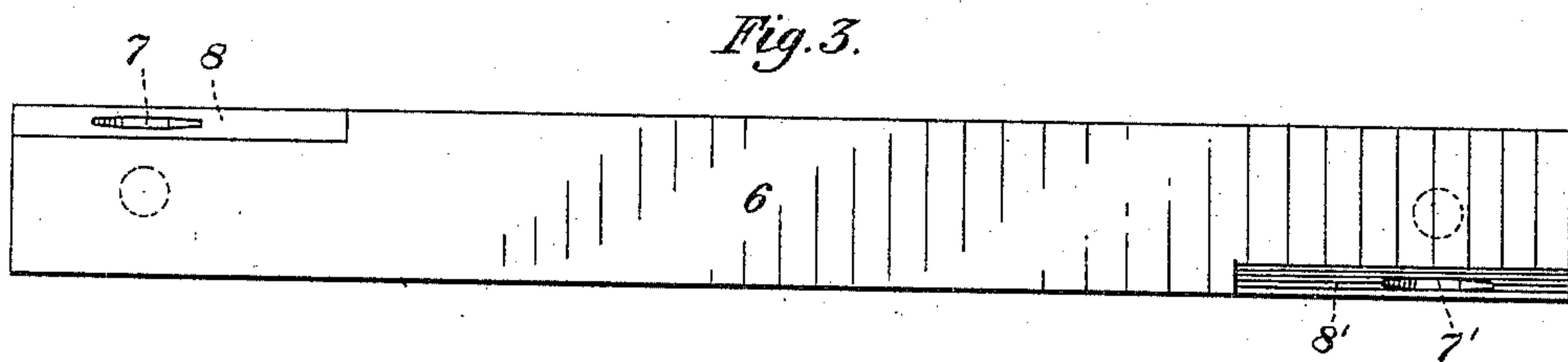
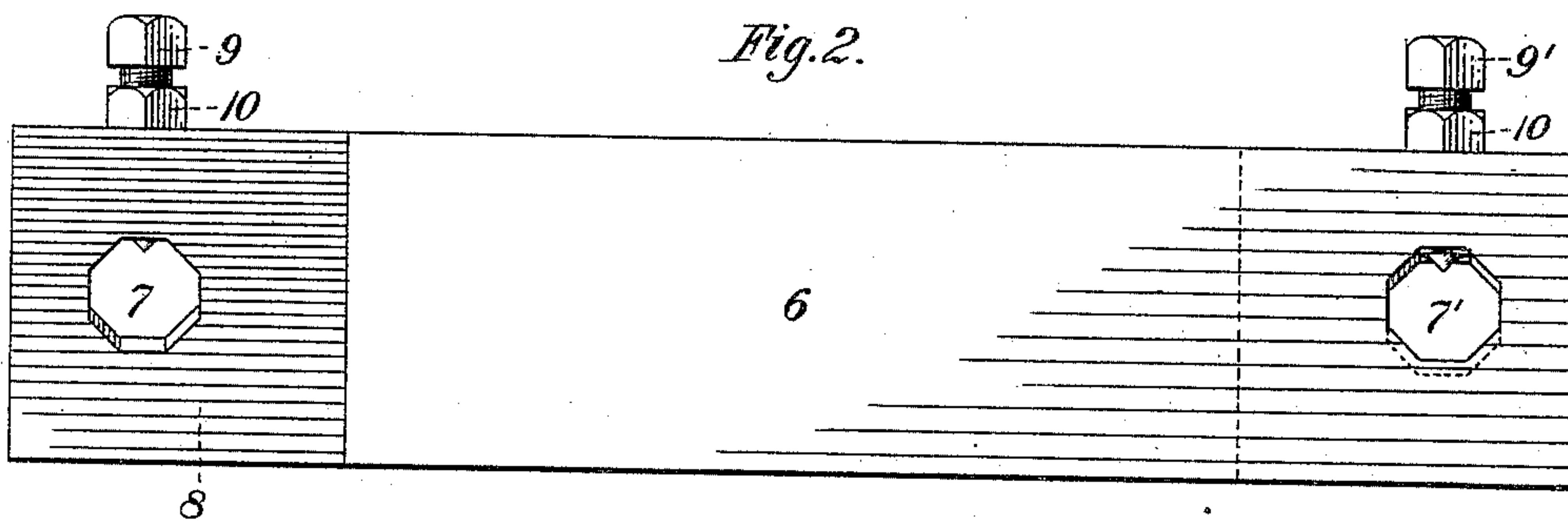
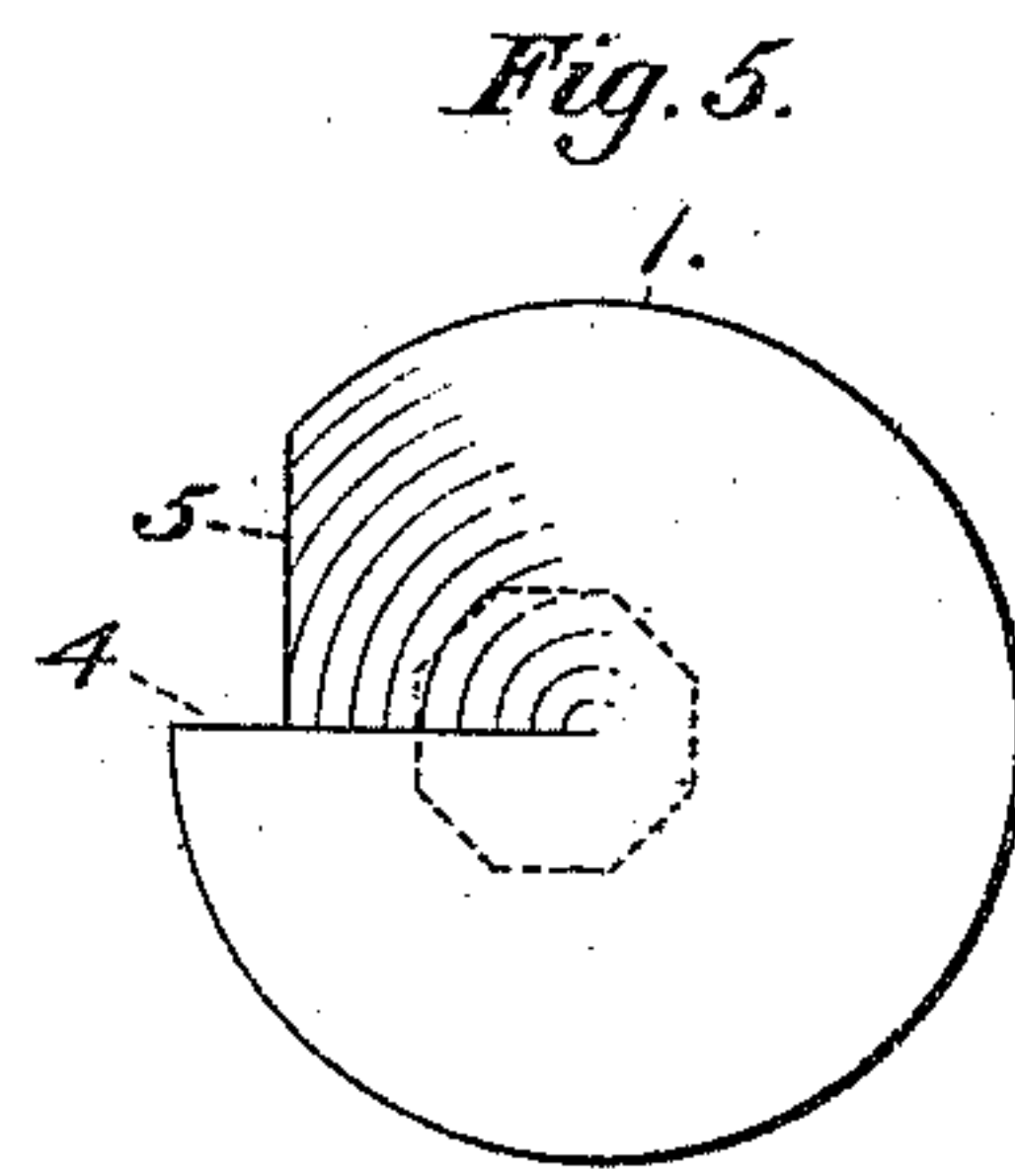
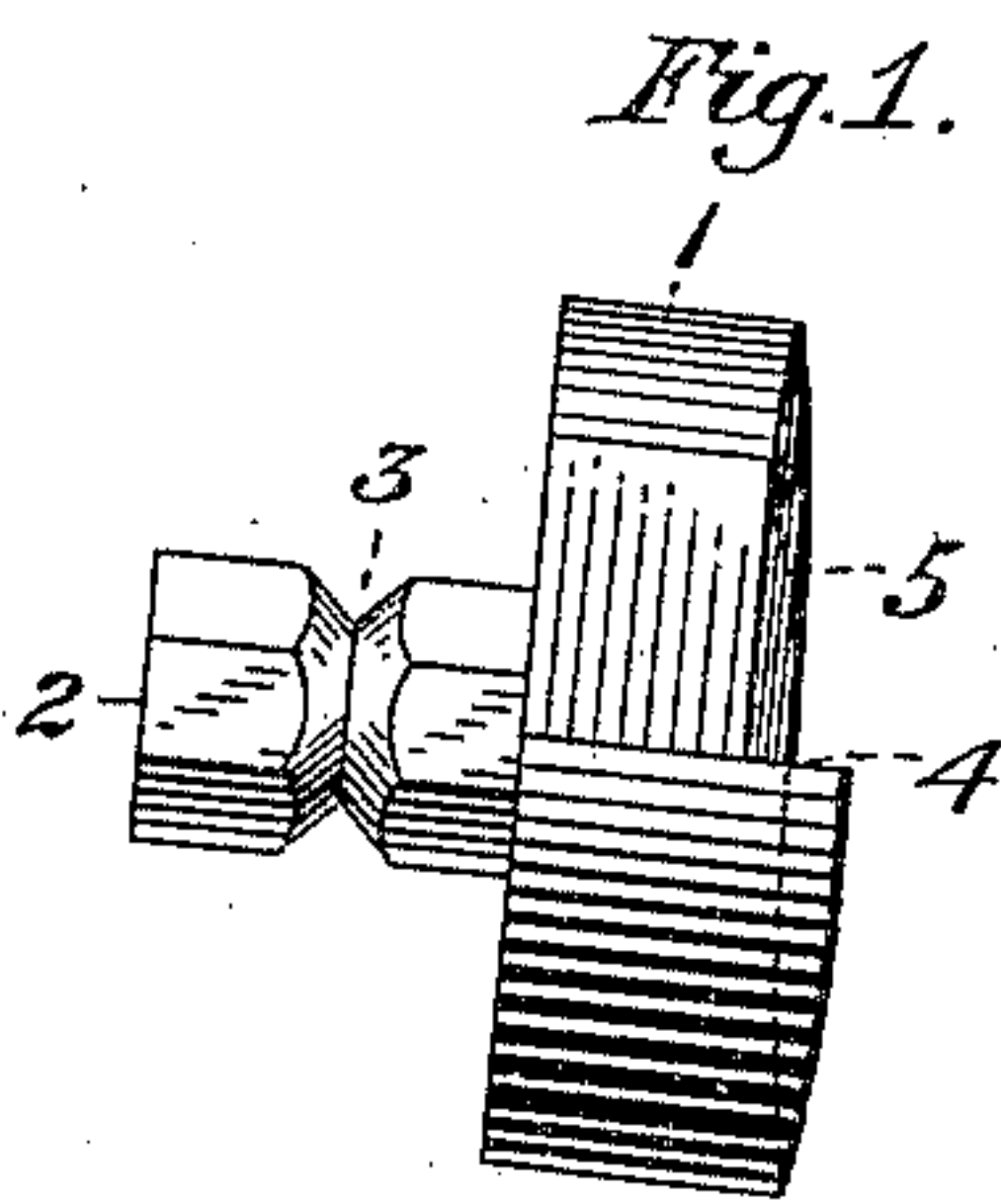
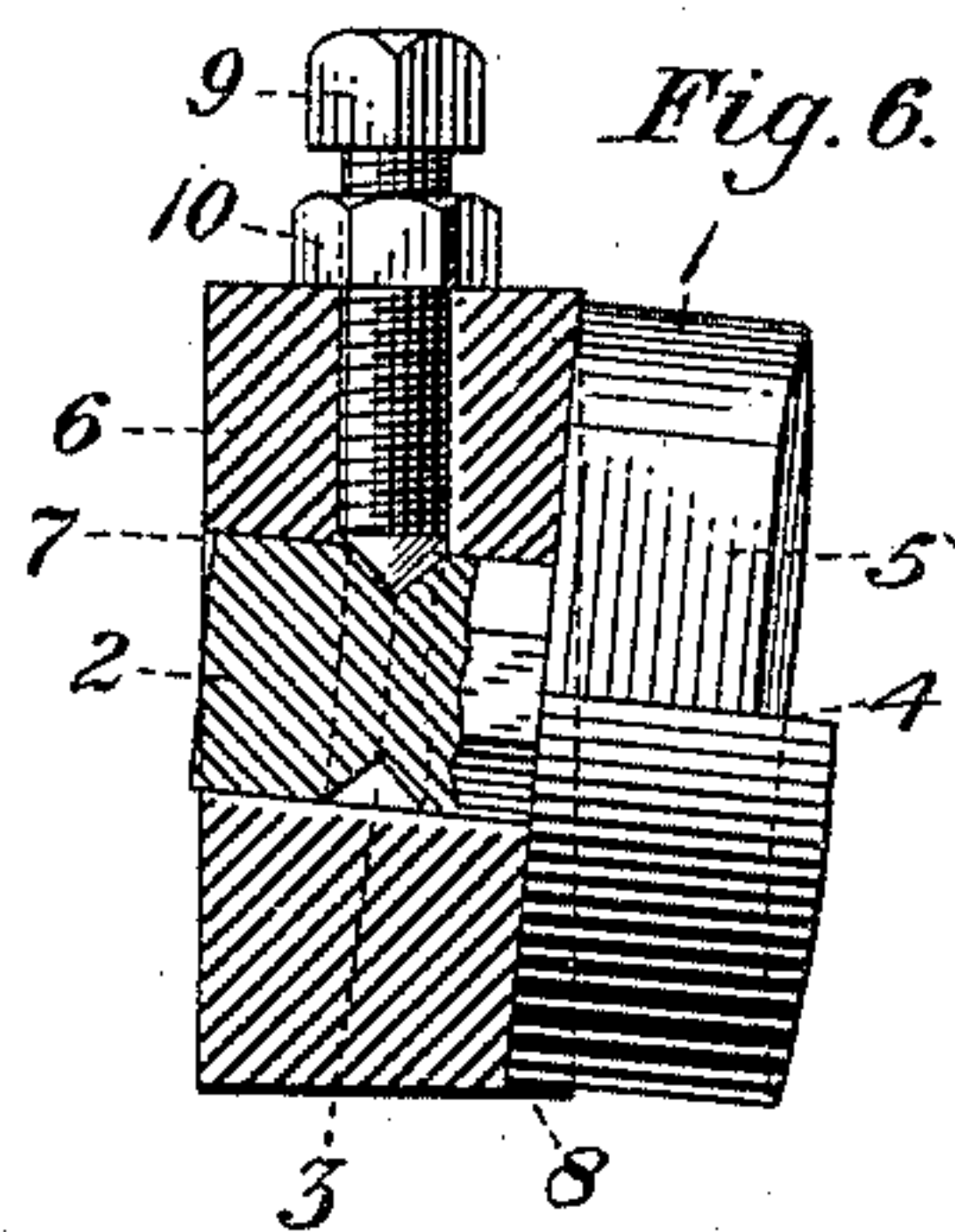


(No Model.)

H. J. MORELAND.
CUTTING TOOL FOR LATHES.

No. 442,907.

Patented Dec. 16, 1890.



WITNESSES.

Herman Weisner
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HENRY J. MORELAND, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO THOMAS H. HUNTER, OF SAME PLACE.

CUTTING-TOOL FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 442,907, dated December 16, 1890.

Application filed August 14, 1890. Serial No. 362,002. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. MORELAND, a citizen of the United States, residing at Pittsburgh, county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Cutting-Tools for Lathes, of which the following is a specification.

My invention consists of a cutting-tool consisting in an improved cutting-disk and rest for the same, as hereinafter described.

The objects of it are to render available for service a greater portion of the cutting-disk and to give greater cutting capacity to said disk than heretofore in tools of the same class.

In the accompanying drawings, Figure 1 is an elevation of the cutting-disk of the tool. Fig. 2 is a side elevation of the rest therefor; Fig. 3, a view of the edge of Fig. 2, showing tapers at both ends on opposite sides; Fig. 4, a view of cutting-disk and rest combined; Fig. 5, a side view of Fig. 1; Fig. 6, a sectional view of the rest on line 4, Fig. 4, showing disk inserted in said rest.

Like figures of reference refer to like parts throughout.

The cutting-disk shown at Fig. 1 is made of any suitable metal, preferably of steel, with a disk 1 and a shank 2, being first forged with parallel faces, and the shank extending from one side at right angles to said faces. During the process of forging the shank is to be driven into a drift to give it the polygonal section shown. The shank is placed slightly eccentric (see Fig. 5) and is furnished with a groove 3. After the disk has been forged the same is turned up true and a notch cut into its periphery, one of the sides 4 of the notch being coincident with a diameter of the disk, the other side 5 being perpendicular thereto. After the disk has been notched it is so turned that the surface of the face not having the shank will be an inclined plane, the lowest point of the same being in the side 5 of the notch and rising gradually until it culminates in side 4 of the same, the result being to give a projecting or leading point around the circumference of the disk from side 4 to side 5 of the notch, this being for the purpose of giving the cutting-point a lead and clearance to render the same available in practice to a

greater and more useful extent than heretofore.

The rest for the cutting-disk is made of a bar 6, of metal of suitable quality, having polygonal holes 7 7', with same number of sides as shank 2 of the disk, the holes in the rest being slightly larger than the diameter of the shank, so as to permit of slight play of the shank 2 of the disk and to allow the disk to accommodate itself to the taper on rest 6 when joined and held together by set-screws in each end of rest 6. Rest 6 is tapered on both ends on opposite sides at 8 8', for a purpose hereinafter mentioned, the tapers extending along the rest a sufficient distance to allow of the revolution of disk 1 on its shank in holes 7. The rest is provided with set-screws 9 9', so placed therein as to enter the holes 7 7', respectively. They are so placed and the groove 3 in shank 2 is so arranged that when disk 1 is placed in hole 7 the point of set-screw 9 will be slightly beyond center line of groove 3 for the purpose of causing set-screw 9 not only to hold disk 1 in place, but also to draw it firmly against the side of rest 6 and make it conform to its taper. (See Fig. 6.) Each of set-screws may or may not be provided with a jam-nut 10.

To use my invention it is only necessary after the disk and rest have been adjusted to each other to use the same as an ordinary lathe-tool. While in use but one set-screw may be actually in the rest, so as to facilitate the manipulation of the tool. As the disk wears away the edge may be redressed by simply grinding the same, the inclined plane on its surface giving the edge sufficient lead and clearance, the other cutting-edge formed by the intersection of the periphery and side 4 of the notch being by regrinding restored and rendered available. When the disk has by use been so worn away as not to give sufficient lead beyond the end of the rest, then the set-screw 9 is loosened, the disk removed from its polygonal hole in the rest and revolved upon its axis and replaced in the rest, when again it will be ready for use. When the wear has extended half-way around the periphery, the disk is taken out and ground, so as to practically make a new notch and placed

in hole 9' at the remaining end of the rest, the taper being on the opposite side and the rest being inserted in the tool-post of the lathe with the hole 9' next to the center line of the same, the inclined plane of the surface of the disk and the taper on the rest being relatively in their original positions. The remainder of the periphery of the disk can be used for cutting purposes, thereby giving a greater capacity for service to the disk.

The shank is made slightly eccentric in manner shown to increase the throw or lead of the tool, especially after the half of the periphery is worn away and the tool placed in the hole 9'.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A cutting-tool consisting of a notched disk having an eccentric polygonal grooved shank on one side and the surface of the other side forming an inclined plane, substantially as described.

2. A rest for a cutting-tool, consisting of a rectangular bar having a polygonal hole, a set-screw, and tapers on opposite sides at each end, substantially as described.

3. The combination of a cutting-tool consisting of a notched disk having an eccentric polygonal grooved shank on one side and an inclined plane on the other side, with a rest for the same consisting of a rectangular bar tapered at each end on opposite sides and having a polygonal hole at each end adapted to receive the shank of said disk, and a set-screw adapted to enter the groove of said shank, substantially as described.

HENRY J. MORELAND.

Witnesses:

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