

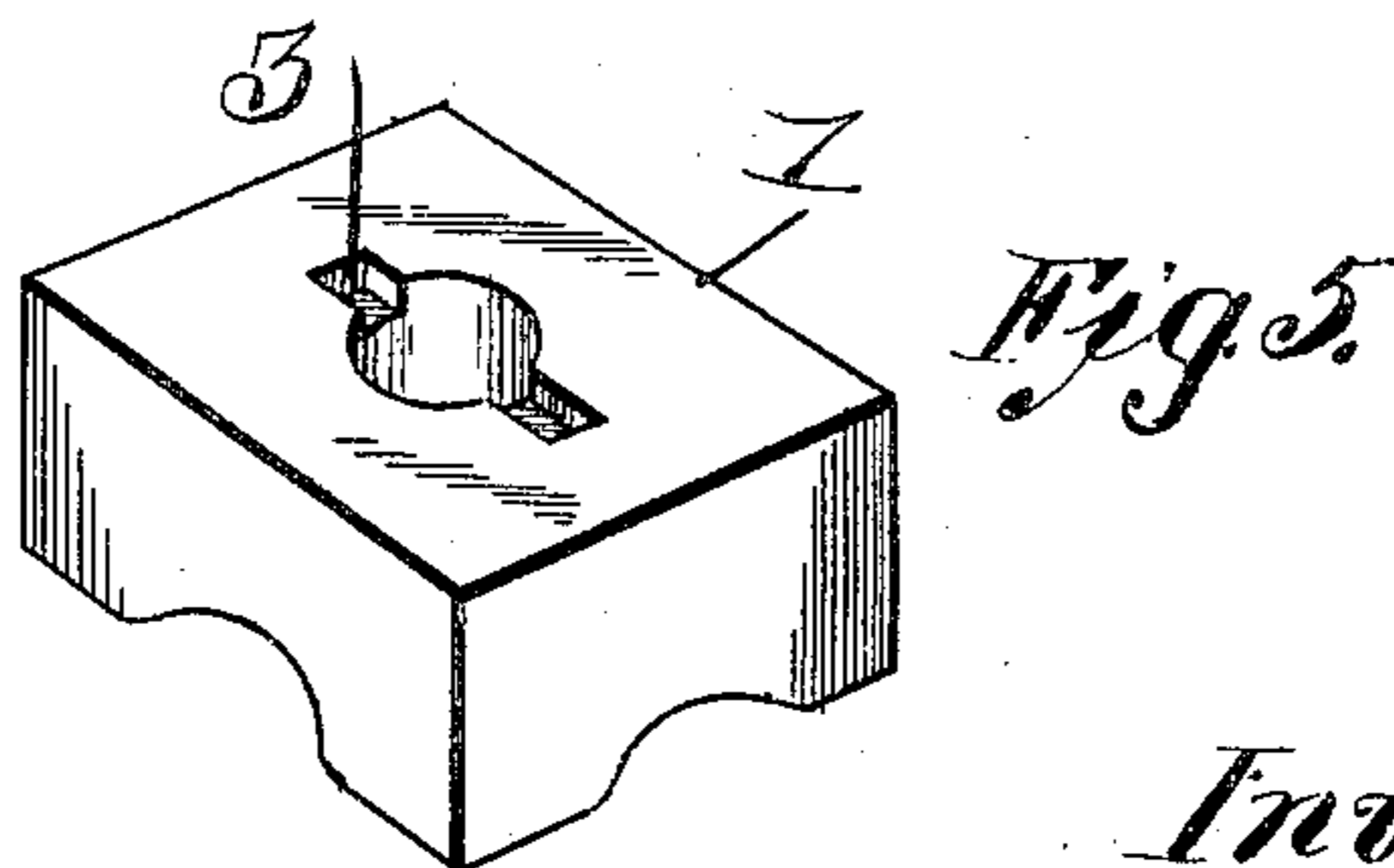
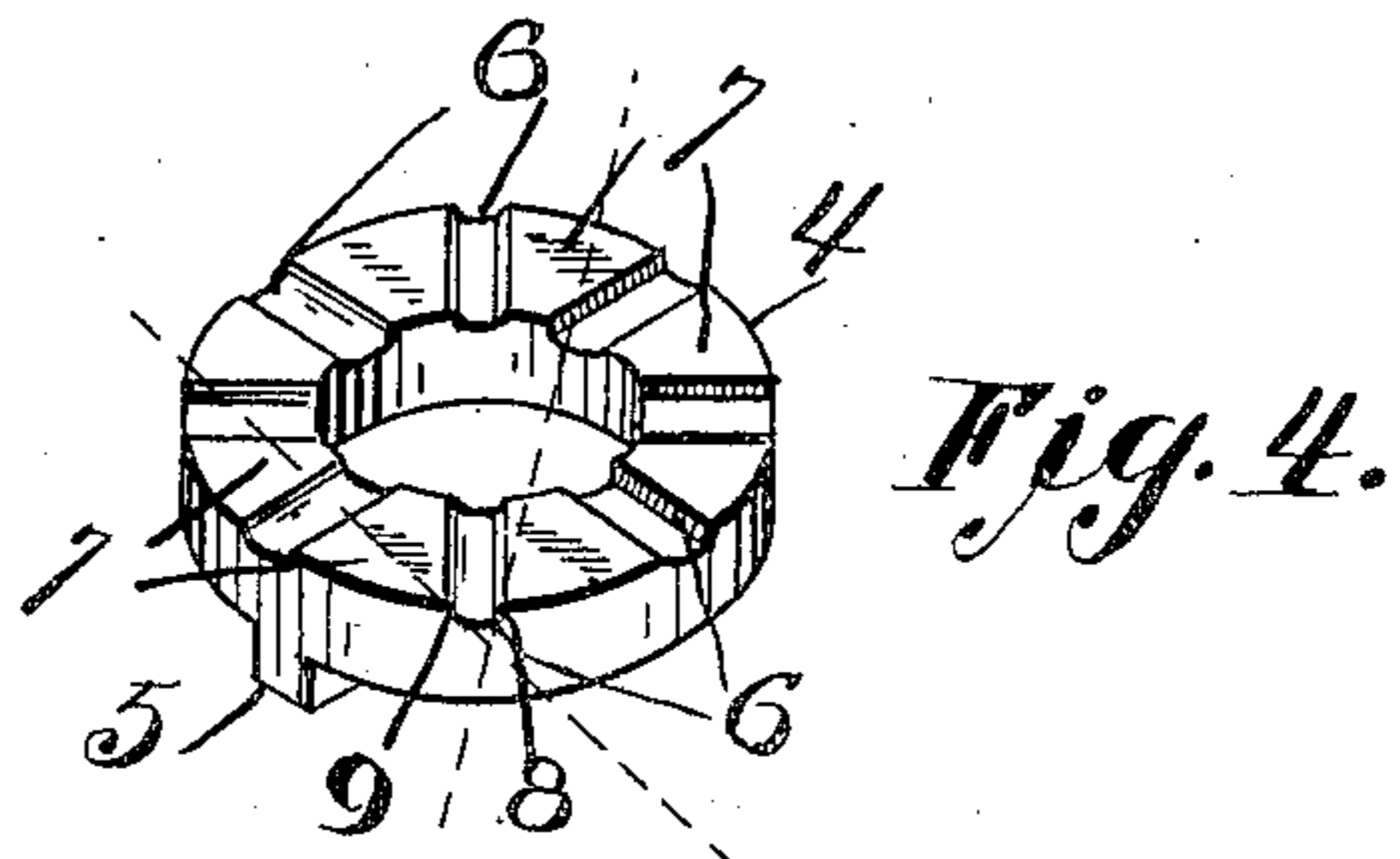
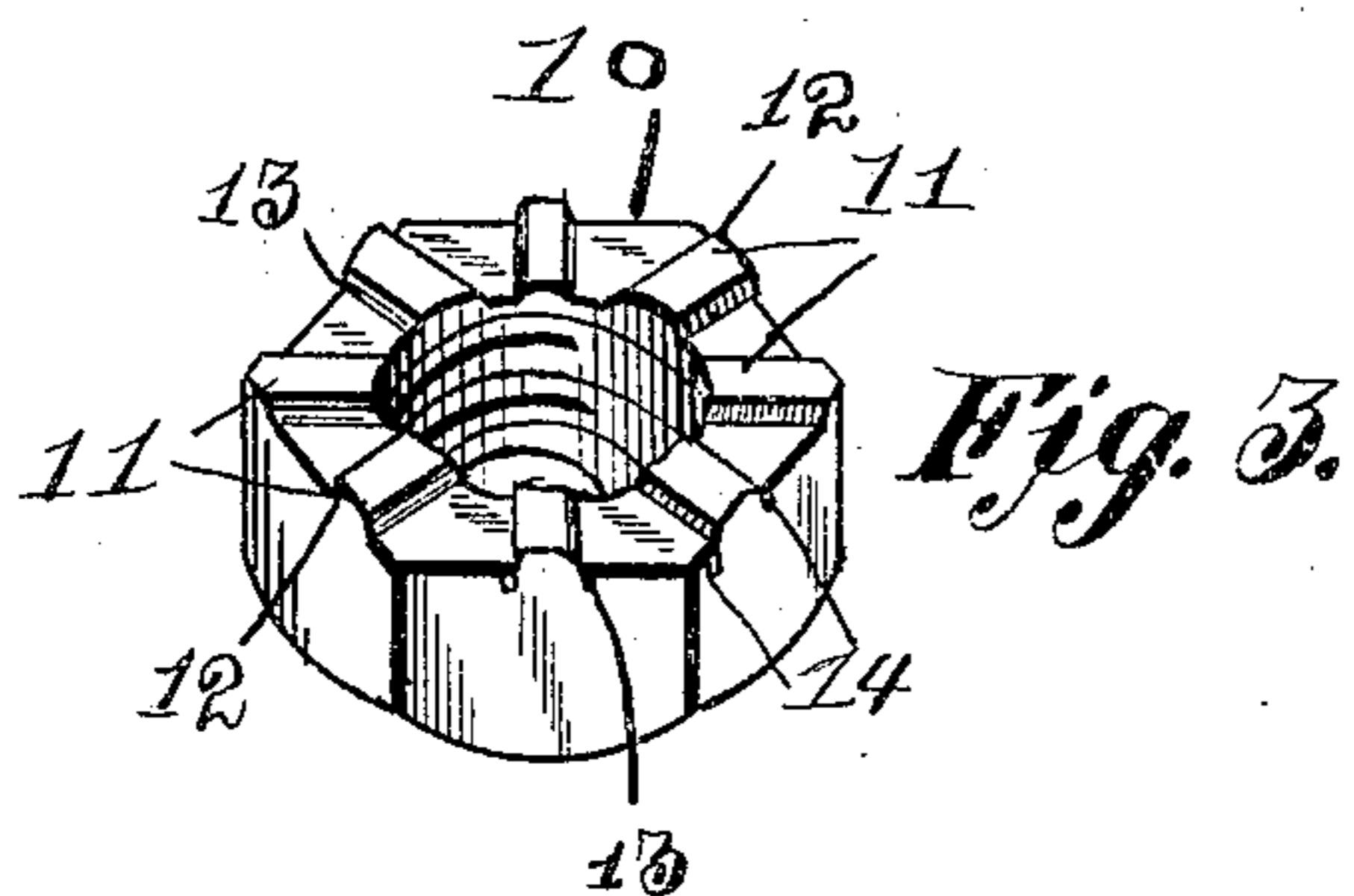
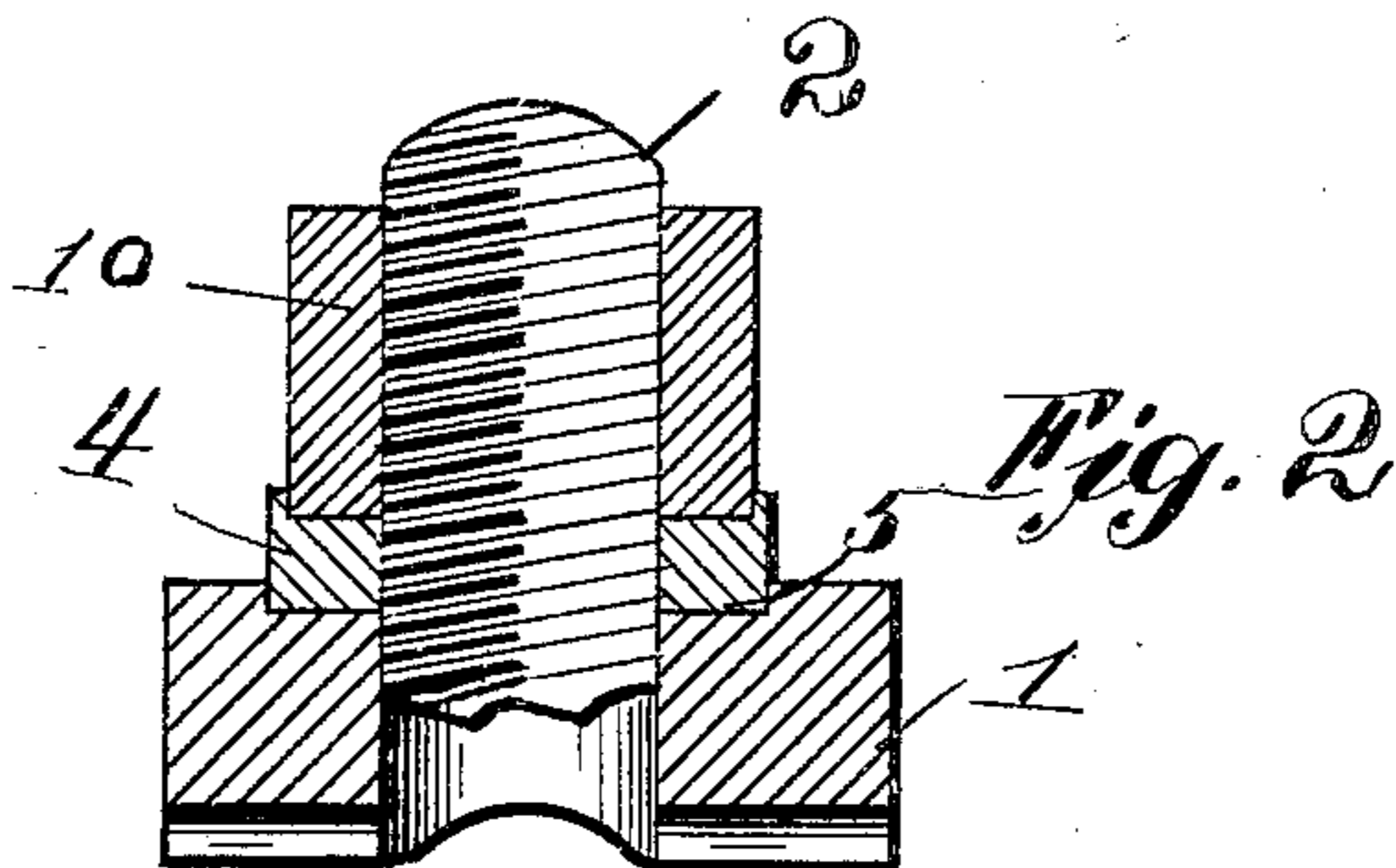
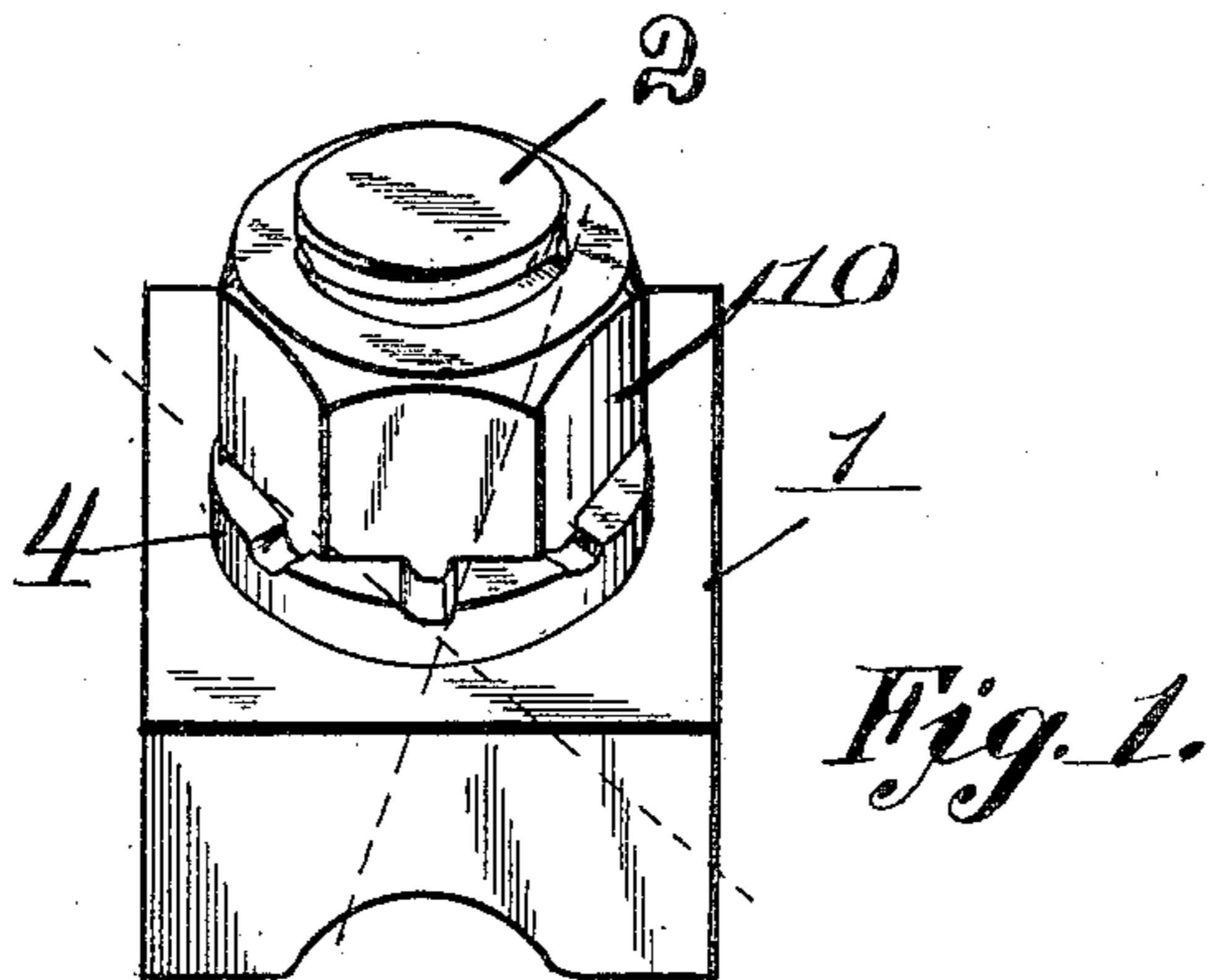
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PATENTED JULY 31, 1906.

J. N. POLLOCK & N. W. DERUELLE.

NUT LOCK.

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Witnesses:
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UNITED STATES PATENT OFFICE.

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NUT-LOCK.

No. 827,562.

Specification of Letters Patent.

Patented July 31, 1906.

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To all whom it may concern:

Be it known that we, JACOB N. POLLOCK and NELSON W. DERUELLE, citizens of the United States of America, residing at Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in nut-locks, and particularly pertains to that type of nut-lock in which a washer is employed to both frictionally and positively engage one of the faces of the nut in effecting a locking engagement therebetween, the washer being secured by independent means to a suitable back plate, through which the bolt is passed. However, in this type of invention the improvement specially contemplated is a means for locking the nut, whereby although backward rotation will be possible in unlocking the same it must be under a greater degree of force than that exerted in locking it.

The detail construction will appear in the course of the following description, in which like numerals of reference designate corresponding parts throughout the several views, wherein—

Figure 1 is a perspective view showing the nut and washer assembled upon a suitable back plate, through which the bolt extends. Fig. 2 is a central vertical sectional view thereof. Fig. 3 is a perspective view of the nut inverted, showing the construction of the underneath face thereof. Fig. 4 is a perspective view of the washer which coacts in the locking operation with the underneath face of said nut. Fig. 5 is a perspective view showing the construction of the back plate into which the washer is locked.

Referring specifically to the accompanying drawings, 1 designates a suitable back plate or block through which a threaded bolt 2 extends, said block or back plate 1 being substantially square or rectangular in shape and having its lower face hollowed out for the purpose of imparting sufficient resiliency to said plate or block. The back plate 1 is provided with a plurality of rectangular recesses 3, radiating from the bore thereof. A washer 4 is mounted upon said back plate and is provided upon its underneath surface

with a plurality of ribs 5, which radiate from the opening thereof and are arranged at intervals corresponding to the arrangement of the intervals 3, into which said ribs interfit. The washer 4 has its underneath surface formed with a plurality of depressions 6 and intermediate webs 7. These depressions are of peculiar construction and are designed to receive corresponding lock-teeth carried from the underneath face of the nut. It is to be noted that, as shown in the dotted lines in Figs. 4 and 1, each depression 6 is formed with a shoulder 8, which slants at an acute angle of very small degree to the axle-line between the oppositely-disposed depression. Each depression 6 is also formed with what we term a "lead-incline" 9 opposite said shoulders, which possesses a far greater degree of inclination than said shoulder. A nut 10 is threaded upon the bolt 2 and is formed on its underneath surface with a series of teeth 11, which are comparatively high compared to said inclined groove 6. The teeth 11 are formed on one side with angular shoulders 12 and on the other side with a lead-bevel 13. The shoulder 12 abuts the shoulder 8 of the depression 6, and the lead-bevels 13 rest in the lead-incline 9 and until the nut is firmly seated therein are adapted to ride said incline. In practical use the bolt 2 is threaded through the back plate. The washer 4 is seated in said back plate, the ribs 5 thereon engaging in the depressions 3 of said plate. The nut 10 is then rotated upon the threads 2 until the underneath face thereof bears against the upper face of the washer 4. When the face of the washer first comes into engagement with the nut, they will be in a manner locked; but in order to secure and effectually lock the nut is rotated a fraction of a turn by a wrench until the ribs upon the nut and the depressions upon the washer directly interfit, provision being made for allowing said nut to turn by forming hollowed-out portions in the block or back plate, thereby giving to same a resiliency necessary to obtaining the object set forth. It is to be noted that the ribs 5 upon the washer are formed of considerable depth, so as to compensate for wear.

The nut is given a certain amount of resiliency by forming slots 14 on each side of the teeth 11, and consequently when the nut is screwed down upon the washer there will be

sufficient resiliency in the connected parts to permit the teeth 11 to ride for a short distance in the intermediate webs 7 between the depressions 6 until they ultimately enter these depressions.

Having fully described our invention, what we claim is—

1. A device of the character described, comprising a block or base-plate, said block or base-plate having a central bore, and having recesses extending radially from said bore, a washer, lugs formed integral with said washer on the underneath side thereof, the upper face being provided with a series of recesses 6, said recesses being separated by spaces, all lying in the same plane, a nut and lugs formed integral with said nut and adapted to repose in the recesses of the washer when the nut-lock is in a locked position.

2. A device of the character described, comprising a base-plate or block, said base-plate or block being provided on its underneath face with hollowed-out portions to give a resiliency to said block or back plate, and said block or base-plate being provided with recesses extending radially from the

bore of said block or base-plate, a washer provided on its underneath face with lugs and on its uppermost face with recesses, a nut provided on its contact-face with radially-extending lugs, all substantially as described.

3. A device of the character described, comprising a resilient block or base-plate, a washer provided with lugs upon its underneath face, and with recesses on its uppermost face, said recesses having a shoulder 8 on one edge, said shoulder being formed at a slight incline and an incline 9 at the other edge of said recesses, disposed oppositely and at a different angle to the incline of the shoulder 8, and a nut provided at its contact-face with radially-extending lugs adapted to engage in the recesses formed in the upper face of the washer, as and for the purpose set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

JACOB N. POLLOCK.

NELSON W. DERUELLE.

Witnesses:

J. F. BEATTY,

JOHN J. LAWLOR.