

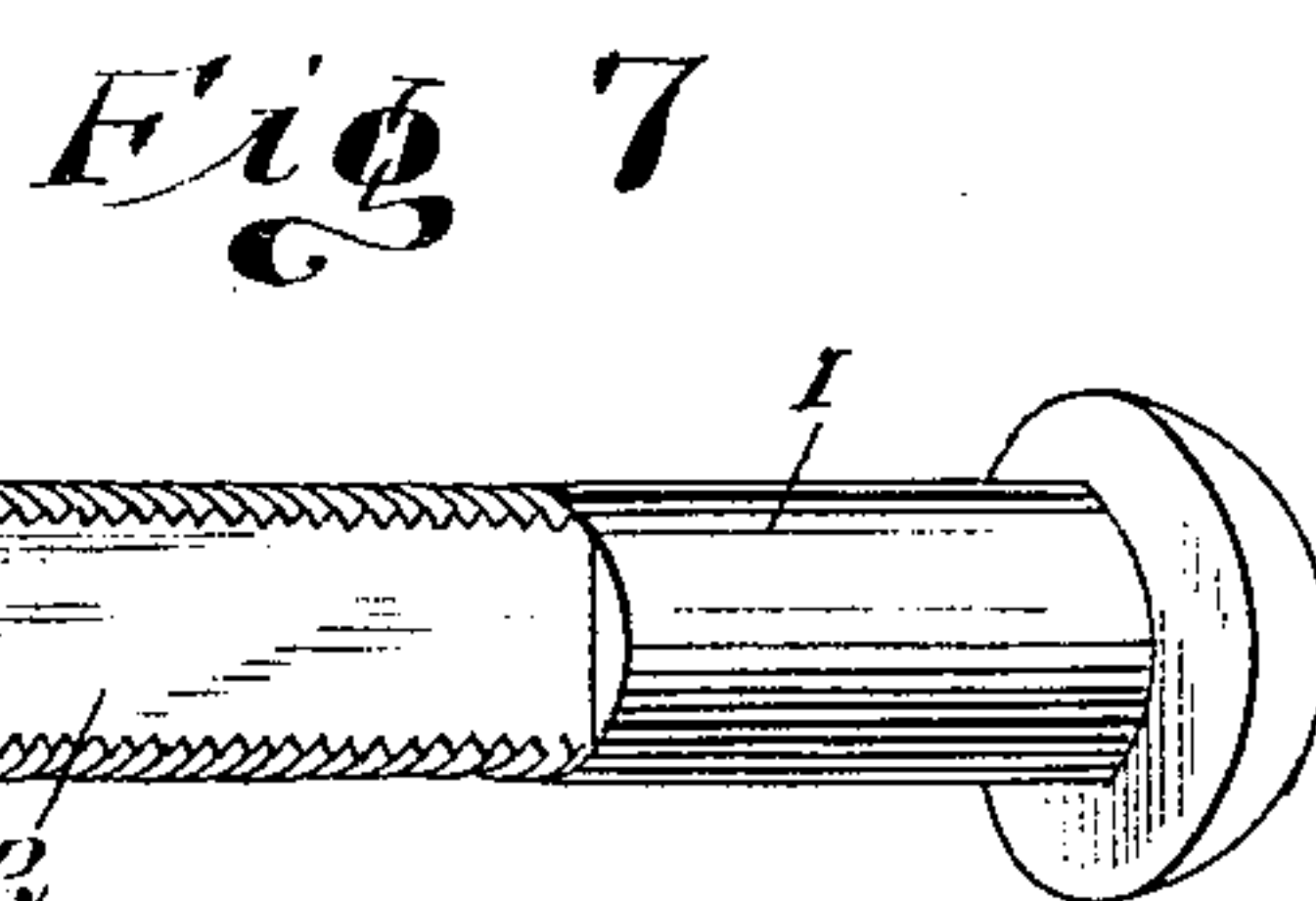
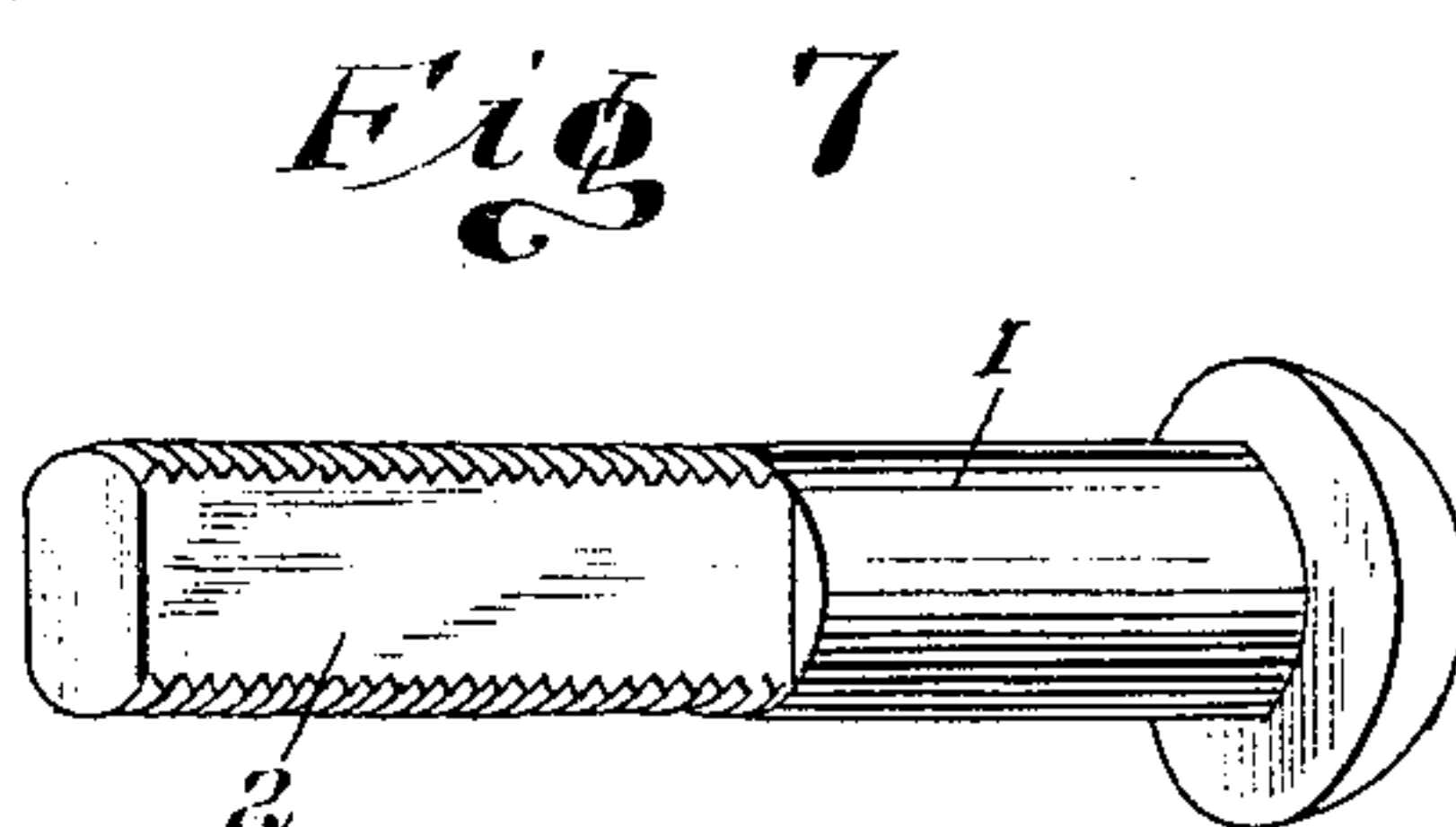
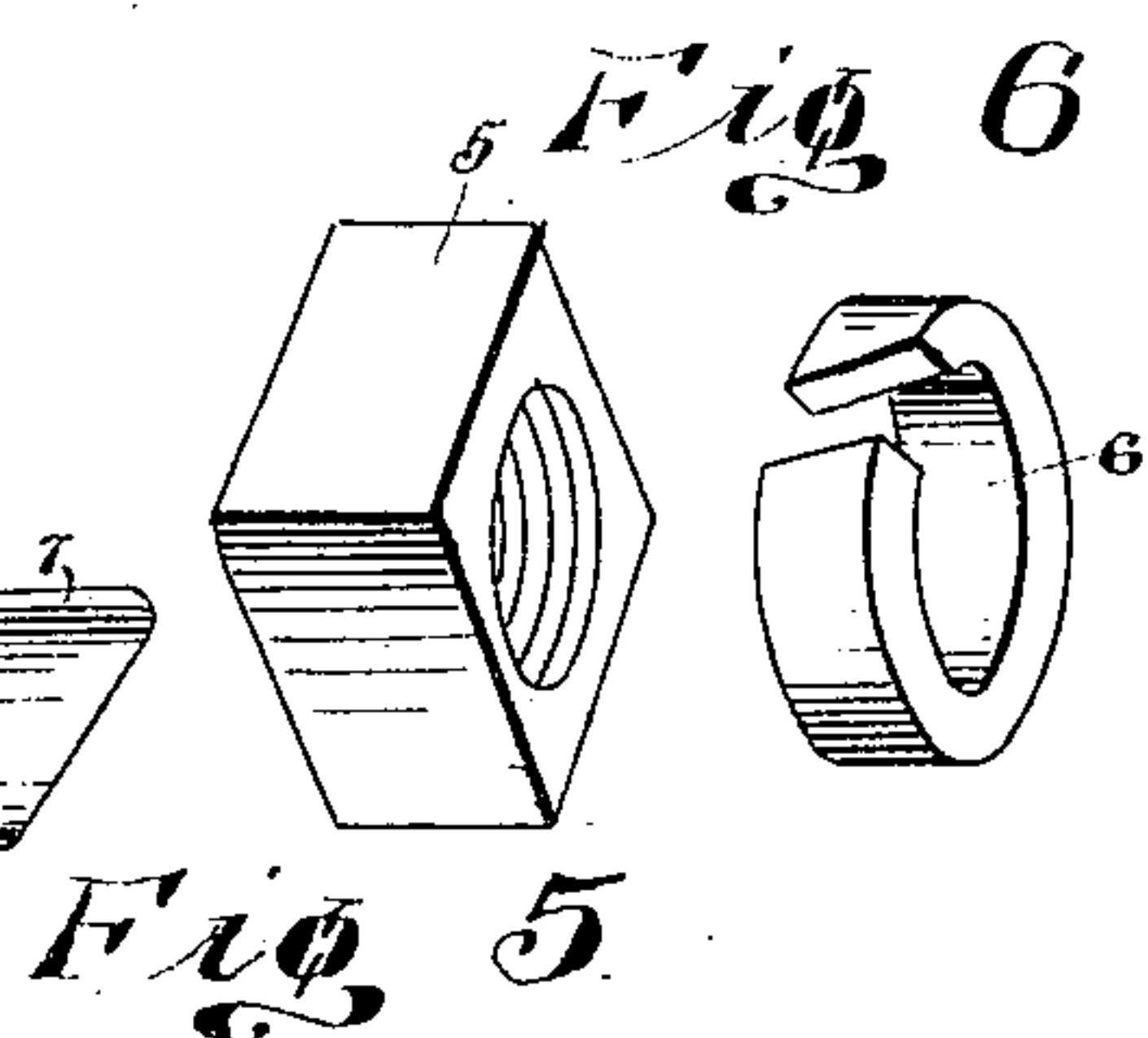
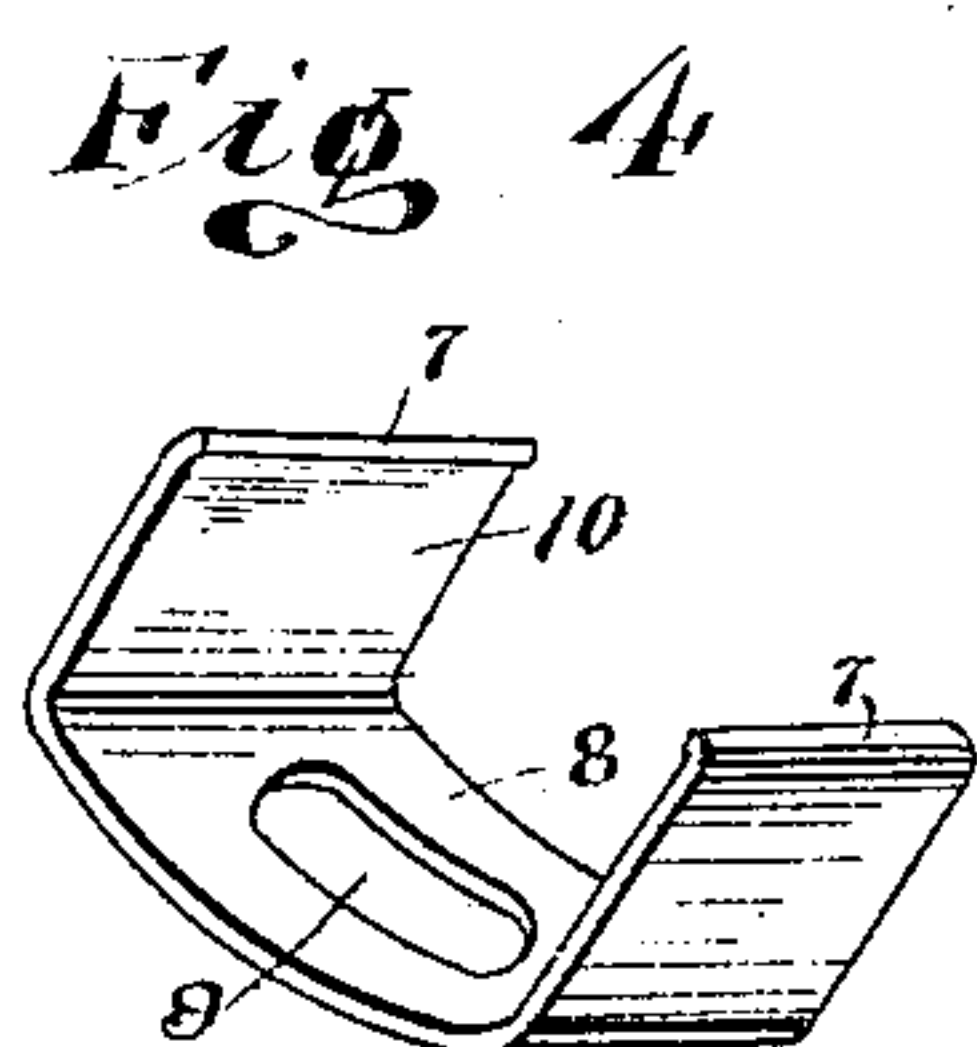
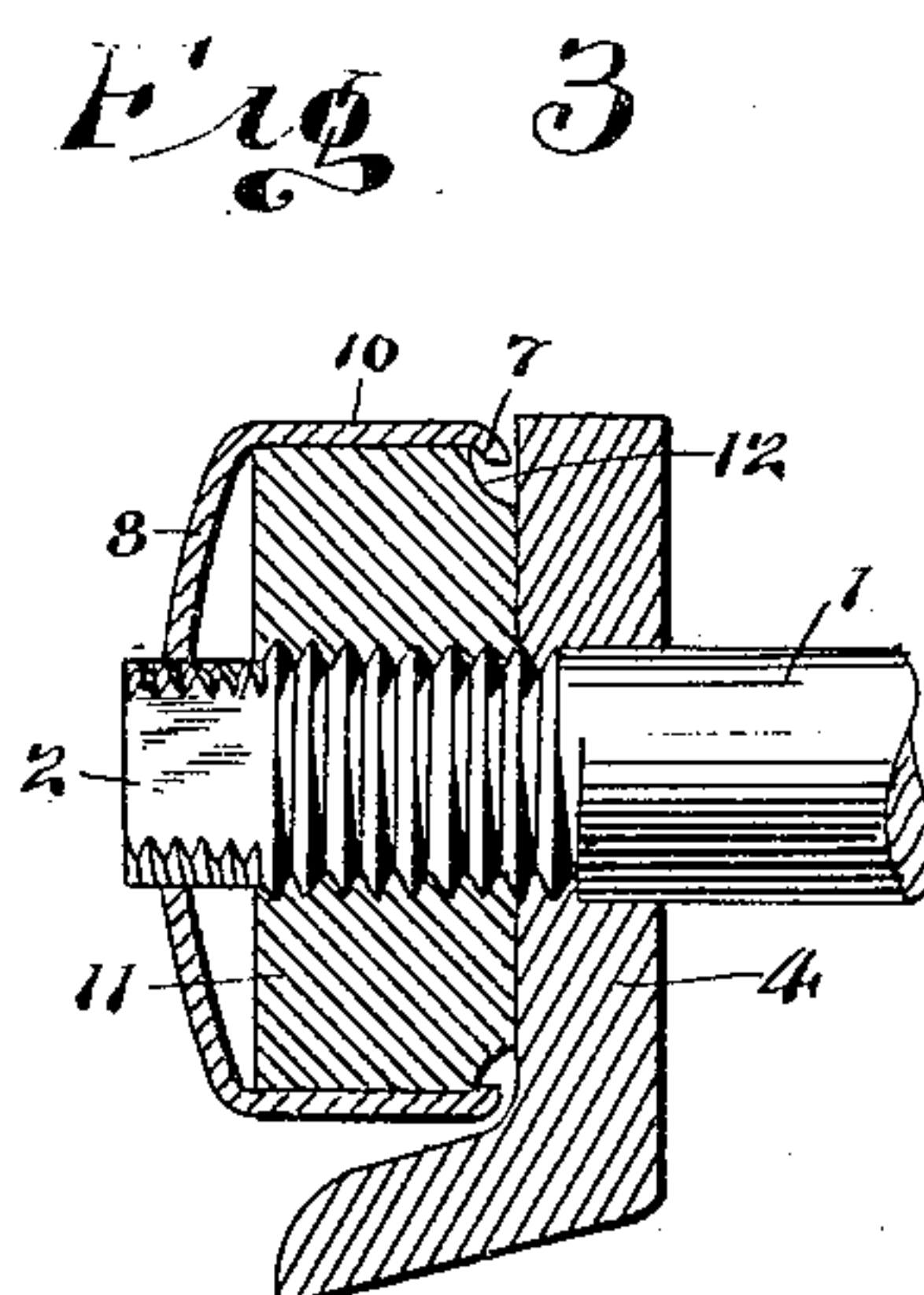
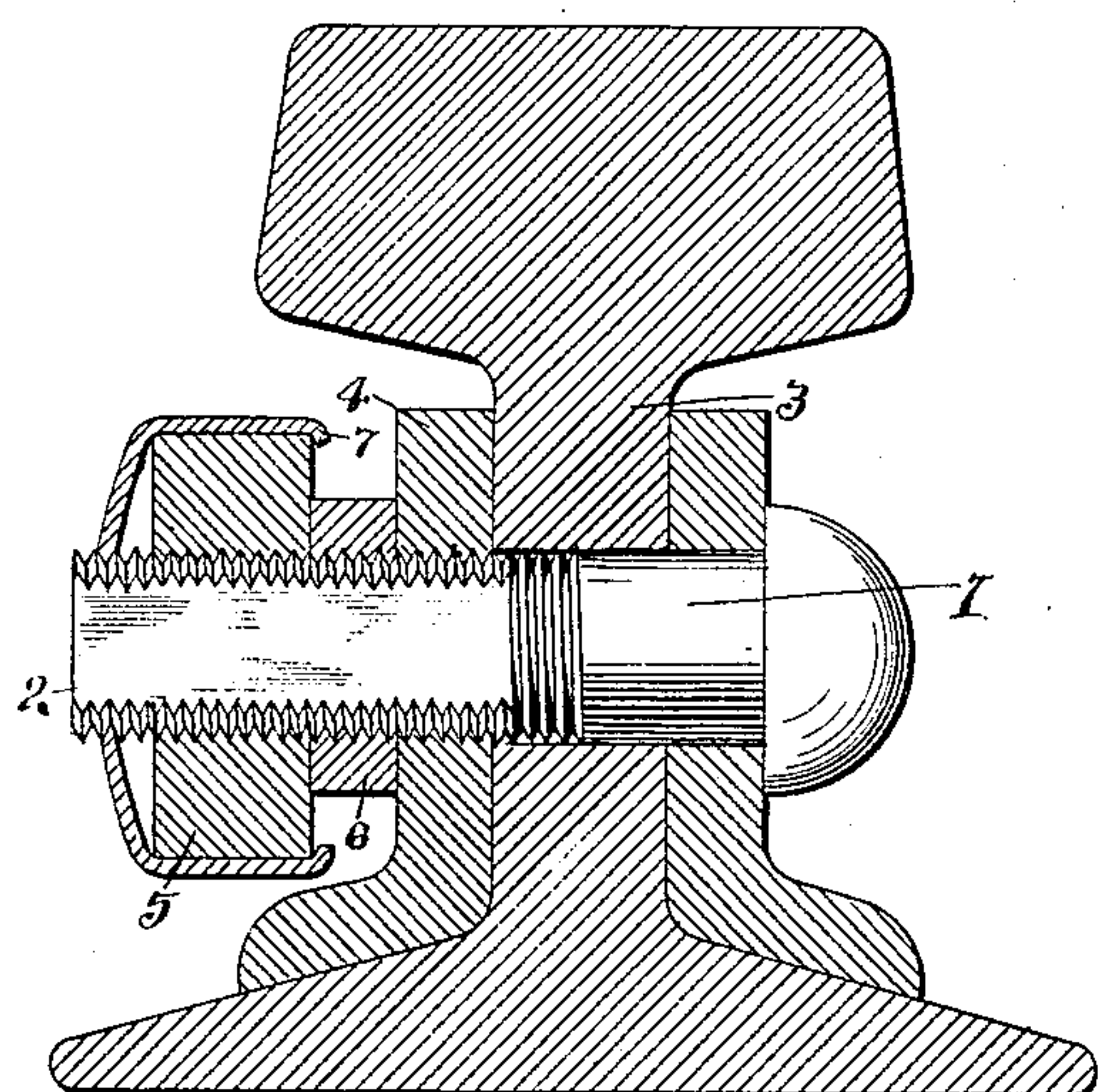
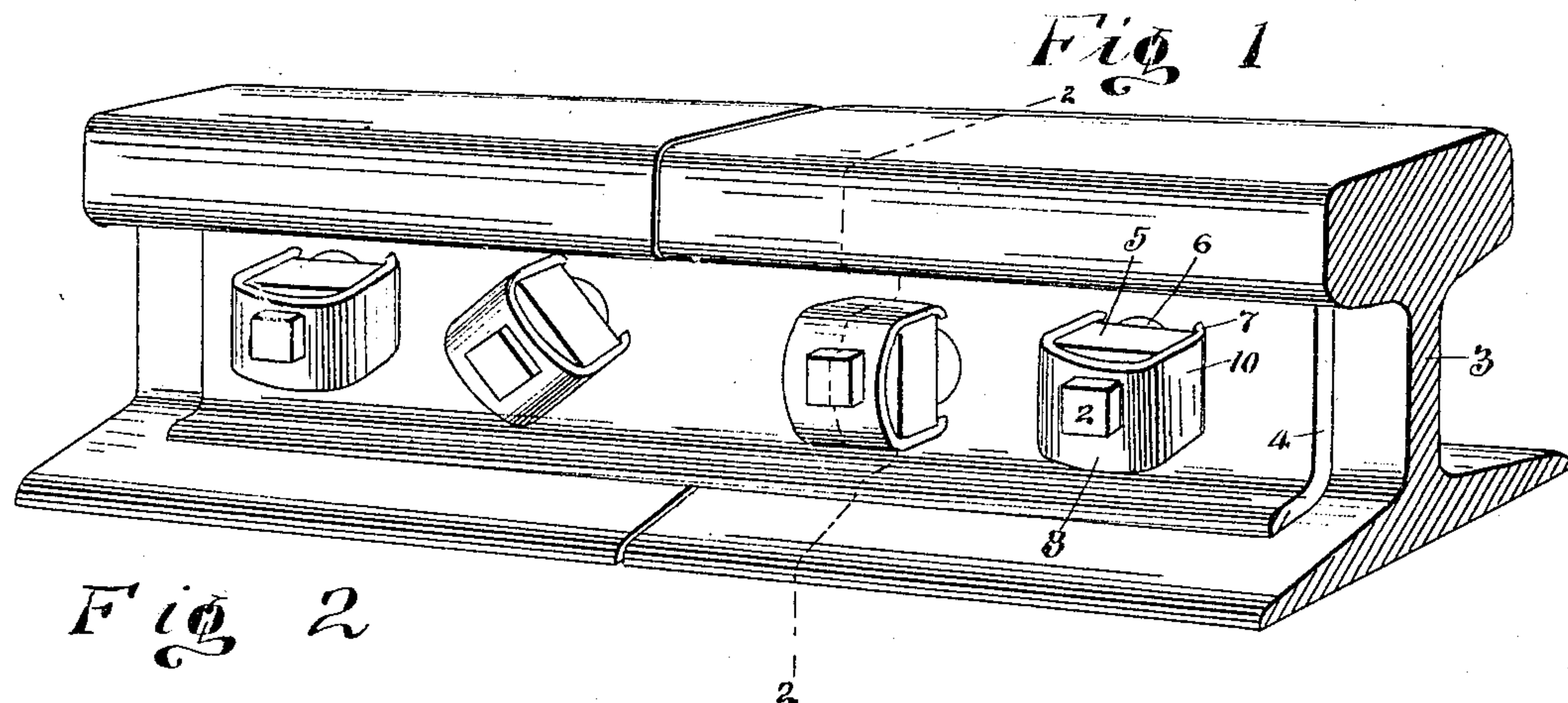
No. 768,954.

PATENTED AUG. 30, 1904.

H. R. ROMBERGER.
NUT LOCK.

APPLICATION FILED JULY 29, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY R. ROMBERGER, OF WINONA, MISSISSIPPI.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 768,954, dated August 30, 1904.

Application filed July 29, 1904. Serial No. 218,631. (No model.)

To all whom it may concern:

Be it known that I, HARRY R. ROMBERGER, a citizen of the United States, residing at Winona, in the county of Montgomery and State of Mississippi, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification.

My invention relates to an improved nut-lock; and it consists in the constructions, combinations, and arrangements herein described and claimed.

The objects of my invention are to provide a simple, durable, and inexpensive nut-lock which will efficiently lock the nut in any position to which it may be screwed onto the bolt.

A further object of my invention is to provide an improved construction, in which the lock can be conveniently and quickly detached from the nut without any injury or distortion of the former and which can be employed with any existing type of nuts.

Referring to the accompanying drawings, forming a part of this application, and in which similar reference - symbols indicate corresponding parts in the several views, Figure 1 is a detail perspective view showing my improved nut-lock applied to the bolts of a rail-joint. Fig. 2 is a sectional view, on a larger scale, taken on the line 2-2 of Fig. 1. Fig. 3 is a detail sectional view illustrating my invention applied to a different form of nut; and Figs. 4, 5, 6, and 7 are detail perspective views illustrating, respectively, the nut-lock, nut, collar, and bolt shown in Figs. 1 and 2.

As shown in the drawings, 1 indicates a threaded bolt provided with a polygonal end 2 and extending through a rail-web 3 and the usual fish-plates 4.

In the construction illustrated in Figs. 1, 2, 4, 5, 6, and 7 a flat-bottomed nut 5 is screwed on against a collar 6, which latter is preferably employed to provide sufficient space between the adjacent faces of the nut and fish-plate for the insertion of the flanges 7 of the nut-lock.

The nut-lock is formed of resilient material, such as spring-steel, and is shown comprising a hipped or bowed portion 8, provided with a polygonal opening 9 for engaging the correspondingly-formed end of the

bolt. Locking members 10 are shown extending from the bowed portion in position to engage the sides of the nut and provided with flanges or offsets 7, constructed to be sprung into position for engaging the inner face of the nut when the parts are properly assembled.

In the operation of my invention the nut is first screwed home. The locking device is then adjusted by sliding its members 10 over the sides of the nut until their flanges 7 pass the lower face of the nut and the opening 9 in the bowed portion engages the polygonal end 2 of the bolt. In this position the resilient bowed portion 8 will act to efficiently and positively maintain the locking members 10 against the sides of the nut, with their flanges 7 held firmly in position to engage the inner face thereof, thus providing means for securely and strongly locking the nut in its position. When it is desired to adjust the nut on its bolt or to remove it therefrom, the locking device can be quickly and conveniently detached by forcing the central portion of its resilient bowed part 8 along the polygonal bolt end 2 toward the nut. This action flattens such bowed part and by its resiliency springs the members 10 outward sufficiently to carry their flanges 7 beyond the sides of the nut out of position for engaging the inner surface of the latter, thus permitting ready removal of the locking device.

Fig. 3 illustrates my invention applied to a common form of nut 11, provided with an annular shoulder 12 on its inner face. In this construction it is obvious that such annular shoulder will provide sufficient space for the reception of the flanges 7, thereby obviating the necessity of employing the spacing-collar 6.

In my preferred construction, illustrated especially in Figs. 2 and 7, the polygonal portion 2 extends along substantially the entire threaded portion of the bolt in order to permit the locking device to engage said polygonal portion when adjusted to lock the nut in any position to which it may be screwed along said bolt. This is an important part of my invention, since it permits the bolt to be used in many different positions where parts of ma-

terially-different thicknesses are to be clamped between the bolt-head and the locked nut.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a nut-lock, the combination of a threaded bolt provided with a polygonal end, and a resilient member comprising a plate extending across the nut and hipped or bowed to slidably engage said polygonal bolt end at a distance from the head of the nut, and locking members extending from said bowed plate in position to engage the sides of the nut, substantially as described.

2. In a nut-lock, the combination of a threaded bolt provided with a polygonal end, and a resilient member comprising a plate extending across the nut and hipped or bowed to slidably engage said polygonal bolt end at a distance from the head of the nut, locking members extending from said bowed plate in position to engage the sides of the nut, and flanges carried by said locking members in position for engaging the inner surface of the nut when the parts are assembled, substantially as described.

3. In a nut-lock, the combination of a threaded bolt provided with a polygonal end, and a resilient member comprising a hipped or bowed portion provided with an aperture constructed to engage with said polygonal bolt end at a distance from the head of the nut, and locking members extending from said bowed plate in position to engage the sides of the nut, substantially as described.

4. In a nut-lock, the combination of a threaded bolt provided with a polygonal end, and a resilient member comprising a hipped or bowed portion provided with an aperture constructed to engage with said polygonal bolt end at a distance from the head of the nut, locking members extending from said bowed plate in position to engage the sides of the nut, and flanges carried by said locking members in position for engaging the inner surface of the nut when the parts are assembled, substantially as described.

5. In a nut-lock, the combination of a threaded bolt provided with a polygonal end, and a locking device formed of a single integral piece of resilient material, and comprising a hipped or bowed portion constructed to engage said polygonal bolt end at a distance from the nut, and locking members extending from said

bowed portion in position to engage the sides of the nut, substantially as described.

6. In a nut-lock, the combination of a threaded bolt provided with a polygonal end, and a locking device formed of a single integral piece of resilient material, and comprising a hipped or bowed portion constructed to engage said polygonal bolt end at a distance from the nut, locking members extending from said bowed portion in position to engage the sides of the nut, and flanges carried by said locking members in position for engaging the inner surface of the nut when the parts are assembled, substantially as described.

7. In a nut-lock, the combination of a threaded bolt provided with a polygonal portion extending along substantially its entire threaded portion, and a resilient member comprising a plate extending across the nut and hipped or bowed to slidably engage said polygonal bolt portion at a distance from the head of the nut, and locking members extending from said bowed plate in position to engage the sides of the nut, substantially as described.

8. In a nut-lock, the combination of a threaded bolt provided with a polygonal portion extending along substantially its entire threaded portion, and a resilient member comprising a plate extending across the nut and hipped or bowed to slidably engage said polygonal bolt portion at a distance from the head of the nut, locking members extending from said bowed plate in position to engage the sides of the nut, and flanges carried by said locking members in position for engaging the inner surface of the nut when the parts are assembled, substantially as described.

9. In a nut-lock, the combination of a threaded bolt provided with a polygonal portion extending along substantially its entire threaded portion, and a locking device formed of a single integral piece of resilient material, and comprising a hipped or bowed portion constructed to engage said polygonal bolt portion at a distance from the nut, and locking members extending from said bowed portion in position to engage the sides of the nut, substantially as described.

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

HARRY R. ROMBERGER.

Witnesses:

JNO. H. DRAM,
LEO A. WINGATE.