No. 886,424. PATENTED MAY 5, 1908.

J. W. SHAWVER

NUT LOCK.

APPLICATION FILED NOV. 6, 1907.

Fig. 1

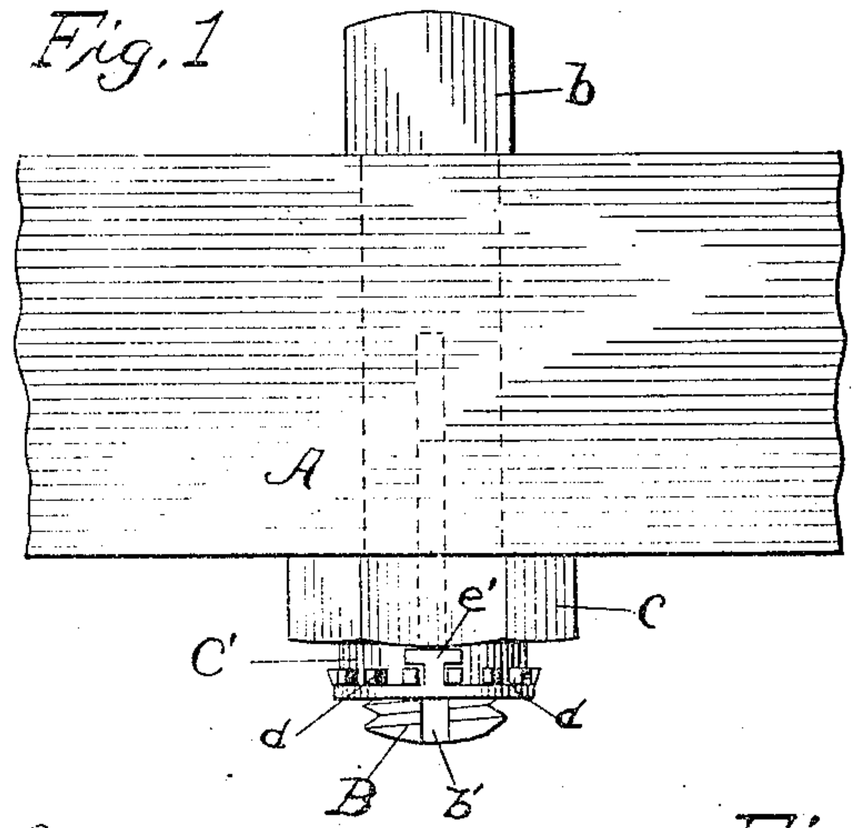



Fig. 2

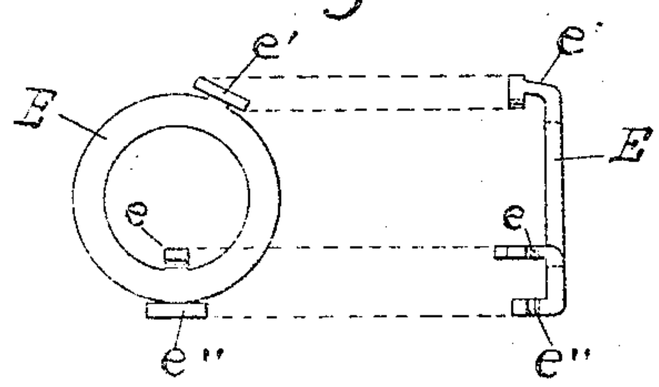



Fig. 3

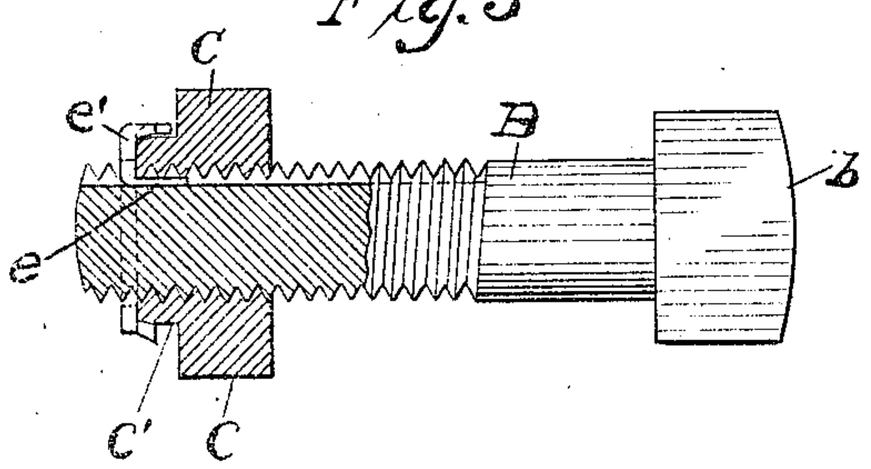



Fig. 4

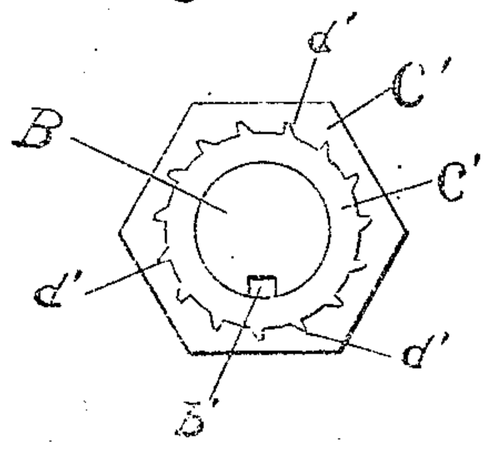
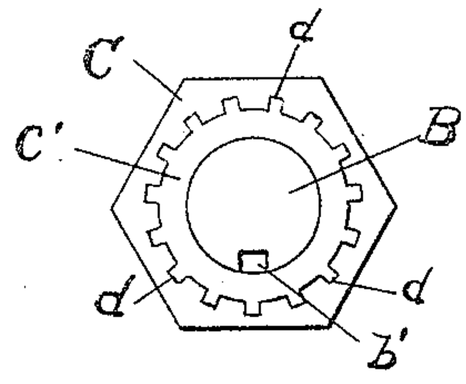



Fig. 5




Witnesses
R. E. Hamdt.
R. L. Brown

John W. Shawver,
Inventor;
By Albert G. Randle.
Attorney.

# UNITED STATES PATENT OFFICE.

OHN W. SHAWVER, OF PORTLAND, INDIANA, ASSIGNOR OF ONE-THIRD TO JERIMIAH P. FOX AND ONE-THIRD TO MARY A. WRIGHT, BOTH OF PORTLAND, INDIANA.

## NUT-LOCK.

No. 886,424. Specification of Letters Patent. Patented May 5, 1908.

Application filed November 6, 1907. Serial No. 401,004.

*To all whom it may concern:*

Be it known that I, JOHN W. SHAWVER, a citizen of the United States, residing in Portland, in the county of Jay and State of Indiana, have invented certain new and useful Improvements in Nut-Locks, of which the following is a full and accurate specification.

The object of this my present invention, broadly speaking, is to provide means for locking nuts in engagement with their bolts, to provide a construction which will be neat and attractive in appearance, strong and durable in construction, easily operated and controlled, and which can be manufactured and sold at a comparatively low price.

More specifically stated, my object is to provide means, in combination with a relatively fixed bolt having a longitudinally disposed channel extending across its threaded portion, of a non-rotatable washer contactable with the outer face of the nut, with means for engaging the nut with the washer whereby the nut may not be inadvertently removed, but at same time having means whereby the nut may be removed when desired without breakage, distortion, or other damage to any of the parts.

Other objects and particular advantages will be brought out in the course of the following specification, and same will be evident from the accompanying drawings, in which—

Figure 1 is a plan view of my invention in operative position with relation to the fixed element. Fig. 2 is a diagrammatical view showing the contact-face of the washer, with an edgewise elevation thereof in projection. Fig. 3 is a central longitudinal section of the invention applied. And Figs. 4 and 5 are face views of the nut, showing two forms for the teeth on the extension thereof.

Similar characters denote like parts throughout the several views.

The construction and operation of my invention is quite simple, and I will now take up the description thereof in concrete detail, in which I will refer to the several parts and their intended operation as briefly and as comprehensively as I may.

In the drawings the letter A refers to a fixed element through which the bolt passes.

The letter B denotes a bolt stem, having the head *b* formed integral therewith in the usual manner, and the periphery of the outer portion of the stem is threaded, substantially as shown. Extending from the outer end inward longitudinally of the bolt stem and along one side of the periphery thereof, is a channel *b'* for the purpose hereinafter appearing.

The letter C denotes a nut of any desired contour, adapted to be run on the threaded portion of said bolt. Extending outward from the nut, formed integral therewith, and located around the central aperture thereof, is a projection C' which is in the nature of a ring formed integral with the nut proper, and having a plurality of teeth or spurs *d* radiating from the outer end thereof as shown. Said teeth may be formed square, as shown in Figs. 1, 3 and 5, or they may be, preferably, beveled off on one side forming the triangular shaped teeth *d'* shown in Fig. 4. By the above it will be seen that interspaces are formed between the teeth which are for the purpose hereinafter set forth.

The letter E denotes the body of a washer, which forms one of the essential elements of this invention, same having a central aperture therethrough which may freely receive the stem B of the bolt, and the outside diameter of said washer is substantially the same as is the outside diameter of the projection C'.

Projecting inwardly in an axial direction from the inner periphery of the washer E is a prong *e*, which is adapted to fit and slide in the channel *b'* to prevent the washer E from rotating independent of the bolt stem. Extending out radially from the outer periphery of the washer E are two unequally spaced arms, *e'* and *e''*, each adapted to fit in between either two of the teeth *d*, and each having a T-head adapted to fit in the space between the teeth and the face of the nut C, as shown in Fig. 1.

In practice the nut may be run on the bolt and tightened in the usual manner, after which the washer E is placed over the end of the bolt and brought up against the face of the projection C' of the nut, the prong *e* of course sliding in the channel *b'* and finally extending in under the nut as shown. I now bend the arms *e'*—*e''* back to the position shown in Figs. 1 and 3, being at right angles to the face of the washer, which of course will prevent the nut from being turned in either direction. Or if the teeth be formed as shown in Fig. 4 it is evident that the nut may be turned in one direction, to tighten it, but it cannot be turned in the opposite di-

rection, to loosen it; also if the washer and its projections which are integral therewith be formed of spring steel, or the like, then in turning the nut to tighten it the arms $e'$—$e''$ will slide over the inclines of the teeth $d'$ and engage ratchet-like to prevent the nut from turning in the opposite direction.

I desire that it be fully understood that various changes may be made in the details of construction from that herein shown and described, without departing from the spirit of my invention or sacrificing any of the advantages thereof which are new and useful.

Having now fully shown and described my invention, and the best means for its construction to me known at this time, what I claim and desire to secure by Letters Patent of the United States, is—

The combination with a bolt, of a nut screwed thereupon and provided at its outer portion with a reduced projection of circular conformation, said projection being provided at its peripheral portion with extending lugs arranged in spaced relation, and a circular locking member of substantially the same diameter as the projection of the nut and having an inwardly extending tongue to interlock with the bolt to prevent rotation of said member, the locking member also having integral arms projecting from its outer portion and bent at substantially a right angle thereto so as to be received between adjacent lugs of the nut projection, said arms being provided with T-shaped heads engaging the inner sides of the lugs above mentioned to prevent displacement of the locking member.

In testimony of which I have hereunto subscribed my name in the presence of two subscribing witnesses.

JOHN W. SHAWVER.

Witnesses:

JAMES M. T. WRIGHT,

WALTER F. MACGINNITIE.