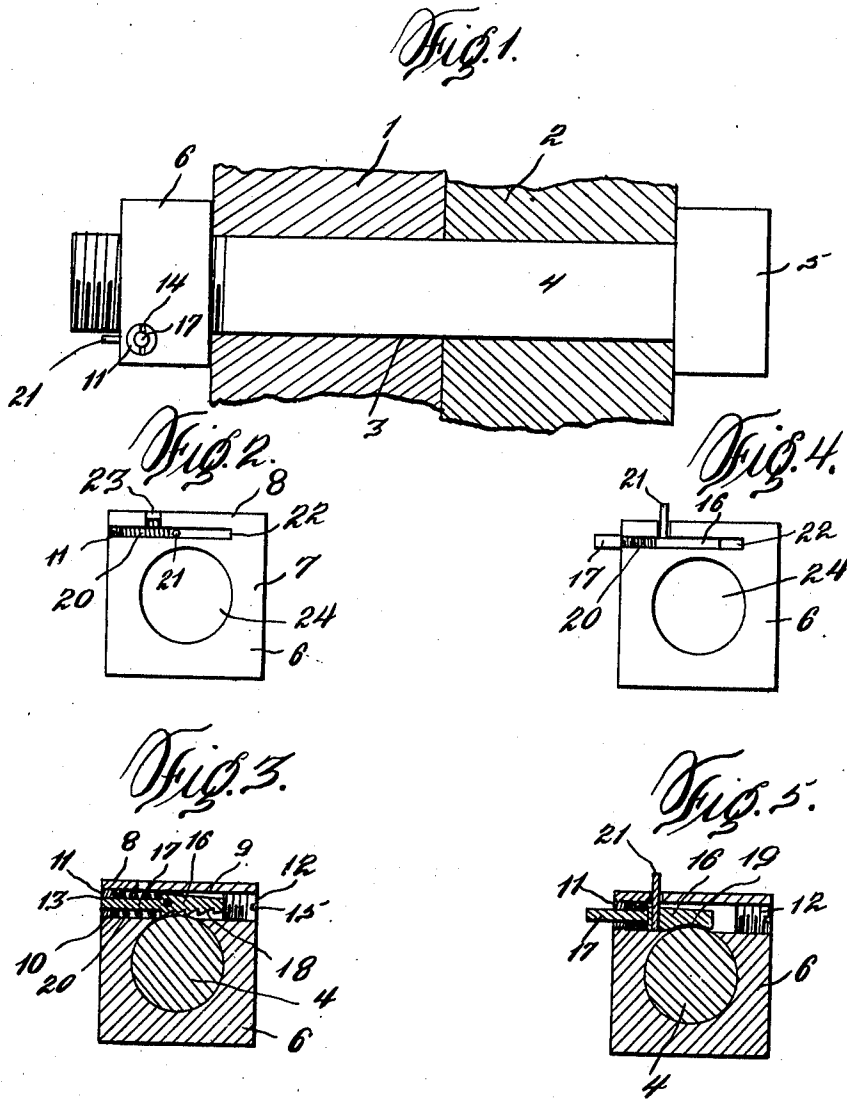


F. E. SACKRIDER.
NUT LOCK.
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989,294.

Patented Apr. 11, 1911.



WITNESSES
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UNITED STATES PATENT OFFICE.

FRANK E. SACKRIDER, OF BRAVE, PENNSYLVANIA.

NUT-LOCK.

989,294.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK E. SACKRIDER, a citizen of the United States of America, residing at Brave, in the county of Greene 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 drawing.

10 This invention relates to nut locks, and the objects of my invention are to provide positive and reliable means in a manner as will be hereinafter set forth for locking a nut upon a bolt whereby it cannot become
15 accidentally displaced, and to furnish a nut lock that can be advantageously used in connection with rail joints, rolling stock, bridges and other structures subjected to vibrations which have a tendency to dis-
20 place nuts.

Other objects of the invention are to provide a nut locking device that can be used in connection with the present type of bolt, and to provide a device of the above
25 type that can be set in a locked or unlocked position.

Further objects of the invention are to provide a nut lock that can be easily and quickly installed, and to accomplish the
30 above results by a nut locking device that is simple, durable, inexpensive to manufacture and efficient for the purposes for which it is intended.

The above objects are attained by a mechanical construction that will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein:—

Figure 1 is a plan of the nut lock in a
40 locked position, Fig. 2 is a front elevation of the nut detached with the locking device thereof in a locked position, Fig. 3 is a vertical cross sectional view of the same, Fig. 4 is a front elevation of the nut with the
45 locking device thereof in an unlocked position, and Fig. 5 is a vertical cross sectional view of the same.

In the drawing the reference numerals 1 and 2 denote, by the way of an example,
50 two pieces of material having registering openings 3 to receive a bolt 4, said bolt having a head engaging the outer side of the piece of material 2 and screwed upon the opposite end of the bolt is a nut 6 adapted to engage the outer side of the piece of
55 material 1 and retain the pieces of mate-

rial together. The nut 6 adjacent to the outer face 7 and the facet 8 thereof is provided with a longitudinal bore 9 having the walls at the ends thereof threaded, as at 60 10 to receive plugs 11 and 12, the former having a longitudinal opening 13 and diametrically opposed grooves 14 adapted to receive a spanner wrench or other instrument for rotating the plug 11. The plug 65 12 is provided with a transverse groove 15 whereby a suitable instrument or screw-driver can be used for mounting said plug in the end of the bore.

Movably mounted in the bore 9 is a gripping 70 block 16 having one end thereof provided with a shank 17 adapted to extend into the opening 13 of the plug 11. The gripping block 16 has one side thereof tapered and provided with teeth or serrations 18 and 75 another side with a recess 19 adapted to provide clearance for the threaded end of the bolt 4, the side containing the recess being at right angles to the side containing the ratchet teeth 18, whereby when the block 80 is turned a quarter of a revolution, either the toothed side of the block will be presented to the bolt or the recessed side thereof.

Encircling the shank 17 within the bore 85 9 is a coiled compression spring 20 having one end thereof engaging the plug 11 and the opposite end thereof the rear end of the block 16, said spring normally holding the forward end of the block in engagement 90 with the plug 12.

Mounted in the rear end of the block 16 is a pin 21 and the end of this pin is adapted to extend through a longitudinal slot 22 provided therefor in the face 7 of the nut, 95 said slot being in communication with the bore 9. Another slot 23 in the facet 8 of the nut communicates with the bore 9 and the longitudinal slot 22.

With the pin 21 in the slot 23, the re- 100 cessed side of the gripping block 16 confronts the threaded opening 24 of the nut and the nut can be screwed upon the threaded end of the bolt 4. After the nut has been tightened against the material 1, the 105 pin 21 can be shifted out of the slot 23 into the slot 22, thereby releasing the tension of the compression spring 20 and allowing said spring to shift the ratchet teeth 18 of the gripping block 16 into frictional engage- 110 ment with the threads of the bolt 4. It is the shifting of the pin 21 from the slot 23

into the slot 22 that rotates the gripping block 16 a quarter of a revolution and places the ratchet teeth 18 in position to grip the threads of the bolt 4 when the nut 6 has a tendency to become displaced.

While in the drawing I have illustrated a preferred embodiment of the invention, it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claims.

What I claim is:—

1. The combination with a bolt, of a nut adapted to screw thereon, said nut having a longitudinal bore adjacent to the outer face thereof, a spring pressed locking block movably mounted in the bore of said nut and having one face thereof tapered and provided with ratchet teeth adapted to engage the threads of said bolt and another face thereof with a recess adapted to provide clearance for the threads of said bolt, said nut having slots formed therein in communication with the bore thereof, and a pin carried by said gripping block and adapted to extend into said slots for shifting said gripping block into and out of engagement with said bolt.

2. The combination with a bolt, of a nut adapted to screw thereon, said nut having a longitudinal bore formed thereof, plugs detachably mounted in the ends of said bore, a rotatable gripping block arranged in said bore and having one face thereof tapered and provided with ratchet teeth adapted to engage the threads of said bolt and another

face thereof with a recess adapted to provide clearance for the threads of said bolt, the recessed side of said gripping block being at right angles to the toothed side thereof, said nut having slots formed therein, and a pin carried by said gripping block and adapted to extend into said slots whereby said gripping block can be shifted.

3. In a nut locking device, the combination with a bolt, of a nut adapted to screw thereon, said nut having a longitudinal bore formed therein, plugs detachably mounted in the ends of said bore, a spring pressed gripping block movably arranged within said bore and having one face thereof tapered and provided with ratchet teeth adapted to engage the threads of said bolt and another face thereof with a recess adapted to provide clearance for the threads of said bolt, the recessed side of said gripping block being at right angles to the toothed side thereof, a shank carried by the end of said block and extending through one of said plugs, a compression spring encircling said shank within said bore, said nut having slots formed therein, and a pin carried by said gripping block and adapted to extend into said slots whereby said gripping block can be shifted into and out of engagement with said bolt.

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

FRANK E. SACKRIDER.

Witnesses:

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C. B. HALSTEAD.