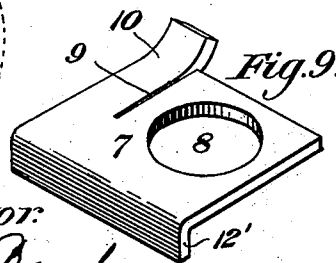
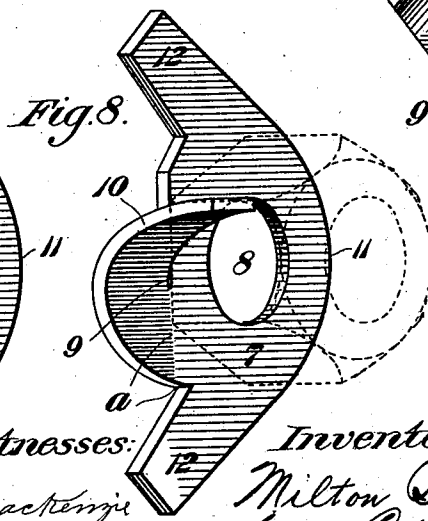
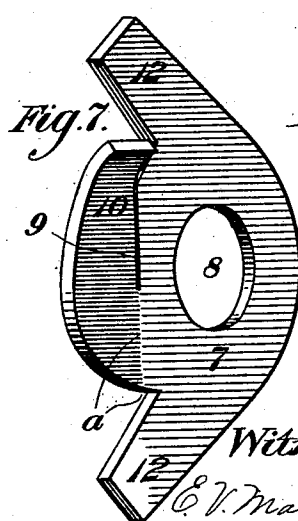
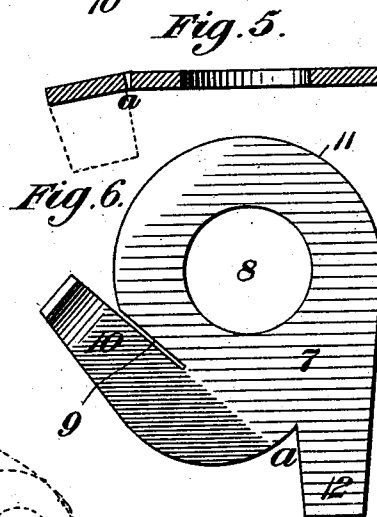
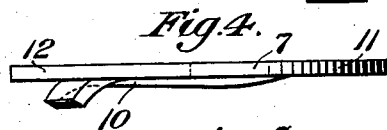
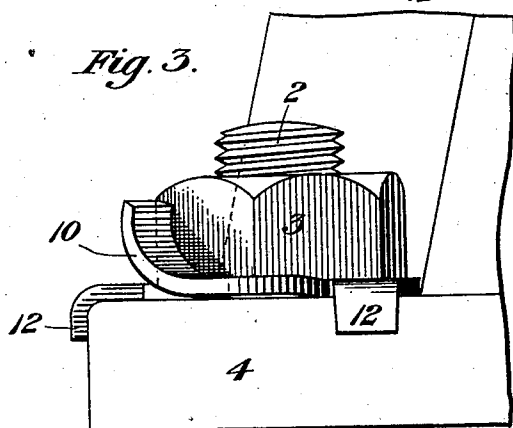
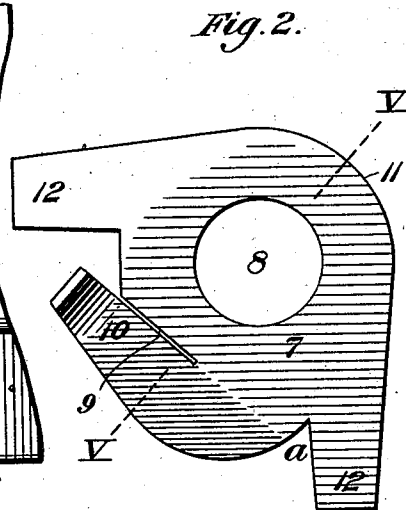
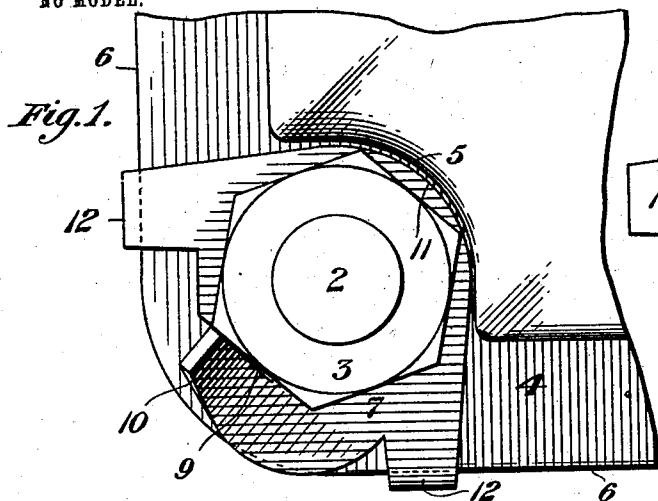


M. BARTLEY.
NUT LOCK.

APPLICATION FILED MAY 31, 1902.

NO MODEL.



Witnesses:
E. V. Mackenzie
Charles Lepley

Inventor:
Milton Bartley
by C. M. Clarke
his attorney.

UNITED STATES PATENT OFFICE.

MILTON BARTLEY, OF ALLEGHENY, PENNSYLVANIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 722,649, dated March 10, 1903.

Application filed May 31, 1902. Serial No. 109,732. (No model.)

To all whom it may concern:

Be it known that I, MILTON BARTLEY, a citizen of the United States, residing at Allegheny, in the county of Allegheny 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, forming part of this specification, in which—

Figure 1 is a plan view of a portion of a bed-plate, showing the application to the holding-bolt and nut therefor of my improved nut-lock. Fig. 2 is a face view of the lock detached. Fig. 3 is a side view in elevation of Fig. 1, showing the holding-tongue in engagement with the nut. Fig. 4 is an edge view of Fig. 2. Fig. 5 is a cross-sectional view on the line V V of Fig. 2. Fig. 6 is a face view of a modified construction. Fig. 7 is a perspective view of the lock detached. Fig. 8 is a similar view showing the tongue bent into engagement with the side of the nut, indicated in dotted lines. Fig. 9 is a similar view showing a modified construction, the lip being turned down.

My invention consists of an improved device for preventing nuts from loosening by turning; and it consists in an especially-constructed washer-plate adapted to engage the bolt under the nut and provided with a partially-severed tongue capable of being bent into holding engagement with the side of the nut.

It also includes means for holding the washer-plate in position against turning in either direction; and the invention is especially designed for use with the particular forms or construction of mechanism to which it is adapted.

The subject of the present invention is, as to its nut-locking element, similar to a nut-lock shown and described in Reissue Letters Patent of the United States, No. 11,963, dated January 28, 1902, but contains improvements thereof, consisting in certain features of construction and advantage by which it is adapted to be used with bolts and nuts employed in holding or connecting castings or other mechanism of peculiar form, to which the ordinary rectangular nut-lock, by reason of its shape, is not adapted.

Referring to the drawings, the invention is

shown as applied to the bolt 2 and nut 3 of a bed-plate 4, in which structure, as is well understood, bearing-faces and clearance-spaces for the nut are provided, as by recessing or rounding the casting, as indicated at 5, the bolt-holes occupying positions at the corners or along the sides adjacent to the edge or edges 6 of the casting. Other constructions, as will be understood without further description, involve the same peculiarities and limitations, and it is therefore necessary to adapt the washer to suit these peculiar conditions to which the ordinary washer is not suited.

The body portion of the washer consists of a metallic plate 7, preferably pliable, having an opening 8, either circular or slotted, for the bolt. On a line to one side of the opening corresponding in relative location to the side of the nut when the washer is in position the plate is partially cut down, as at 9, leaving a partially-divided tongue 10, adapted to be bent upwardly from the plate, so as to bear against the side of the nut, as clearly shown in Fig. 3. In order to insure a tight bearing, the tongue 10 of the plate is also slightly bent outwardly therefrom on a line *a* with the cut 9, so that when the tongue is bent it will move outwardly from the plane of the washer-plate and also inwardly toward and against the adjacent side of the nut, as indicated in dotted lines in Fig. 5, in which construction and operation it resembles the locking-washer of my former patent. For the purpose of adapting the washer-plate to be fitted into recesses or filleted openings, as indicated at 5, a portion, as one-quarter or one-half of the surrounding edge of the washer-plate, may be rounded, as indicated at 11, thus adapting the plate to such conditions where there is only sufficient room for clearance of the nut, and for the purpose of providing means for holding the device against turning under the nut it is provided with one or more outwardly-extending lips 12, adapted to be bent down to engage the sides of the foundation-plate or whatever structure the device is applied to, as indicated in Figs. 1 and 3. These lips may be in any convenient portion of the plate and of any number desired, and they may be left flat, so as to be bent down and locked in place, or may be

originally bent, as shown at 12' in Fig. 9, so as to fit over the edge of any portion to which the lock is applied—as, for instance, structural members of car-truck braces, bridge-work, or whatever bolts may be used. When used with a bolt having a left-hand screw, the position of the tongue with relation to the rotation of the nut may be reversed, as will be readily understood, or the tongue may be provided at each side in the manner shown and described in my original patent.

The operation of the device will be readily understood from the foregoing description, and while the forms illustrated are well adapted to the objects in view it will be understood that changes and variations may be made therefrom by the skilled mechanic as to the various details of holding-lips, contour, &c., and all such changes are to be considered as within the scope of the following claim.

What I claim is—

A nut-lock consisting of a plate provided with a bolt-opening and having a peripheral rounded edge adapted to conform to a concave recess, integral holding-lips arranged approximately at right angles to each other, their outer edges extending away from and forming continuations of the said rounded edge, and a tongue located between said holding-lips partially severed from the plate on a line corresponding to the side of the nut and bent outwardly at an angle to the face of the washer on the line of severance, whereby when the tongue is bent it will bind inwardly against the side of the nut, substantially as set forth.

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

MILTON BARTLEY.

Witnesses:

C. M. CLARKE,

CHAS. W. V. FEIGEL.