M. H. FARNES.

METHOD FOR LOCKING NUTS UPON BOLTS.

APPLICATION FILED OCT. 15, 1917.

1,289,422.

Patented Dec. 31, 1918.

Fig. 1.

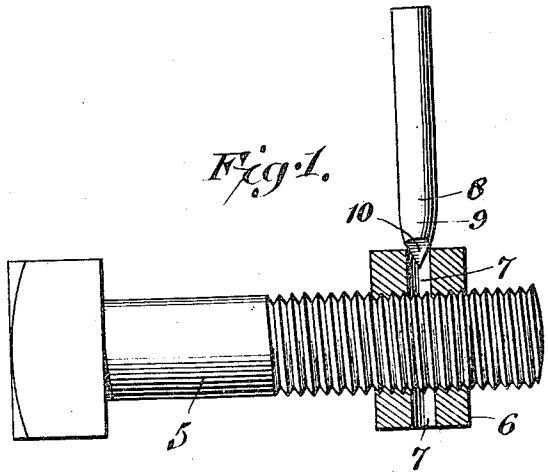


Fig. 2.

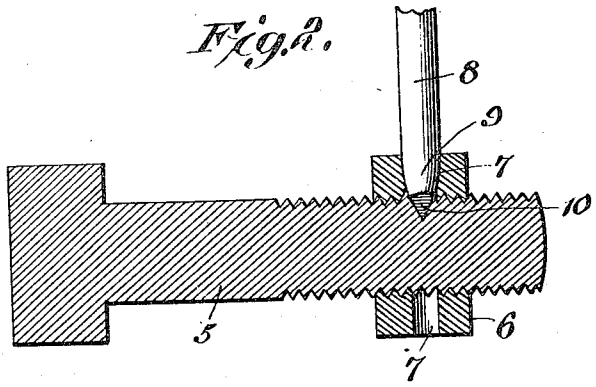


Fig. 3.

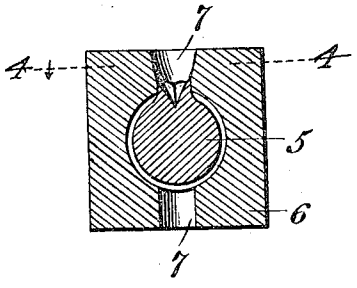
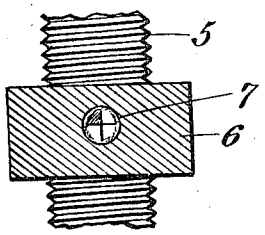


Fig. 4.



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WITNESSES

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UNITED STATES PATENT OFFICE.

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METHOD FOR LOCKING NUTS UPON BOLTS.

1,289,422. Specification of Letters Patent. Patented Dec. 31, 1918.

Application filed October 15, 1917. Serial No. 196,659.

To all whom it may concern:

Be it known that I, MATTHEW HENRY FARNES, a citizen of the United States, residing at Logan, in the county of Cache and State of Utah, have invented a new and useful Method for Locking Nuts Upon Bolts, of which the following is a specification.

The invention relates to a method for locking a nut upon a bolt, so that said nut will not become accidentally loosened or detached therefrom, yet by the use of a wrench or other like tool, said nut can be adjusted on the bolt, or removed therefrom.

The method herein described embodies the formation of one or more holes in the body of the nut, which intersect the usual bolt aperture, at right angles thereto, for the insertion of a punch having a cross sectional diameter greater than said hole or holes, and a tapered pointed end with a four sided tip. After the nut is turned on to the bolt and the punch engaged in the hole, a hammer blow upon said punch will distort said hole and force the punch into the bolt causing the metal thereof to be displaced upwardly into the hole about the sides of the tip of the punch between the same and the wall of said hole, thereby securing the nut upon the bolt.

With the above recited object in view, and others which will appear as the nature of the invention is more fully understood, the preferred embodiment of the invention resides in the construction, combination and arrangement set forth in the following description, and falling within the scope of the appended claim.

In the accompanying drawings:

Figure 1, is an elevation of a bolt with a nut in vertical section thereon with holes formed therein, and a punch in initial position in one of the holes for carrying out the method, in accordance with the invention.

Fig. 2, is a vertical longitudinal sectional view through the headed bolt and nut with the punch engaged in the bolt for displacing the metal thereof into the hole in said nut.

Fig. 3, is a vertical transverse sectional view with the punch removed.

Fig. 4, is a sectional view on the line 4—4 of Fig. 3, looking in the direction of the arrow.

Similar reference characters indicate corresponding parts throughout the several views of the drawing.

In carrying out the method constituting the invention, there is employed an ordinary bolt 5, and an ordinary nut 6, which is threaded upon the bolt. The nut 6, may be provided with any desired number of sides or faces, and in this instance, said nut is formed with diametrically opposite holes 7, which are arranged at right angles to the bore of the nut to intersect the same, and open through opposite faces of said nut. However, if desired, any number of holes arranged, as hereinbefore stated, may be provided in the nut.

Adapted to be inserted in either or both of the holes 7, is a punch 8, which for a major portion of its length is of greater cross sectional diameter than the hole or holes 7 and is formed with a tapered pointed end 9, having a four sided tip 10, for penetrating the shank of the bolt 5. When a hammer blow is struck upon the punch 8, for driving the same into the hole 7, it causes distortion of the wall of the hole 7 and causes the tip 10, to penetrate the shank of the bolt for displacing the metal upwardly and outwardly into the hole about the sides of the tip 10, between the same and the wall of the hole. This crowds the metal in a restricted space, and causes the nut to be securely locked upon the bolt against accidental turning movement thereon. However, when a wrench or the like tool is engaged with the nut after the locking thereof on the bolt, it can be turned for the adjustment of said nut or the removal of the same from said bolt.

It is, of course, understood, that the punch is constructed of some hard metal to assure the displacement of the metal from which the shank of the bolt is made.

From the foregoing, it is thought that the hereinbefore described method will be clearly understood, and, therefore, a more extended explanation has been omitted.

What is claimed is:

The herein-described method consisting in

forming in a nut one or more holes which intersect the bore thereof, threading the nut upon a bolt, and driving a bolt-piercing element through said hole or holes into the threaded portion of the body of the bolt, the element having a point of smaller and a shank of larger diameter than the holes, said element thereby distorting the hole or holes and displacing the metal of the bolt upwardly and outwardly about its point into the hole or holes, thereby locking the nut upon said bolt.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MATTHEW HENRY FARNES.

Witnesses:
EBENEZER FARNES,
VERNON W. CROCKETT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."