

No. 838,734.

PATENTED DEC. 18, 1906.

H. T. MOLER.  
NUT LOCK.

APPLICATION FILED MAY 21, 1906.

FIG. 1

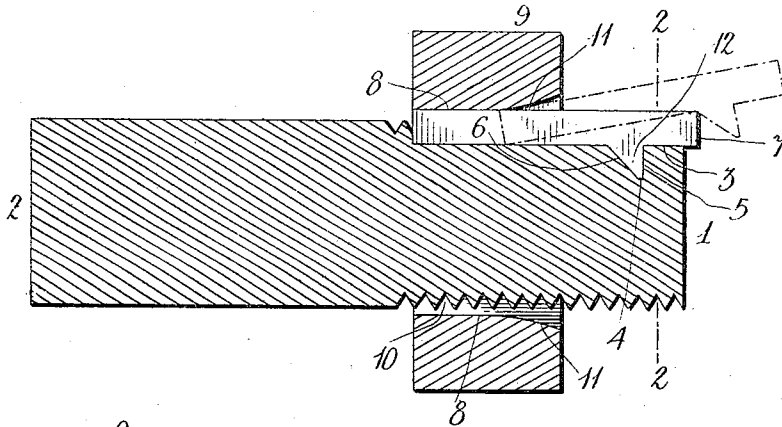


FIG. 2

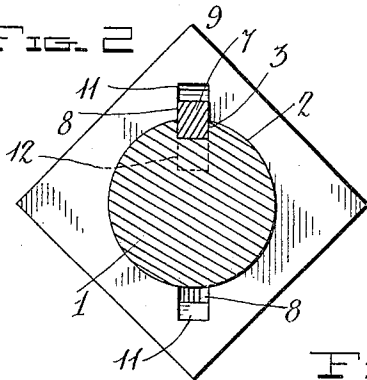


FIG. 3

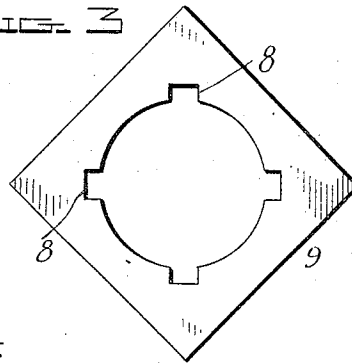


FIG. 4

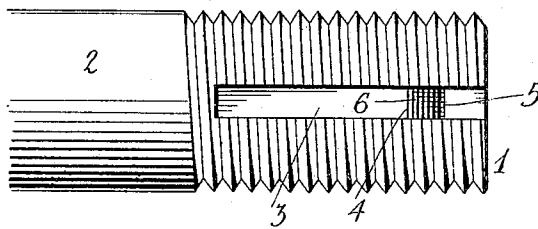
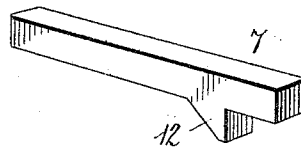


FIG. 5



Witnesses  
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# UNITED STATES PATENT OFFICE.

HARVEY TANNER MOLER, OF NEAR SHEPHERDSTOWN, WEST VIRGINIA.

## NUT-LOCK.

No. 838,734.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed May 21, 1906. Serial No. 317,987.

*To all whom it may concern:*

Be it known that I, HARVEY TANNER MOLER, a citizen of the United States, residing near Shepherdstown, in the county of Jefferson and State of West Virginia, have invented certain new and useful Improvements in Nut-Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in nut-locks of that class in which the nut is locked to a bolt or the like by means of a longitudinal key.

The object of the invention is to provide a locking device of this character which will be of simple and comparatively inexpensive construction, easy to apply and remove, and very effective for the purpose intended.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal sectional view through a bolt or rod, showing a nut locked thereon in accordance with my invention, my improved locking-key being shown in its locked position in full lines and in the position it assumes when being applied in dotted lines. Fig. 2 is a transverse sectional view taken on the plane indicated by the line 2 2 in Fig. 1. Fig. 3 is an end view of a slightly-modified form of the nut. Fig. 4 is a side view of the end of the bolt or rod, showing its groove or recess; and Fig. 5 is a perspective view of the locking-key.

In the practice of my invention I form in the screw-threaded end 1 of a bolt, rod, or the like 2 a longitudinally-extending groove or channel 3, which has in its bottom adjacent to its outer end a recess or depression 4. The recess or seat 4 is preferably angular in form, as shown in Fig. 1, and has a transversely-extending outer end wall 5 and an inclined inner end wall 6. The groove 3 and the depression 4 form a seat for the lower half of a locking-key 7, the upper half of which is adapted to enter a groove or seat 8 formed in the nut 9, which latter has internal screw-threads 10 to engage the threads 1 on the bolt or rod 2. Any number of these longitudinally-extending grooves 8 may be formed in the nut. As shown in Figs. 1 and 2,

the nut has two grooves and as shown in Fig. 3 it has four. A greater or less number may be provided, according to the strength which it is desired the nut to have. The grooves 8 have their bottoms at the outer end of the nut cut away or beveled, as shown at 11, to facilitate the insertion of the keys in them. The key 7 can be made of brass, galvanized malleable iron, or any other suitable metal which is flexible or yieldable and not resilient. When made of malleable iron, it is preferably galvanized to prevent it from rusting. It is of substantially rectangular form and has upon one of its side edges a projection or detent 12, which preferably corresponds in shape to that of the recess 4 in the bolt. The key may be of any suitable length, and the projection or lug 12 is located some distance from its outer end, so that said end will project beyond the bolt, as shown in Fig. 1, when the key is in its operative position in the grooves or seats 3 8.

The construction, operation, and advantages of the invention will be readily seen. In locking the nut upon the bolt it is first screwed thereon to the desired position and turned to bring one of the grooves 8 in alignment with the groove 3. The key 7 is then forced into said alining grooves or seats and may be bent slightly, as shown in dotted lines in Fig. 1, by tapping upon its outer end with a hammer or other tool. After it has been bent sufficiently to allow its detent or projection 12 to clear the bottom of the outer end of the groove 3 it is driven farther into the grooves 3 4 until said detent or projection is above the recess or depression 4. Its outer end is then hammered and bent downwardly to cause the detent to enter said depression, so that the key will be effectively retained in said groove to lock the nut upon the bolt. By having the outer end of the key project beyond the end of the bolt it will be seen that when it is desired to remove the key to unlock the nut said outer end may be bent upwardly to permit the detent or projection 12 to clear the recess 4, and the key may then be readily pulled out of said grooves. By beveling the outer ends of the groove 8, as shown at 11, the application and removal of the key are greatly facilitated. The invention is simple and comparatively inexpensive, since the grooves 8 in the nut may be punched therein when the nut is punched and before it is screw-threaded, and the grooves in the bolt may be rolled therein while the bolt is being formed.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined by the appended claim.

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

- 10 The herein-described nut-lock, comprising the bolt having the longitudinal groove in one side extending to its end and provided near the outer end of said groove with a recess communicating with the bottom of said  
15 groove, the nut of the bolt having a groove in its bore, said groove being deepened out-

wardly at its outer end, and the flexible non-resilient locking-key inserted in the groove of the bolt and nut, having its outer end projecting beyond the outer end of the bolt and 20 provided near said end with the projection entering the recess in the bottom of the groove in the bolt, substantially as described.

In testimony whereof I have hereunto set 25 my hand in presence of two subscribing witnesses.

HARVEY TANNER MOLER.

Witnesses:

GEO. M. BELTZHOVER,  
THOS. B. LINE.