No. 845,643. PATENTED FEB. 26, 1907.

C. H. HUGHES.

NUT LOCK.

APPLICATION FILED OCT. 8, 1906.

Fig. 1.

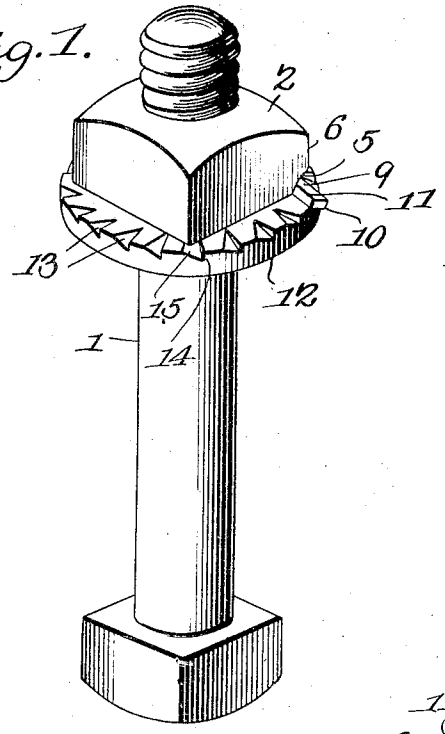
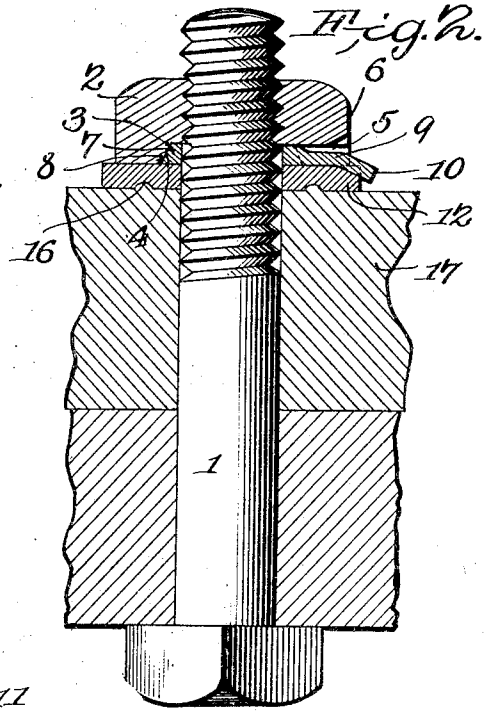


Fig. 2.



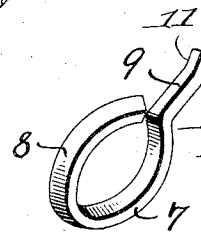


Fig. 3.

Fig. 4.

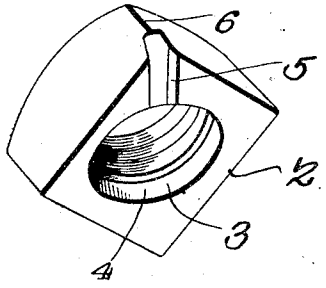
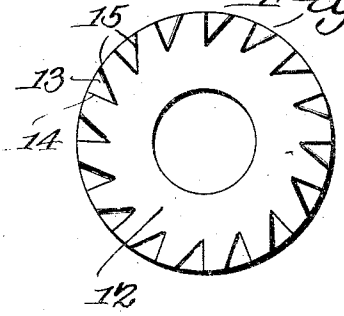


Fig. 5.



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CHARLES H. HUGHES, OF ROSSBURG, OHIO

NUT-LOCK.

No. 845,643. Specification of Letters Patent. Patented Feb. 26, 1907.

Application filed October 8, 1906. Serial No. 338,008.

To all whom it may concern:

Be it known that I, CHARLES H. HUGHES, a citizen of the United States, residing at Rossburg, in the county of Darke and State of Ohio, have invented a new and useful Nut-Lock, of which the following is a specification.

This invention has relation to nut-locks; and it consists in the novel construction and arrangement of its parts, as hereinafter shown and described.

The object of the invention is to provide a simple, effective, and positive locking mechanism whereby a nut may be attached to a bolt and the possibility of the same unscrewing incidental to expansion and contraction of metal or to jarring is prevented. The invention consists primarily of a key, which is provided with an annular portion adapted to surround the bolt and which fits within a recess provided in the under face of the nut. The said under face of the nut is provided with a radially-extending recess which receives the radially-extending arm of said key. The outer end of said arm is adapted to engage notches provided in a washer or may enter a detent formed by any suitable implement in a metallic surface against which the nut is screwed.

In the accompanying drawing, Figure 1 is a perspective view of a bolt, showing the nut and washer applied thereto. Fig. 2 is a side elevation of the bolt, showing the nut, key, and washer in section. Fig. 3 is a perspective view of the key. Fig. 4 is a perspective view of the under side of the nut, and Fig. 5 is a top plan view of the washer.

The bolt 1 is of usual formation. The nut 2 is provided in its under face with the annular recess 3, the side wall of which is pitched at an incline. The radially-extending recess 5 enters at its inner end the said annular recess 3, and its outer end is located at the corner 6 of the nut. The top wall of said recess 5 is curved upwardly toward its outer end. The key consists of the annulus 7, which is adapted to surround the bolt 1 and fit within the recess 3 of the nut 2. The outer wall 8 of said annulus is beveled or inclined at a degree corresponding to that of the side 4 of the recess 3. The finger 9 extends laterally and radially from the annulus 7 and is slightly reduced in vertical thickness toward its outer end 10. Said outer end of the finger 9 is bent down, as indicated in Fig. 2, and is twisted slightly along its longitudinal axis, as indicated at 11 in Fig. 1. The washer 12 is provided in its face with a number of notches 13, each said notch being provided with a radially-extending side 14, which is substantially at right angles to the face of the washer, and the tangentially-disposed side 15, which is located at an acute angle to the face of the washer. The said notches 13 are adapted to receive the end 10 of the finger 9, the said finger being twisted along its longitudinal axis in order to fit snugly within the said notches.

The washer 12 is held in fixed position upon the backing material 17 by means of the indentation 16, provided in its under side, which are adapted to receive elevated portions of the said backing 17. The washer 12 is generally employed when the backing 17 is composed of wood. Consequently as the said washer is forced against the face of the said backing the fiber of the wood is forced up into the recesses 16 and retains the said washer against rotation.

When the nut-lock is used in connection with a backing 17 composed of metal, the washer 12 is not used; but when the nut 2 is tightened upon the bolt a detent is made in the face of the backing 17, a cold-chisel being used for this purpose, and the end 10 of the finger 9 is permitted to enter said detent. When it is desired to remove the nut 2 from the bolt 1, an implement is inserted under the end 10 of the finger 9, and the said end 10 of the said finger is brought up until its lower edge is above the edge of the detent (not shown) or above the edge of the notch 13 in the washer 12, when the nut 2 may be readily unscrewed.

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

1. A nut-lock consisting of a bolt, a nut having a bolt-perforation with an annular recess located at the end thereof, said recess having an inclined wall and a radially-extending recess extending from said annular recess to the edge of the nut, a key having an annular portion adapted to rest within said annular recess, said annular portion having a beveled outer wall, said key having a finger resting in said radially-extending recess of the nut and adapted at its outer end to enter a notch or detent.

2. A nut-lock consisting of a bolt, a nut having a bolt-perforation, an annular recess located at the end of said perforation and a radially-extending recess extending from the said annular recess to the corner of the nut,

said radially-extending recess having its top wall curved upwardly toward its outer end, a key having an annular portion resting within said annular recess, and a radially-extending finger resting within said radially-extending recess, the outer end of said finger being bent down and adapted to enter a notch or detent.

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

CHARLES H. HUGHES.

Witnesses:
J. F. HARNWY,
H. F. CAMPBELL.