

(No Model.)

J. E. CRISP.
NUT LOCK.

No. 488,472.

Patented Dec. 20, 1892.

Fig. 1.

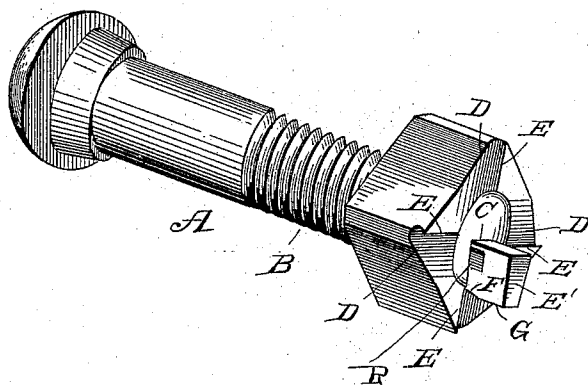


Fig. 2.

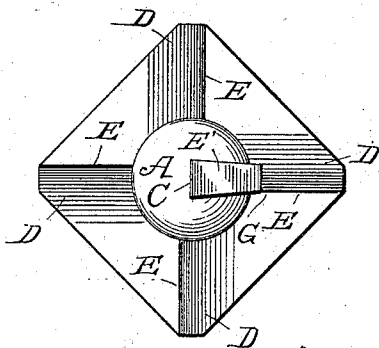


Fig. 3.

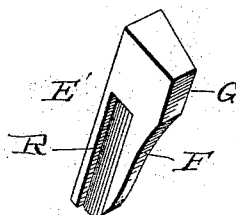
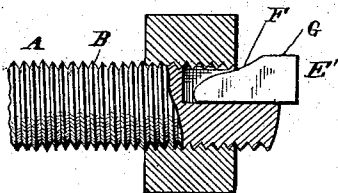


Fig. 4.



Witnesses

Wm. A. Schoenborn.
C. E. Doyle.

Inventor

James E. Crisp.
By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JAMES E. CRISP, OF BROWNWOOD, TEXAS, ASSIGNOR OF ONE-HALF TO
WASH W. BROOKS, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 488,472, dated December 20, 1892.

Application filed August 26, 1892. Serial No. 444,185. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. CRISP, a citizen of the United States, residing at Brownwood, in the county of Brown and State of Texas, have invented a new and useful Nut-
Lock, of which the following is a specification.

My invention relates to improvements in nutlocks of that class in which a key is employed to secure the nut in the desired adjusted position, the object of my improvement being to provide means whereby the nut may be engaged at any desired point, the thread of the nut being uninjured.

A further object of my improvement is to provide a nut lock, employing a key, in which the key may be removed readily and quickly.

Further objects of my invention will appear in the following description and the novel features thereof will appear in the appended claims.

In the drawings:—Figure 1 is a perspective view of a bolt and nut provided with my improved lock; Fig. 2 is a plan view of the outer face of the nut, showing the bolt and key in end view; Fig. 3 is a detail view of the key, detached. Fig. 4 is a longitudinal section of the bolt and nut, showing the key in the operative position.

The bolt A is provided near its end with the usual threaded portion, B, a vertical or longitudinal groove, C, being formed in said threaded portion, and extending inwardly to the axis of the bolt, as shown in Fig. 2. This groove is dove-tailed in cross-section, being narrower at the mouth or surface of the bolt and widening gradually toward the center or axis of the same. The nut is unbroken in its interior contour, and its outer face is provided with a series of transverse or diametrical cuts or channels, D D, which intersect the tapped opening in the bolt and form angles or shoulders, E, at such intersections. The key, E', is dove-tailed in cross-section, as shown to fit the similarly shaped groove in the bolt, and is slipped into the latter from the end. The rear or inner edge of the key, or that edge which rests against the inner wall of the groove in the bolt, is straight and perpendicular, the front or outer edge of the same being slightly inclined whereby the key

is tapered toward its lower end. In addition to this the front or outer edge of the key is slightly concaved, as shown at F, whereby when the key is engaged in the groove in the bolt the overhanging portion, or shoulder, G, which is beveled easily so as to form no abrupt angles, overhangs the outer face of the nut to engage the angle or shoulder at the inner end of one of the cuts or grooves in the nut.

In operation, after the nut has been screwed to place, the key is inserted in the groove of the bolt, as described, and pressed thereinto until it bites slightly upon the threads of the nut, after which the nut may be turned back (if necessary) to bring the nearest cut or channel, or the angle or shoulder formed thereby, into contact with the beveled shoulder of the key.

It will be seen that to remove the nut it is simply necessary to force the nut forward sufficiently to disengage the said angle from the key when the latter may be withdrawn without difficulty.

The dovetailed shape of the seat and key holds the latter to its place as it is inserted, and prevents the premature engagement thereof with the nut, as might occur if the key were capable of lateral movement in the seat. The longitudinal recess, R, which is formed in the side of the key, and is clearly shown in Fig. 3, is designed to reduce the frictional surface of key without affecting its operativeness. It will be noted that such recess is formed in the side of the key against which the shoulder of the nut impinges and therefore upon the opposite side to that which bears the thrust of the key against the walls of the socket in the bolt. A further function of the recess in the key is to allow the latter to be compressed without splitting the bolt in case the socket or groove in the bolt is too small for the easy adjustment of the key.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, is:—

1. In a nut-locking device the combination of the bolt provided with a dove-tailed groove, the nut engaging said bolt, and the key, fitting in said groove, and provided with a beveled

shoulder overhanging the outer surface of the nut to engage angles or shoulders thereon, substantially as specified.

2. In a nut locking device the combination
5 of the bolt provided with a longitudinal groove, the nut engaging said bolt and provided upon its outer face with a series of diametrical cuts or channels forming angles or
10 shoulders at their intersections with the bore of the nut, and the tapered key fitting in the groove of the bolt and provided with a beveled, overhanging shoulder to engage the angles or shoulders of the nut, substantially as specified.

15 3. In a nut-locking device the combination of the bolt provided with a longitudinal groove, the nut engaging said bolt and pro-

vided upon its outer face with transverse cuts or channels intersecting the bore of the nut and forming angles at such intersections, and
20 the key-fitting in the groove of the bolt and having a concaved outer edge to form a beveled shoulder which overhangs the outer face of the nut to engage the angles thereof, substantially as specified.

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

JAMES E. ^{his} X CRISP.
mark

Witnesses:

JOHN MURPHY,
R. M. LEGGETT.