

(No Model.)

D. BOYER.
NUT LOCK.

No. 522,144.

Patented June 26, 1894.

Fig. 1.

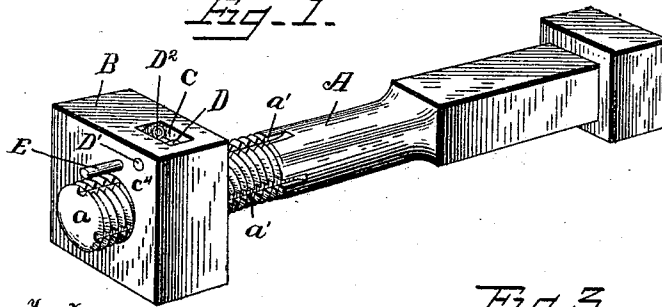


Fig. 2.

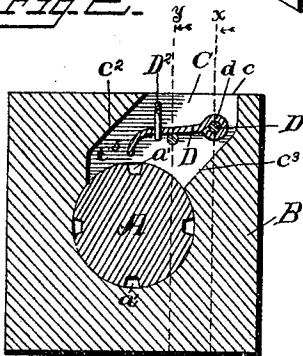


Fig. 3.

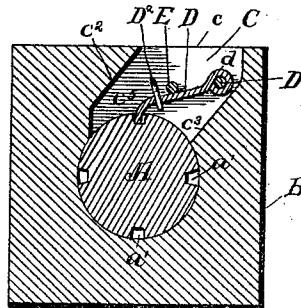


Fig. 4.

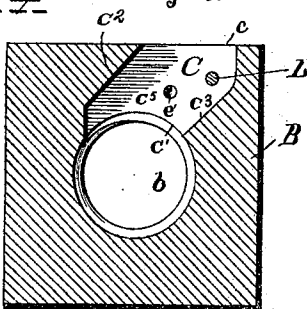


Fig. 5.

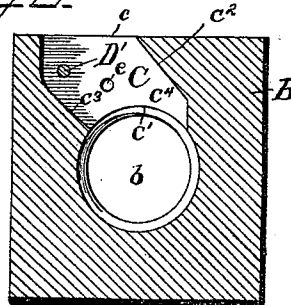


Fig. 6.

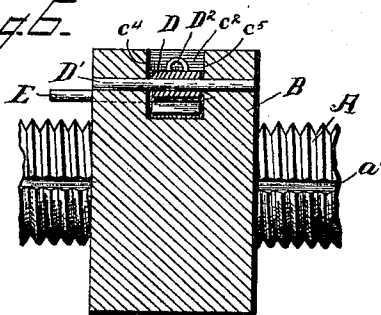


Fig. 7.

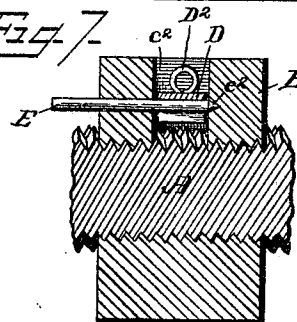
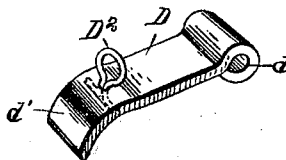


Fig. 8.



WITNESSES.

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DANIEL BOYER, OF CRESSONA, PENNSYLVANIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 522,144, dated June 26, 1894.

Application filed March 8, 1894. Serial No. 502,863. (No model.)

To all whom it may concern:

Be it known that I, DANIEL BOYER, a citizen of the United States, residing at Cressona, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Nut-Locks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to
10 which it appertains to make and use the same.

This invention relates to that class of nut locks in which the bolt is provided with a series of longitudinally-disposed grooves adapted to be engaged by a spring-actuated pawl carried
15 by the nut.

The object of my invention is to provide an improved nut lock of this character, which will possess advantages in point of simplicity and inexpensiveness, effectiveness, convenience and facility in operation, durability, and
20 general efficiency.

In the drawings:—Figure 1 is a perspective view of a bolt and nut, embodying my invention. Fig. 2 is a transverse sectional view, showing the nut unlocked. Fig. 3 is a transverse sectional view, showing the nut locked. Fig. 4 is a transverse sectional view, showing the rear face of the recess. Fig. 5 is a transverse sectional view, showing the front face
30 of the recess. Fig. 6 is a sectional view, taken on the line $x-x$, Fig. 2. Fig. 7 is a sectional view, taken on the line $y-y$, Fig. 2. Fig. 8 is a detail perspective view, of the pawl detached.

Corresponding parts in all the figures are denoted by the same letters of reference.

Referring to the drawings, A designates the bolt, which is provided in its threaded end, a , with a series of longitudinally-arranged
40 grooves or channels, a' , running through the threads and preferably of a depth corresponding therewith.

B designates the nut, which is in the main of ordinary or suitable construction, having the threaded eye, b . In one wall of the nut, preferably at one side the center, is formed a recess, C, opening at the outside of the nut, as at c , and opening into the threaded eye, as at c' . The outer opening c of the recess C is
50 thus preferably at one side of the center of the nut and extends preferably from about the center nearly to the edge, while the inner

opening c' extends over a segment of the eye b equally on each side of a central point with relation to the width of the nut. The inner
55 end, c^2 , of the recess C is therefore beveled or inclined downwardly and inwardly, as shown, and the rear end, c^3 , is similarly formed. The recess C thus substantially forms an irregularly-shaped slot extending on a tangential
60 or angular plane from the central threaded eye to one of the outer ends of the nut.

In the recess C is pivotally mounted a pawl, D, which is preferably formed of sheet metal bent to form a bearing eye, d , at its upper
65 end, embracing a bearing bar or pin, D' , passing across the recess C and preferably through the nut. The pawl D is suitably bent or curved and has its free end curved to form a hook or point, d' , adapted to engage the
70 grooves or channels a' in the bolt. The pawl is provided with an eye or loop, D^2 , preferably formed of wire, projecting from its upper face at a point between its bearing eye and free end d' , by engaging which the pawl
75 may be lifted in the recess C.

It will be noted that the flat pawl or plate D corresponds approximately in width to its inclosing recess C, and that the angular or tangential arrangement or shape of the recess
80 permits free operation of the pawl without waste space.

E designates a removable pin, adapted to be inserted from the face of the nut into an eye or opening, e , intersecting the front face, c^4 , of the recess C. The rear face, c^5 , of the recess C is provided with a depression or recess, e' , opposite the opening e , to accommodate the point or end of the pin E. To facilitate the insertion of the pin, and also its pas-
90 sage by the pawl, the inner end of the pin is pointed, as at e^2 .

The operation and advantages of my invention will be readily understood. When the pawl is elevated in its recess, and the pin
95 inserted under the same (see Fig. 2), the nut is retained in unlocked position. When the pawl is in engagement with one of the grooves in the bolt, the nut is in locked position, and by then inserting the pin over the pawl the
100 latter is locked in place and accidental disengagement or unlocking of the nut is prevented.

Having thus described my invention, I

claim and desire to secure by Letters Patent—

1. As an improvement in nut locks, the nut provided in its wall with a recess extending from the outside of the nut to the threaded eye and with an eye or opening extending from the face of the nut and intersecting said recess, and having a plate or pawl pivotally mounted in said recess and provided with an eye or loop upon its upper face, said pawl being adapted to engage horizontally-disposed grooves or channels in the bolt, and a pin inserted in the eye or opening intersecting the recess and adapted to control the position of the pawl; substantially as set forth.

2. As an improvement in nut locks, the nut provided in its wall with a recess, C, extending from the outside of the nut and opening into the threaded eye, and having an eye or opening, *e*, extending from the face of the nut and intersecting the recess C; the flat pawl, D, mounted upon a bar or pin, D', and housed in the recess, the pawl being provided with an eye or loop, D², projecting from its upper face and having a hook or point adapted to engage longitudinally-disposed grooves or channels in the bolt; and a removable pin, E, inserted in the eye or opening *e* and adapted to control the position of the pawl; substantially as set forth.

3. As an improvement in nut locks, the herein described nut provided in its wall with the recess C extending from the outside of

the nut to the threaded central eye on a tangential plane, and having the eye or opening *e* extending from the face of the nut and intersecting the front face *c*⁴ of the recess, and the depression or recess *e*¹ in its rear face *c*⁵; the bearing bar or pin D' extending across the recess; the flat plate or pawl D having the bearing eye *d* embracing the bar D' and the hook or point *d*¹ adapted to engage longitudinally-disposed grooves or channels in the bolt, the pawl being provided with an eye or loop D² projecting from its upper face; and the removable pin E inserted in the eye or opening *e* and having the pointed end *e*² adapted to be received by the depression *e*¹; substantially as and for the purpose set forth.

4. As an improvement in nut locks, the combination, with a longitudinally-grooved or channeled bolt, of a nut provided in its wall with a recess extending from outside the nut and opening into the threaded eye, a pawl pivotally mounted and housed in said recess and having an eye or loop projecting from its top, and a removable pin inserted through an eye or opening intersecting said recess and adapted to control the position of the pawl.

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

DANIEL BOYER.

Witnesses:

HUGH QUIN,
OSCAR TIDLER.