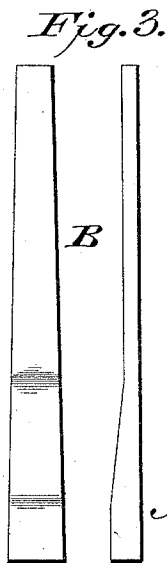
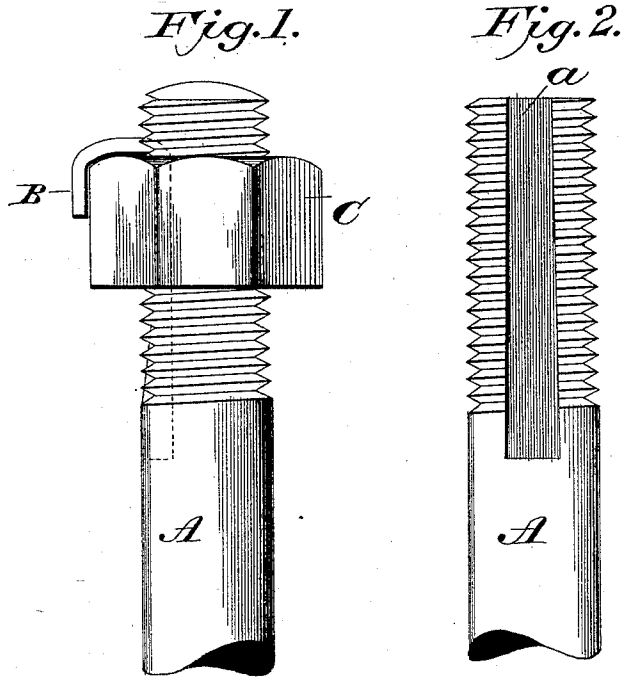


(No Model.)

A. GROSS.
NUT LOCK.

No. 467,617.

Patented Jan. 26, 1892.



Witnesses *L. S. Elliott*
E. M. Johnson

Augustus Gross.
Inventor
by *[Signature]*
Attorney

UNITED STATES PATENT OFFICE.

AUGUSTUS GROSS, OF SYDNEY, NEW SOUTH WALES.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 467,617, dated January 26, 1892.

Application filed October 1, 1891. Serial No. 407,400. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS GROSS, a subject of the Queen of Great Britain, residing at Sydney, New South Wales, have invented certain new and useful Improvements in Nut-Locks; and I do hereby 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in nut-locks; and it consists in providing the bolt with a longitudinal recess having tapered sides which is adapted to receive a key of less thickness than the full depth of the recess including the threads of the bolt, said key also being of a greater length than the recess, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view showing the application of my improvement. Fig. 2 is a side view of the bolt with nut and key detached. Fig. 3 is a plan view of the key.

The bolt A is provided longitudinally with a recess *a*, which, if desired, may extend a slight distance below the threaded portion of the bolt, and this recess is of sufficient depth to receive a key specially constructed therefor. The sides of the recess are not parallel with each other, but converge from the end near the head of the bolt to the threaded end thereof. The key B is of greater length than this recess, and is adapted when placed therein to be located below the threads of the bolt while its upper end extends beyond the bolt. This key is preferably made of malleable metal, and the lower end may be, if desired, of greater thickness than the upper portion, so that when the nut C, which is of ordinary construction, is screwed home the threads near the base of said nut will contact with the portion of the key of increased thickness and force it into the recess and against the base thereof.

By having the sides of the key tapered and a correspondingly-shaped recess, the key, when placed in position and retained there by the nut, cannot be withdrawn, and by simply up-

setting or bending the end of the key over the top of the nut the displacement of the same will be prevented and the nut will be securely locked in place. In my patent dated October 20, 1891, No. 461,678, a recess and key were employed, said key having a bulbous portion, and my present invention is distinguished therefrom by providing the bolt with a longitudinal recess with tapered or converging sides and having a key to fit therein, said key also being of slightly greater thickness adjacent to its widest end than at the portion located above the upper surface of the nut when in use.

I am aware that prior to my invention it has been proposed to provide a bolt with a recess having converging sides and employ in connection therewith a flat key having sides corresponding with said recess, and I do not claim such construction, broadly, as my invention; but

What I claim as new, and desire to secure by Letters Patent, is—

1. In a nut-lock, the combination of the bolt having a longitudinal recess with converging sides or edges and a key adapted to fit in said recess and be retained therein by the nut, said key being of greater thickness at its base than at its upper end to adapt it for engagement with the threads of the nut and of such length that the upper end can be bent on the nut, substantially as set forth.

2. In a nut-lock, the combination of a bolt having a longitudinal recess with converging sides or edges, said recess extending into the body portion of the bolt beyond the threaded portion thereof, and a key with converging sides and a wedge-shaped inner end of greater thickness than the depth of the recess, the opposite end of the key being adapted to lie within the recess in the threaded portion of the bolt and below the base of the threads, said key being made of malleable metal and of such length that the upper end can be bent in engagement with the nut to retain the same against rotation, substantially as shown, and for the purpose set forth.

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

AUGUSTUS GROSS.

Witnesses:

E. W. JOHNSON,
H. L. BEALL.