

(No Model.)

P. E. BOURGEOIS.
NUT LOCK.

No. 517,022.

Patented Mar. 27, 1894.

Fig. 1.

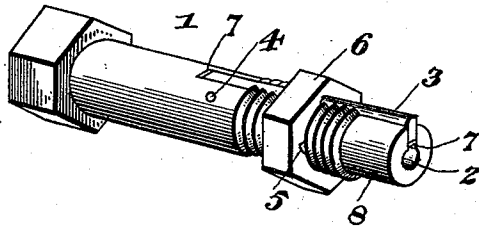


Fig. 2.

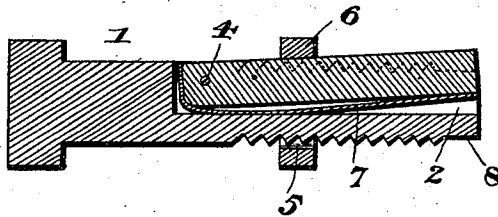
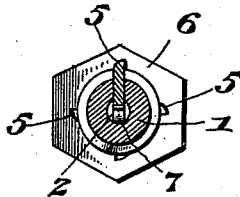


Fig. 3.



Inventor

Philip E. Bourgeois,

By *his* Attorneys.

C. Snow & Co.

Witnesses

B. S. Ober,
N. H. Wiley

UNITED STATES PATENT OFFICE.

PHILIP E. BOURGEOIS, OF EAST LONGMEADOW, MASSACHUSETTS.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 517,022, dated March 27, 1894.

Application filed September 26, 1893. Serial No. 486,644. (No model.)

To all whom it may concern:

Be it known that I, PHILIP E. BOURGEOIS, a citizen of the United States, residing at East Longmeadow, in the county of Hampden and State of Massachusetts, have invented a new and useful Nut-Lock, of which the following is a specification.

The invention relates to improvements in nut locks.

The object of the present invention is to improve the construction of nut locks, and to provide a simple and inexpensive one, which will not interfere with the screwing on of a nut, but which will effectually prevent the same from being accidentally unscrewed.

A further object of the invention is to provide an effective nut lock, which, when desired, will enable a nut to be readily removed without injuring the parts.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claim hereto appended.

In the drawings—Figure 1 is a perspective view of a nut lock constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a transverse sectional view.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a bolt provided with a longitudinal groove 2, extending inward from the outer end of the bolt and receiving a longitudinally disposed key 3, which is pivoted at its inner end 4 to the bolt, and is adapted to spring outward and engage an inner series of recesses 5 of a nut 6. The key is forced outward by a flat spring 7 arranged in the groove 2, and interposed between the bottom of the same and the inner edge of the key. The inner end of the spring 7 is bent outward and bears against the inner end of the key and is thereby retained in position, without the employment of any other fastening device. The outer edge of the key is beveled at one side, and the recesses 5 of the nut are shouldered at one side, and their other sides are beveled to enable the nut to be readily screwed on

and to prevent the same from unscrewing. When the nut is being screwed on the bolt, the beveled or inclined walls of the recesses 5 engage the beveled outer edge of the key, and the latter is depressed against the action of the spring; but in attempting to unscrew the nut the shoulders of the recesses will come in engagement with the key at one of the side faces thereof, and the nut will be locked. The bolt is provided at its outer end with a smooth portion 8, of less diameter than the threaded portion which enables the spring to be readily depressed out of engagement with the nut, until the latter has been screwed off the threaded portion of the bolt.

It will be readily seen that the nut lock is exceedingly simple and inexpensive in construction, that it is capable of effectually preventing a nut from accidentally unscrewing, that it will permit a nut to be readily screwed on a bolt, and that it will enable the nut to be readily removed when desired without injuring any of the parts. It will be noted, furthermore, that by arranging the spring between the key and the inner wall of the groove the spring is protected from contact with exterior objects, and the peculiar manner of securing the spring in place enables it to be removed and replaced when worn or injured. By employing a key and an independent actuating spring as described, the spring may be made light in weight and strength, for the reason that its only function is to extend the key, and therefore the flexibility of the spring enables it to be inserted with facility without removing the key. Also, the key may be made flat in the direction of a radius of the bolt and it may be fitted snugly in the groove provided for its reception.

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 this invention.

What I claim is—

In a nut lock, the combination of a bolt provided with a longitudinal groove extending inward from its extremity, a key flattened in the direction of the radii of the bolt, fitted snugly in the said groove and pivoted at its

inner end thereto, an independent leaf spring arranged in the groove between the inner edge of the key and the adjacent wall of the groove and provided with an upturned inner
5 end to lie between the pivoted end of the key and the adjacent end wall of the groove, whereby the spring is detachably secured to the bolt, and a nut threaded upon the bolt and provided with shouldered recesses to en-

gage the outer edge of the key, substantially as specified.

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

PHILIP E. BOURGEOIS.

Witnesses:

ALLEN WEBSTER,
ERNEST GIFFORD.