

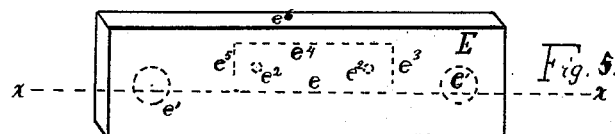
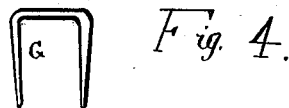
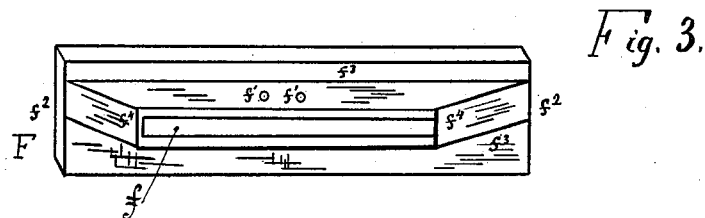
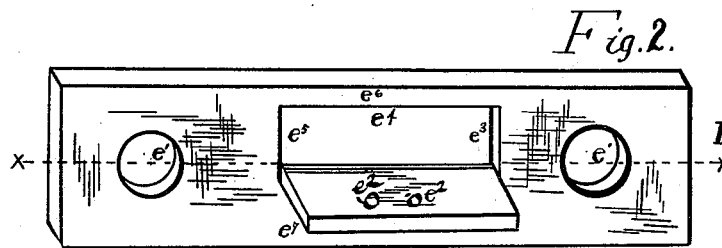
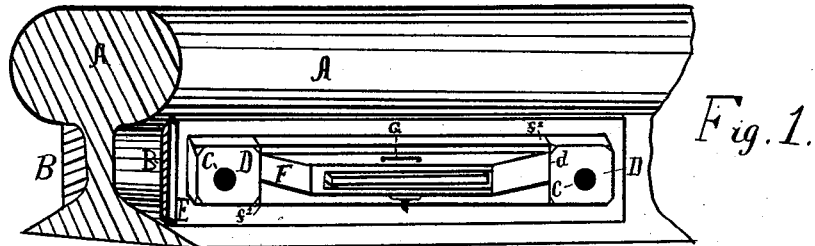
(No Model.)

O. H. MITCHELL.

NUT LOCK.

No. 303,446.

Patented Aug. 12, 1884.



Witnesses.

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# UNITED STATES PATENT OFFICE.

OBED H. MITCHELL, OF SPRINGFIELD, MISSOURI.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 303,446, dated August 12, 1884.

Application filed April 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, OBED H. MITCHELL, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, 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.

My invention relates to improvements in nut-locks, the object of which is to provide a simple, convenient, and reliable means of securing screw-nuts on bolts, and especially designed for securing the nuts on the bolts at the splice-joints of railway-rails. These objects I attain by means of the device illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view showing the entire device as attached to a railway-rail. Fig. 2 shows the under plate; Fig. 3, the upper plate; Fig. 4, the key, and Fig. 5 a blank showing the way the lower plate is cut.

The distinctive features of my invention consist in two plates, the under one having holes to receive two bolts, between which is a long projecting lug or tongue formed by cutting in the body of the said plate and turning or bending up the edge in a line with the center of the said holes, said tongue having holes to receive a key. The upper plate is made to fit between the screw-nuts on the said bolts, and has large rectangular ends to rest against the sides or edges of said nuts to prevent their turning off. In this upper plate is a long narrow slot to receive the tongue of the lower plate, said slot being strengthened by lips which have holes to receive a key. These plates are secured in position by the screw-nuts to be held and a key, as hereinafter more fully explained.

A represents a railway-rail; B B, fish-plates; C C, connecting-bolts, and D the screw-nuts on the same.

E is a plate, made with holes  $e' e'$  to receive two of the connecting-bolts at the splice-joints of railway-rails. Out of this plate is formed a tongue or lug,  $e$ , which is made by cutting the plate E, as indicated by the dotted broken line  $e^1 e^1 e^1$  in Fig. 5, and bending up the edge

of the part  $e$ , so as to form the tongue on a line,  $x x$ , which passes through the center of the holes  $e' e'$ , and leaving the upper and lower parts,  $e^2 e^2$ , to strengthen the said plate, and thus the plate and tongue are easily and quickly formed out of one piece of material or blank, as shown in Fig. 5. This tongue has holes  $e^2 e^2$ , and is made long to form a firm and durable support to the upper plate, and to prevent its working or turning.

F is a cap or plate, made to be placed between the screw-nuts D D, to prevent their turning off. It has large ends  $f^2 f^2$  for this purpose, preferably made rectangular, to rest against the sides  $d d$  of the said nuts, and in the said plate is made a long narrow slot,  $f$ , to fit closely over and around the lug or tongue  $e$ . This slot is strengthened by the lips  $f^1 f^1$ , which extend parallel with the cap above and below the slot, and through which are holes  $f' f'$  to receive a key, G, which is placed through the tongue for securing the upper plate.

G is a key or staple, made of any suitable material, preferably of wire, that will easily bend without breaking. This key may be of any desired shape or size; but preferably, as shown, is a loop to pass through holes  $f'$  in the lips of the upper plate, and  $e^2$  in the tongue of the under plate, and then bent to firmly hold the said plates together.

This simple device may be used in many places for locking the screw-nuts on bolts, but principally for securing the nuts on the bolts at the splice-joints of railway-rails, as shown. It is put together by placing the plate E over the bolts C C, then screwing the nuts down, leaving the inner edges,  $d d$ , parallel. Then the upper plate is placed down between the nuts, letting the tongue pass through the slot, and then the same is locked to its place by a key or staple, G, placed through the tongue and lips, as explained. Thus secured, the nuts cannot turn off, and by removing the key and raising the upper plate the nuts can be tightened, and then the upper plate and key replaced.

Having thus described the construction, use, and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An improved nut-lock, composed of a

plate, E, having holes  $e' e'$  for bolts C C, and a long projecting tongue,  $e$ , cut and bent from the body of the same, leaving the parts  $e^b e^i$ , and having holes  $e^2 e^2$  for a key, G, and an upper plate, F, having a long narrow slot,  $f$ , to receive the said tongue, and large rectangular ends  $f^2 f^2$ , to rest against the inner sides,  $d$ , of the nuts D D, and a key, G, the said slot being strengthened by lips  $f^4 f^4$ , which have  
10 holes  $f' f'$  to receive the said key, all substantially as shown and described.

2. A plate, E, placed on two bolts beneath the screw-nuts on the same, said plate having a tongue,  $e$ , cut and bent from the body of the same, in which are holes  $e^2 e^2$ , combined with  
15 a key, G, and a plate, F, made to fit between the said nuts to prevent their turning off, said plate F having a slot,  $f$ , to receive the tongue

$e$ , and holes  $f' f'$  to receive the key, all substantially as shown and described. 20

3. The combination of a plate, E, having a tongue,  $e$ , cut and bent from the body of the same, which has holes  $e^2 e^2$  and holes  $e' e'$ , with a plate, F, having a slot,  $f$ , strengthened by lips  $f^4 f^4$ , which have holes  $f' f'$ , and with a  
25 key, G, in the shape of a loop, together with a railway-rail, A, fish-plates B, and bolts C, having nuts D, all substantially as shown and described, for the purpose set forth.

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

OBED H. MITCHELL.

Witnesses:

S. A. HASELTINE,  
J. T. WHITE.