

(No Model.)

2 Sheets—Sheet 1.

L. H. DAVIS.
NUT LOCK.

No. 266,780.

Patented Oct. 31, 1882.

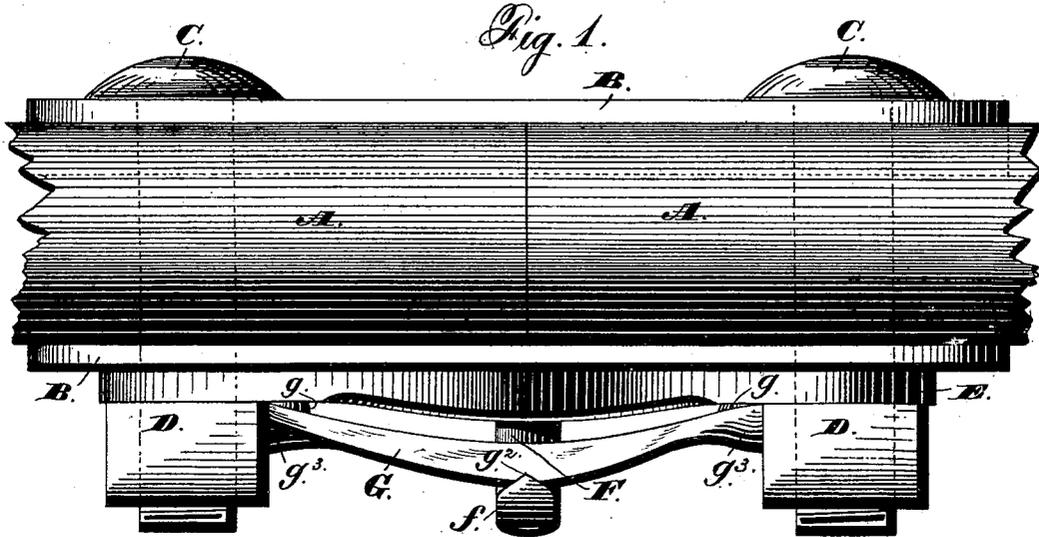
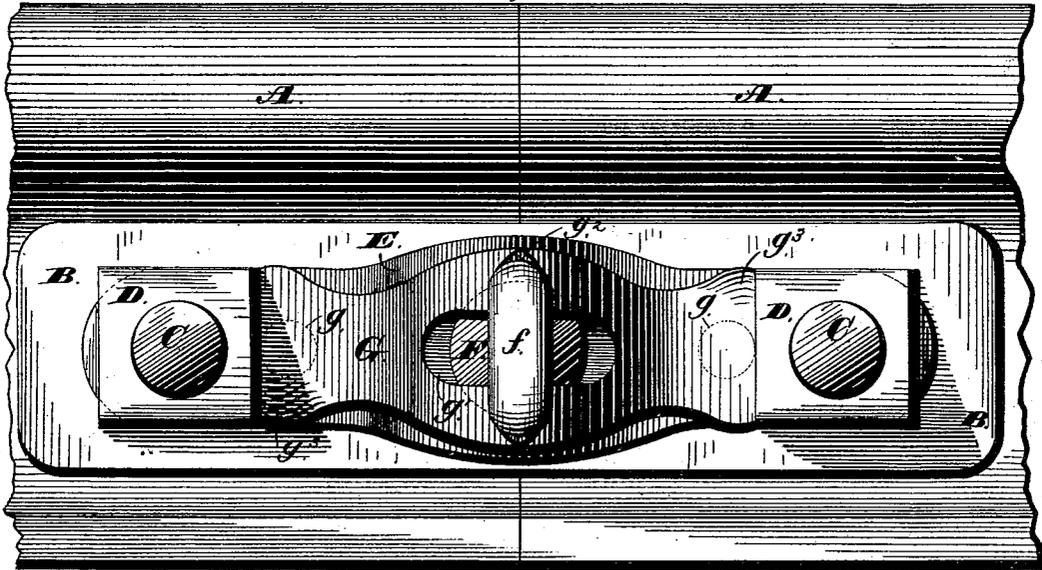


Fig. 2.



Witnesses.
 Jas. E. Hutchinson.
 J. A. Rutherford.

Inventor.
 Lewis H. Davis,
 By his Attorney,
 James L. Norris.

UNITED STATES PATENT OFFICE.

LEVIS H. DAVIS, OF WEST CHESTER, PENNSYLVANIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 266,780, dated October 31, 1882.

Application filed September 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEVIS H. DAVIS, a citizen of the United States, residing at West Chester, in the county of Chester and State of Pennsylvania, have invented new and useful Improvements in Nut-Locks, of which the following is a specification.

This invention relates to that class of nut-locks which comprise a bearing-plate adapted to support a headed pin, which serves to retain in position a plate, the ends of which abut against the nuts to prevent them from rotating.

The invention consists essentially in the combination of a bearing-plate provided at or near its center with an opening or slot and a recess on its back or under side, a button having at its inner end a head loosely seated in said recess, and projecting through the opening or slot in the bearing-plate, and an arched locking-plate having its ends adapted to rest against the nuts, said button having a locking-head to secure the locking-plate in position.

The invention further consists in the combination, with a bearing-plate having end bolt-holes, and provided at or near the center of its back or under side with a recess communicating with a slot through the plate, of a button having a head loosely seated in the recess on the back or under side of the plate, and projecting through the slot therein, and a spring locking-plate, through which the button passes to secure it in position.

The invention also consists in the combination, with a bearing-plate provided at or near its center with a circular recess communicating with a slot, of a slotted locking-plate and a button having a circular head adapted to rotate in the said circular recess.

The invention also consists in the combination, with a bearing-plate having end bolt-holes, and provided at or near its center with a circular recess communicating with a slot, of a slotted spring locking-plate and a button having at one end a head adapted to rotate in the circular recess and at its other end a locking-head to confine the locking-plate in place and spread its ends apart.

Other features of the invention will be fully hereinafter described in detail, and set forth in the claims.

In the accompanying drawings, illustrating

my invention, Figure 1 is a plan view, showing the invention applied to railway rails; Fig. 2, a side elevation of Fig. 1; Fig. 3, a central transverse longitudinal section with the fish-plate omitted; Fig. 4, a plan view of the bearing-plate; and Fig. 5, a section of the bearing-plate on the line $x x$ of Fig. 4, showing the inner head of the button in the recess therein.

In the drawings, in which like letters of reference indicate corresponding parts, the letters A A indicate the abutting end portions of two railway-rails, B B the usual fish-plates, C C the bolts, and D the nuts.

The bearing-plate E is provided near each end with a hole or perforation, e , for the passage of the bolts, adjacent to which is an aperture, e^2 , to receive lugs on the locking-plate, as hereinafter explained, while at or near the center of the plate, on its back or under side, is formed a circular recess, e' , which communicates with an opening or slot, e^2 , extending through the plate.

The button F has a circular head, f' , at its inner end, which is loosely seated in the recess e' , so as to be capable of rotation therein, and said button projects through the slot e^2 , and has its outer end provided with a locking-head, f , which, as shown, is in the shape of lateral projections forming a T-head.

The nut-locking plate G is composed of metal capable of springing, and is of arched form, with a central slot, g' , to pass over the outer head, f , of the button, and the ends of this plate abut the nuts D D, each end being provided with a projecting lug, g , which enter respectively the apertures e^2 in the bearing-plate. The outer surface of the locking-plate, at or near its center, is grooved transversely, as at g^2 , to form a seat for the locking-head of the button, and at diagonally-opposite corners the plate is thickened, as at g^3 , in order to render it strong and substantial, and to provide a broad bearing-surface to abut against the nuts.

In applying the invention to locking the nuts of railway-rails or other structures, the ends of the rails are made to abut against each other and the bolts C C passed through the bolt-holes therein, after which the button F is passed through the slot or opening e^2 in the bearing-plate, and its circular head f' seated loosely in the circular recess e' on the back or

under side thereof, after which the bearing-plate is placed in position by passing its end holes or perforations, *e*, over the bolts until its back or under side bears against the fish-plate, or directly against the web of the rails. The locking-plate G is now arranged in place by passing its slot or opening *g'* over the outer head of the button F until its ends rest against the nuts, and its lugs *g* enter the apertures *e'* in the bearing-plate, after which the button is rotated until the lateral projections forming its T-head rest in the groove *g''* of the locking-plate. Owing to the arched form of the locking-plate, this rotation of the button has the effect of spreading its ends apart to firmly and squarely bind against the nuts. The locking-plate, being a spring, will of course react, and thus bind and hold the locking-head of the button in proper position to securely confine the parts in place, which effectually prevents the nuts from rotating and becoming loose on the bolts.

It will be obvious that while the invention is especially applicable to railway-rails it can be used in various places where it is desirable to lock the nuts of bolts to prevent them from becoming loose.

Having thus described my invention, what I claim is—

1. The combination of a bearing-plate provided at or near its center with a slot and a recess on its back or under side, a button having at its inner end a head loosely seated in said recess, and projecting through the slot in the bearing-plate, and the arched locking-plate having its ends adapted to rest against the nuts, said button having a locking-head to secure the locking-plate in position, substantially as described.
2. The combination, with a bearing-plate having end bolt-holes, and provided at or near the center of its back or under side with a recess communicating with a slot through the plate, of a button having a locking-head loosely seated

in the recess on the under side of the plate, and projecting through the slot therein, and a spring locking-plate, through which the button passes to secure it in position, substantially as described.

3. The combination, with a bearing-plate provided at or near its center with a circular recess communicating with a slot, of a slotted locking-plate and a button having a circular head adapted to rotate in the said circular recess, substantially as described.

4. The combination, with a bearing-plate having end bolt-holes, and provided at or near its center with a circular recess communicating with a slot, of a slotted spring locking-plate and a button having at one end a head adapted to rotate in the circular recess and at its other end a T locking-head to confine the locking-plate in place and spread its ends apart, substantially as described.

5. The combination, with a bearing-plate provided with a circular recess communicating with a slot and with bolt-holes, of an arched slotted locking-plate provided with studs, and a button having a head, adapted to rotate in the said circular recess, substantially as described.

6. The combination, with the rails A A and fish-plate B, or their described equivalents, of the bolts C, nuts D, arched locking-plate G, and the button F, substantially as described.

7. The combination of the bolts C C, nuts D D, bearing-plate E, perforated at *e e e'*, the arched locking-plate G, slotted at *g'*, grooved at *g''*, and provided with lugs *g*, and the button having the circular head *f'* and a locking-head, *f*, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LEVIS H. DAVIS.

Witnesses:

WM. WHITEHEAD,
MATTHEW WHITEHEAD.