(No Model.)

J. T. LA DU.

NUT LOCK.

No. 306,085. Patented Oct. 7, 1884.

Fig. 1

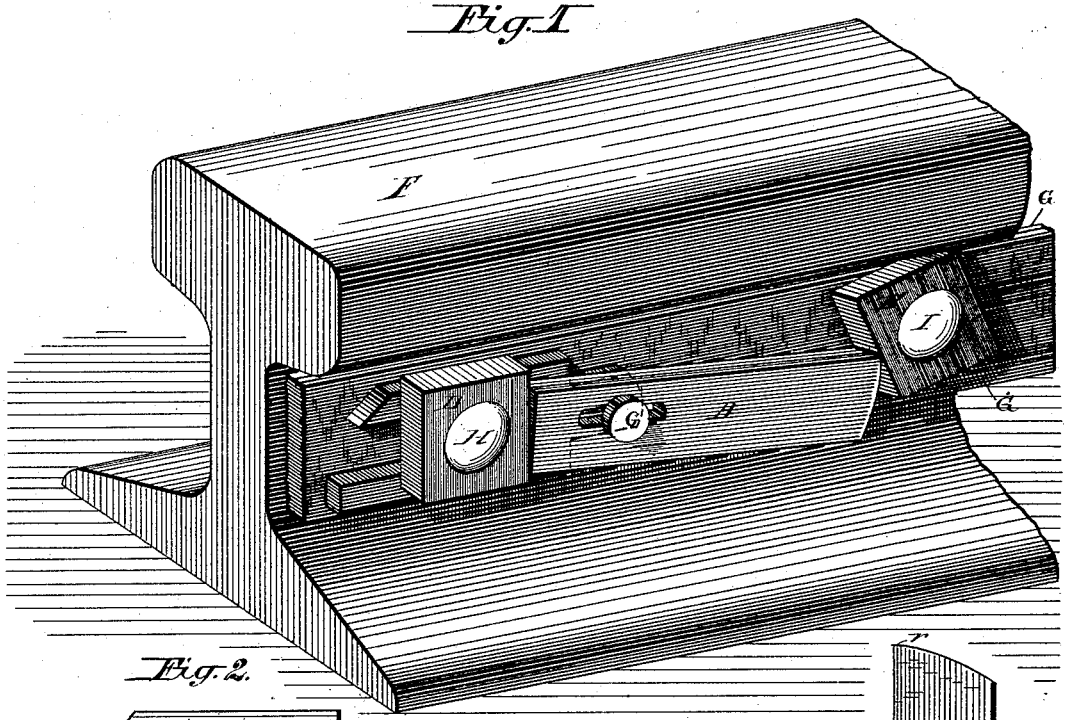


Fig. 2.

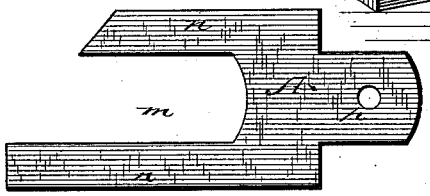


Fig. 3.

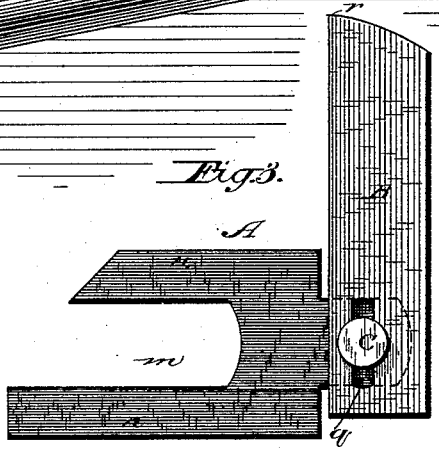


Fig. 4.

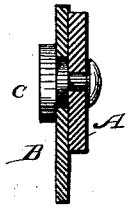
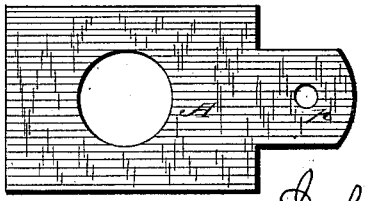


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN T. LA DU, OF ROCHESTER, MINNESOTA, ASSIGNOR OF ONE-HALF TO WILLIS L. MOORE, OF HUTCHINSON, KANSAS.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 306,085, dated October 7, 1884.

Application filed March 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. LA DU, a citizen of the United States, residing at Rochester, in the county of Olmsted and State of Minnesota, 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 or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in nut-locks.

The object of my invention is to provide a strong, durable, and non-elastic device for locking-nuts, especially on railroad-rails, in connection with the usual fish-plates, which device is simple in construction, and readily applied or removed, and capable of being used and reused many times without change in or injury to its structure, and is adapted to endure rough usage and resist the destructive action of the elements for a long time, and which will securely lock and hold the nuts to which it is applied permanently in position on their respective bolts.

In the accompanying drawings, Figure 1 is a perspective view of a section of railway-rail with fish-plate, bolts, nuts, and my device in position as a lock. Fig. 2 is a front view of that part of my nut-lock which I call the "washer-plate." Fig. 3 is a front view of my nut-lock, consisting of washer-plate A, locking-plate B, and rivet C, the locking-plate being turned at right angles to the long axis of the washer-plate, this being the most convenient position for application. Fig. 4 is a cross-section of the rivet I preferably use and the two plates of my lock as they are in the completed lock. Fig. 5 is a form of washer that may be used as an equivalent for or instead of the washer-plate shown in Fig. 2.

Like parts are represented by the same reference-letters in the several views.

Referring to the drawings, A represents a washer-plate made of plate-iron or other suitable material, having a slot, *m*, at one end for the reception of the bolt, and the jaws *n n*, adapted to pass beneath the nut and on the respective sides of such bolt, and at the other end the hole *p* for reception of rivet C.

B is the locking-plate made of plate-iron or other suitable material, provided with a slot, *q*, near one end, adapted to receive and allow the easy movement of said locking-plate on the rivet C, the end of the locking-plate nearest the slot being square, and adapted to engage and rest against the nut D, and the other end (being the long arm of the lever as adjusted on the rivet C as a fulcrum) being adapted to engage and hold the nut E. The locking-plate B is preferably cut off diagonally or on the arc of a circle having its center in the slot *q* at its end farthest from the slot *q*, making an acute angle at *r*.

A is the section of a railway-rail.

G is the ordinary fish-plate used in connecting railway-rails.

H and I are bolts, and D and E nuts such as are commonly used in connecting railway-rails. The length of the locking-plate B is slightly less than the distance between the nuts, but only so much less than said distance as will permit the easy application of said locking-plate between such nuts D and E. The locking-plate B is movably attached to the washer-plate A by the slot *q* and rivet C, which rivet is rigidly affixed to the plate A, but allows the free sliding and revolving movement of the locking-plate B on it.

The mode of applying my lock is as follows: The fish-plate G and the bolts H and I being applied to the railway-rail F in the ordinary way, the washer A (the lock in the position shown in Fig. 3) is placed on the fish-plate, with the jaws *n n* horizontally on the respective sides of the bolt H, the plate at the inner end of the slot *m* being pushed firmly against the bolt. The nut D is then put on its bolt H, and is screwed tightly down to position, leaving its edges horizontal and perpendicular. The nut E is put on and screwed firmly down to position, leaving its edges horizontal and perpendicular as near as may be, and thereupon the locking-plate B is swung over to the right, barely passing the edge of

nut E until its lower side strikes against and rests upon the flange of the rail I or other suitable support, the corner *r* being at or about the middle of the side of the nut E, and thereupon the nut E, being unscrewed by a part of a revolution, engages against the end of the locking-plate B at its angle *r*, and the other end of the locking-plate at the time of swinging the plate over to the right, having been pushed back against and engaging the nut D, both nuts D and E are locked in the position shown in Fig. 1, and cannot be unscrewed or removed except by removing the nut-lock by first tightening the nut E with a wrench or other sufficient device.

Instead of the washer-plate shown in Fig. 2, one of the form shown in Fig. 5 may be used, if preferred, and in such case this plate must be put on the bolt H before the nut D is put on.

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

1. A nut-lock consisting of a rigid non-elastic washer-plate provided with a slot and jaws at one end and a rivet-hole at the other end, a rigid non-elastic locking-plate having a slot near one end, said plate being of such length as to extend from one of the nuts to be locked to the other nut to be locked, and a rivet affixed to said washer-plate in and through the hole therein provided therefor, and upon which rivet said locking-plate slides and revolves by the slot therein provided therefor, through which slot said rivet passes, and by which rivet and its retaining-head said locking-plate is movably attached to said washer-plate, said washer-plate by its slot and jaws being adapted to pass beneath and be held by one nut, and said locking-plate movably attached to said washer-plate being adapted to extend between and engage against and lock said nut and another nut at a distance from said first nut, said nut-lock being capable of being removed and reapplied in the same place or elsewhere without change in or injury to its form or structure, substantially as and for the purpose specified.

2. The non-elastic washer-plate A, having slot *m*, jaws *n n*, and rivet-hole *p*, the non-elastic locking-plate B, having slot *q* near one end, and being movably attached to washer-plate A by rivet C through said slot *q*, in combination with nuts D and E, bolts H and I, fish-plate G, and railway-rail F, said washer-plate A being adapted by its slot *m* and jaws *n n* to pass beneath and be secured by the nut D, and said locking-plate B sliding and revolving upon rivet C, being adapted to extend between and engage against and lock nuts D and E in position, substantially as and for the purpose described.

3. The washer-plate A, provided with aperture for reception of bolt H, and an aperture for reception of rivet C, locking-plate B, provided with aperture for reception of rivet C, and rivet C, connecting plates A and B, in combination with nuts D and E on their retaining-bolts H and I, substantially as set forth.

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

JOHN T. LA DU.

Witnesses:
W. L. MOORE,
ARTHUR L. GOVE.