(No Model.)

N. E. LISTER

NUT LOCK.

No. 539,692. Patented May 21, 1895.

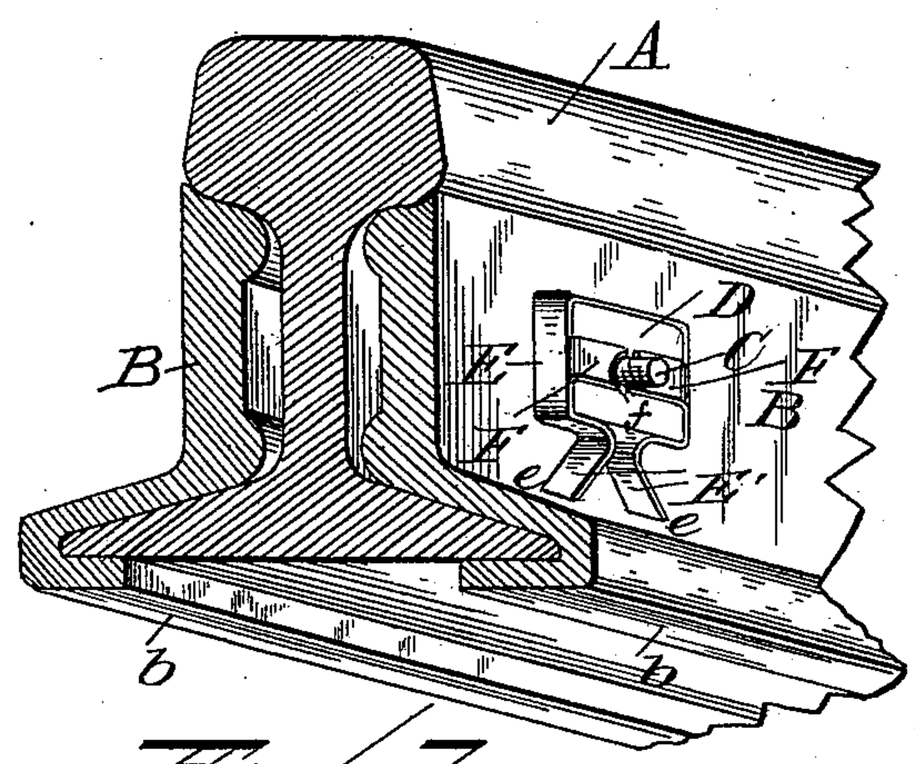

Fig. 1.

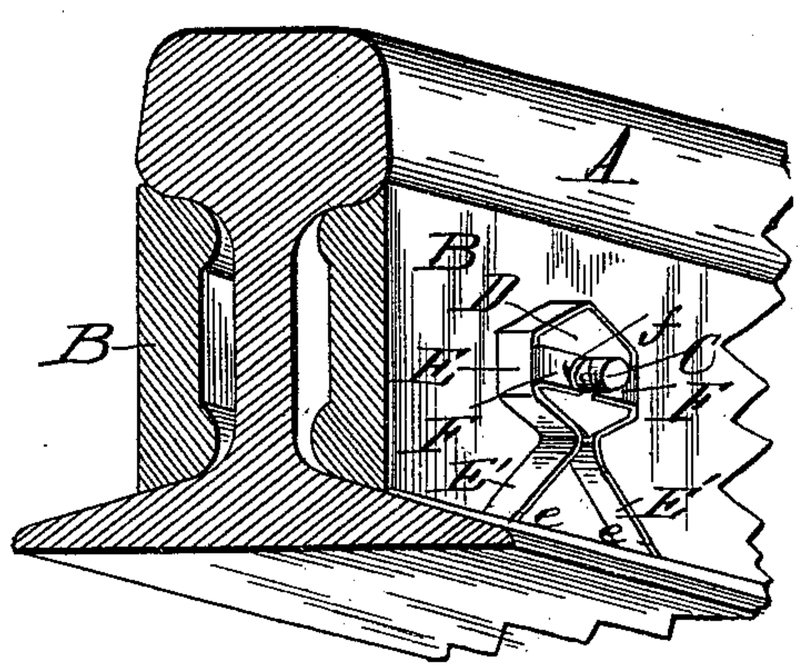

Fig. 2.

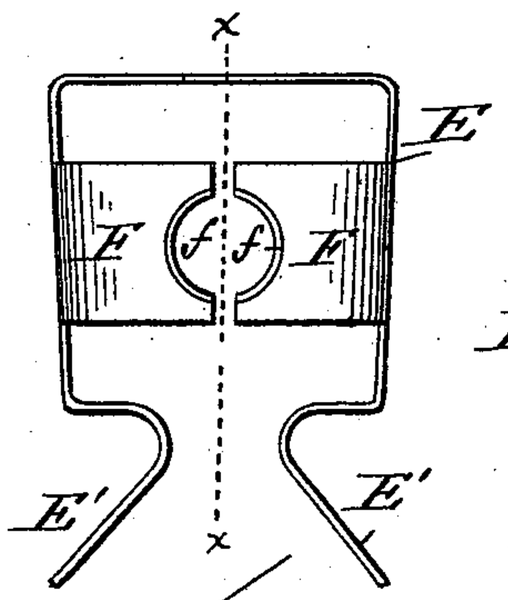

Fig. 3.

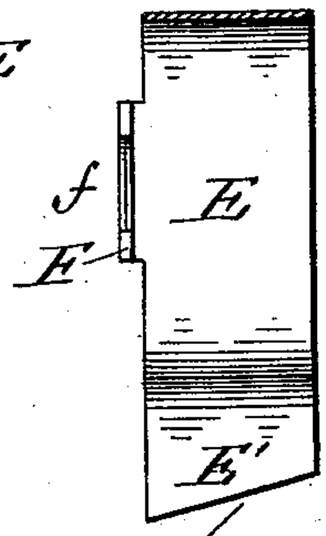

Fig. 4.

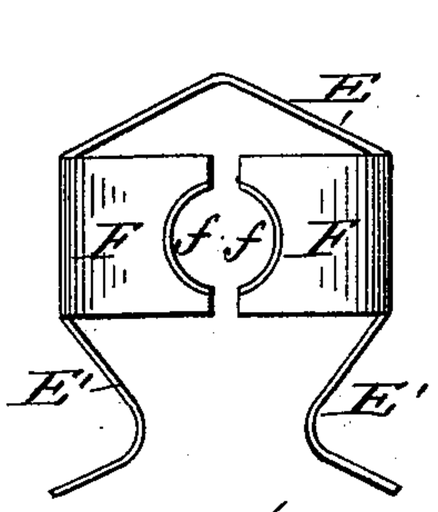

Fig. 5.

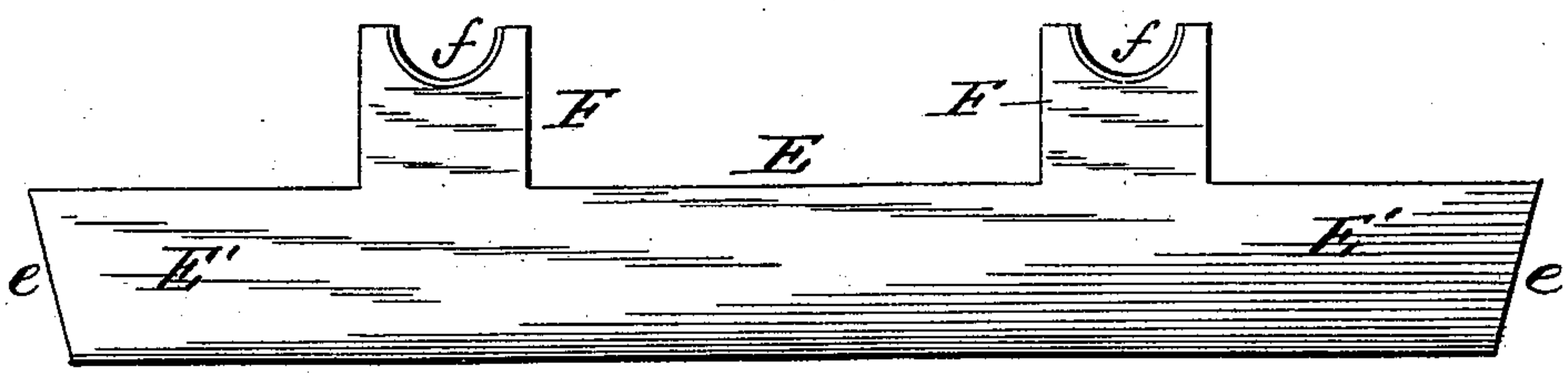

Fig. 6.

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UNITED STATES PATENT OFFICE.

NICHOLAS EDWARD LISTER, OF WESTFIELD, ASSIGNOR OF ONE-HALF TO WELLINGTON L. HAMM, OF ST. JOHN'S, CANADA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 539,692, dated May 21, 1895.

Application filed November 30, 1894. Serial No. 530,383. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS EDWARD LISTER, a subject of the Queen of Great Britain, and a resident of the parish of Westfield, in the county of Kings and Province of New Brunswick, Canada, have invented certain new and useful Improvements in Nut-Locks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view illustrating my improved nut-lock as applied to the bolt, nut, and fish-plate of a rail-joint. Fig. 2 is a similar view, but showing a slight modification in the shape of the nut and its lock. Fig. 3 is a front elevation of the nut-lock represented in Fig. 1, showing it removed from the nut and rail. Fig. 4 is a sectional view of the same on line *x x* in Fig. 3. Fig. 5 is a front elevation of the locking device illustrated in perspective in Fig. 2, showing it removed from the nut and rail; and Fig. 6 is a plan of the metal blank used in the manufacture of my improved nut-lock.

Like letters of reference designate corresponding parts in all the figures.

My invention relates to nut-locks of that particular type or class which consists of a strip or band of metal encircling the nut and provided with legs or extensions, the lower ends of which abut upon the base of either the fish-plate or the rail, as the case may be, and thereby prevent the nut from turning; and my improvement consists in a novel construction of nut locks of that type, whereby they are prevented from slipping off the nut, but will always be kept in their operative position upon the same, as will be hereinafter more fully described and claimed.

On the accompanying drawings, the reference-letter A designates one of the rails of a rail joint, and B the fish-plate appertaining to the same, which in Fig. 2 is shown as of the ordinary kind, while the fish plate represented in Fig. 1 is of an improved type, provided with a base-flange, *b*, which overlaps the bottom flange or base of the rail. I desire it to be understood, however, that the construction of the fish-plate forms no part of my invention, as my improved nut-lock may be used with fish-plates of different kinds.

One of the bolts appertaining to the rail-joint and fish-plate is shown at C, and its appropriate nut at D; a square nut being shown in Fig. 1 and a hexagonal or six-sided nut in Fig. 2. The nut lock is shown at E, and consists of a strip or band of any suitable metal, provided with two parallel projections F F, the outer ends of which are cut out or concaved, with a thinned or beveled edge *f*, *f*, adapted to fit into the threads of the bolt C.

In Fig. 6, I have shown the flat metal blank before it is bent into the shape of the nut-lock, from which it will be seen that the two ends E′, E′, of the strip E are beveled slightly, as shown at *e e*, instead of being cut off straight or at right angles to the body of the strip. The object of this will be described later on. After this blank has been cut and the concave recesses *f f*, in the ends of the projections F F have been thinned out and beveled, it is bent into the shape or form required in a given case, according to whether it is to be used with a square, hexagonal, or octagonal nut—that is to say, the strip or blank E is bent around a form or pattern of the same shape and size as the nut with which it is intended to be used, so that it will fit closely around the sides of the same, as clearly shown in Figs. 1 and 2; its two ends being bent or deflected in a downward direction so as to form a pair of diverging limbs E′ E′, the lower ends *e e* of which abut against the flange of the rail base, as in Fig. 2, or the overlapping flange or base of the fish plate, as in Fig. 1; and thus prevent the nut lock (and with it, of course, the nut) from turning upon the bolt. It is in order to provide for a firm bearing of the diverging limbs E′ E′ upon the flanged base of the rail or fish-plate (as the case may be) that the lower ends *e e* of said limbs E′ E′ are beveled, to conform to the slope or slant of the flanged base upon which they abut, and thus get a true bearing against the same.

The concaved projections F F are bent inwardly, toward each other, at right angles to the strip, so as to overlap the front side of the

nut and impinge with their concaved and thinned ends *f f* against opposite sides of that portion of the bolt C which projects through the nut, and fit with said thinned and beveled edges *f f* into the threads of the bolt, on opposite sides thereof, as shown in Figs. 1 and 2. This will effectually prevent the lock from slipping off the nut, owing to the jarring and shaking of the rails caused by passing trains.

From the foregoing description, taken in connection with the drawings, it will be seen that my improved nut-lock is exceedingly simple, both in its construction and application, and can be used on bolts and nuts of the ordinary description, as neither the bolt, nor the nut, requires to be changed or altered in any manner to adapt it to be used with my lock.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. As an improved article of manufacture, the herein-described nut-lock, consisting of a strip or band of metal, bent or shaped to fit around the sides of the nut; having two depending diverging limbs adapted to bear or abut against the rail flange or base below the nut, and provided with integral arms or projections overlapping the front side or face of the nut from opposite sides and concaved and thinned at their outer ends to fit, from opposite sides, into the threads on the projecting end of the bolt; substantially as and for the purpose shown and set forth.

2. In a rail joint, the combination of the rail A, fish-plate B, bolt C, nut D, and nut lock E impinging against the sides of the nut and abutting with its diverging limbs E′ E′ against the base or flange below the nut, and provided with arms F F overlapping the front side or face of the nut on opposite sides and fitting with their concaved, thinned outer ends into the threads of the bolt on opposite sides thereof, substantially as and for the purpose shown and set forth.

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

NICHOLAS EDWARD LISTER.

Witnesses:
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