

A. TORVIK.
NUT LOCK.
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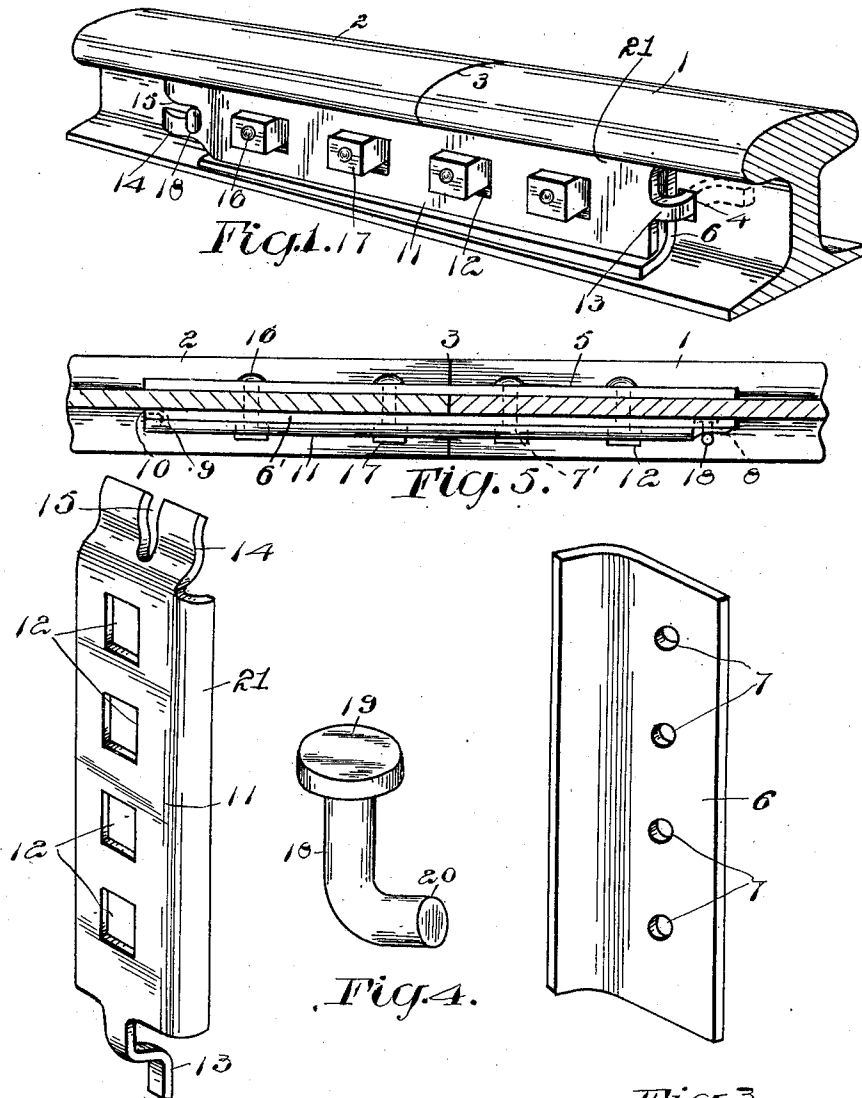


Fig. 2.

Fig. 3.

Fig. 4.

Witnesses

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NUT-LOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALFRED TORVIK, resident of the town of Deloro, in the county of Hastings, in the Province of Ontario, in the Dominion of Canada, subject of the King of Norway, 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 same.

The invention relates to improvements in nut locks, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel means employed in locking a plate having one or more squared holes therethrough to one of the pieces through which the bolts extend.

The objects of the invention are to prevent the loosening of the nuts subsequent to their being turned to their home position, to facilitate the removal of the lock whereby said nuts may be further tightened on the bolts and relocked, and generally to devise a simple, cheap and durable nut lock.

In the drawings, Figure 1 is a perspective view of the ends of two railway rails, secured together in the usual manner by bolts extending through fish plates and showing the nuts on the ends of said bolts locked by this invention. Fig. 2 is a perspective detail of the locking plate. Fig. 3 is a perspective detail of the fish plate. Fig. 4 is a perspective detail of the locking bolt. Fig. 5 is a horizontal section of a slightly modified arrangement.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings particularly Figs. 1, 2, and 3, 1 and 2 are the rail ends, meeting at the joint 3 and having the usual bolt holes therethrough and an additional tongue hole 4 which may be similar to any of the bolt holes, in fact this can be just an additional hole beyond the usual fish plates.

5 and 6 are fish plates having holes corresponding to the holes in the rail end and adapted to fit to the rails.

11 is the locking plate having the squared holes 12 therethrough in a longitudinally arranged row, said plate terminating at one end in the hook shaped tongue 13 and at the other end in the inwardly bent ends 14

separated by the central slot 15, said ends being preferably knocked up from the inner side.

16 are bolts extending through the bolt holes in the plate 6, the fish plate 5 and the rails 1 and 2 and through the square holes 12 in the locking plate, 11.

17 are nuts secured on the ends of the bolts and normally contained within the square holes 12 in their locked position on said bolts.

18 is a locking bolt having the head 19 and the bent shank 20, said bolt 18 being inserted through the locking bolt hole 8 in the plate 6 and through a corresponding hole in the web of the rail-end 1 and fish plate 5 or simply through the rail into and through the slot 15, the bent shank 20 being knocked over an end 14 and thus secured in position from the raised nature of said end.

In the modified form shown in Fig. 5, 6' is a fish plate having bolt holes 7' corresponding to holes 7 of fish plate 6. 8 is a locking bolt hole in one end of fish plate 6', 9 a tongue hole at the other end of 6' and 10 is a recess extending from the tongue hole 9 to the end.

In the use of this nut lock, the rail ends are first brought together as customary and the bolts inserted through the plate 6, the adjacent fish plate, the web of the rail and the fish plate on the other side and the nuts are then screwed home on the projecting ends of the bolts. The tongue 13 of the locking plate 11 is then inserted through a hole in the web of the rail 2 and where the particular fish plate is used, into the tongue hole 9, the end of said tongue turning in the recess 10 on the placing of the plate 11 over the nuts 17, said nuts extending into the squared holes 12. The locking bolt 18 is then inserted through the rail into and through the slot 15 and then turned over a raised end 14 as explained.

In further explaining the use of this invention, it can be said that locking plate 11 may be finished as shown with a slot on one end and a tongue on the other, or both ends may be provided with a slot 15 and outwardly extending arms 14 thus eliminating the tongue altogether, and using a second bolt 18 to fasten plate 11 to the web of the rail. In the one case, a particular

kind of fish plate is used, while in the other, the ordinary fish plates are used.

It will be readily seen that for the ordinary fish plate the locking plate extends
5 around the end of the fish plate at each end and fits into the web of the rail so that at one end a tongue hooks into a hole in the rail, while at the other end the locking bolt projects through the rail into the slot and
10 turns over the raised part.

This invention has been described as pertaining to railway rails, but it must be understood that with a very slight modification it may be used for locking nuts on the
15 ends of bolts which are used to join various pieces of metal or other material together. Further, the locking plate 11, as well as being bent in at one end to fit into the web of the rail, preferably has a longitudinal inturned flange 21 so that while the
20 flange 21 engages the upper side of the fish plate, the lower straight edge of the said plate 11 engages at the bend of the fish plate.

What I claim as my invention is:

25 1. In a nut lock, a locking plate having a squared hole therethrough, said plate terminating at one end in a bent tongue and having the other end forked defining a slot, the ends thus formed being raised slightly
30 on their outer side, and a locking bolt having a bent shank adapted to fit into said

slot and turn over one of the said forked ends.

2. In a nut lock, a locking plate having a plurality of squared holes therethrough, said
35 plate terminating at one end in a bent tongue adapted to pass through and be supported from the opposite side of an adjacent piece, the other end of said plate having forked ends defining a slot, said forked ends
40 being raised and a locking bolt having a bent shank adapted to turn over one of said forked ends.

3. In a nut lock, a locking plate having a plurality of squared holes therethrough, said
45 plate terminating at one end in a bent tongue adapted to pass through and be supported from the opposite side of an adjacent piece, the other end of said plate having forked
50 ends, said forked ends being raised and a locking bolt adapted to pass through and be supported from the opposite side of an adjacent piece and having a bent shank adapted to turn over one of said raised ends.

Signed at the city and district of Montreal, Quebec, Canada, this fourth day of
55 October, 1911.

ALFRED TORVIK.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."