2 Sheets—Sheet 1.

R. DUNN.
Nut Lock.

No. 202,249. Patented April 9, 1878.

Fig. 1.

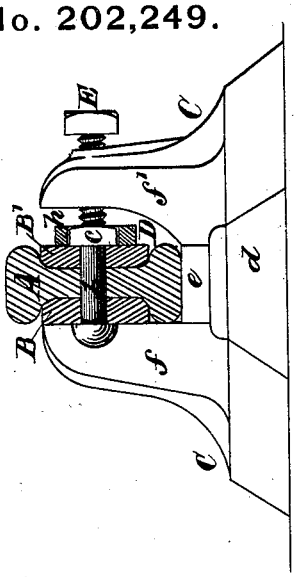


Fig. 4.

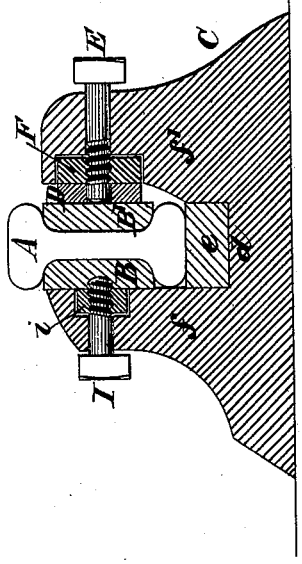


Fig. 2.

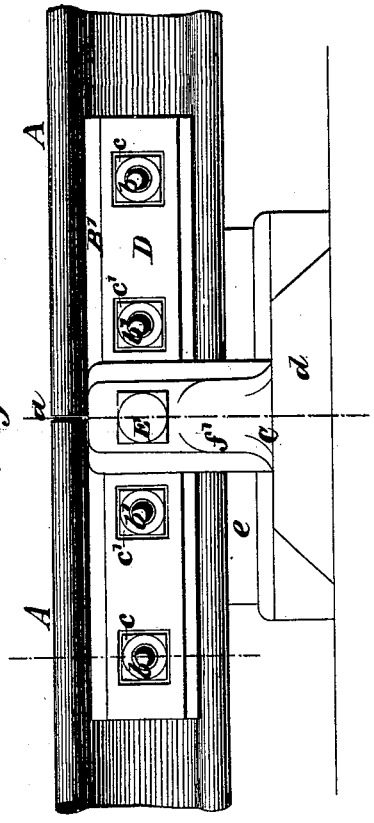
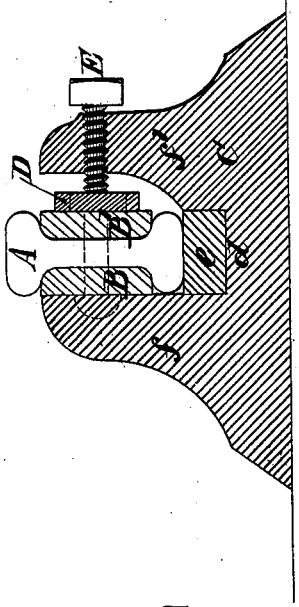


Fig. 3.



Witnesses
John M. Deemer
Harry Smith

Inventor
Robert Dunn
by his Attorneys
Howson and Sons

2 Sheets—Sheet 2.

R. DUNN.

Nut Lock.

No. 202,249. Patented April 9, 1878.

Fig. 6.

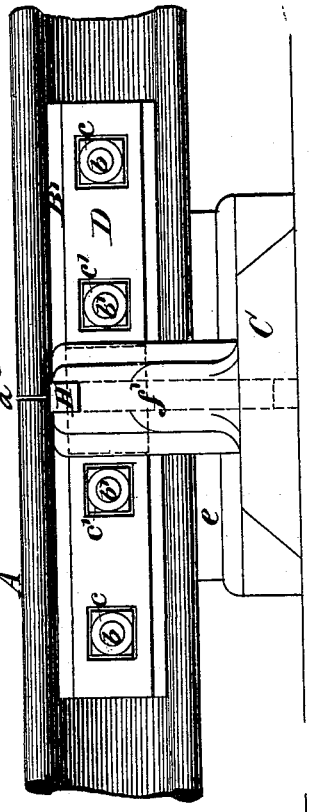


Fig. 8.

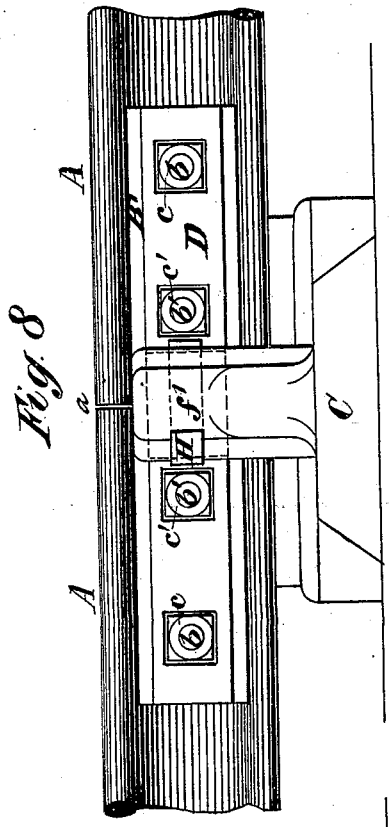


Fig. 9.

Fig. 5.

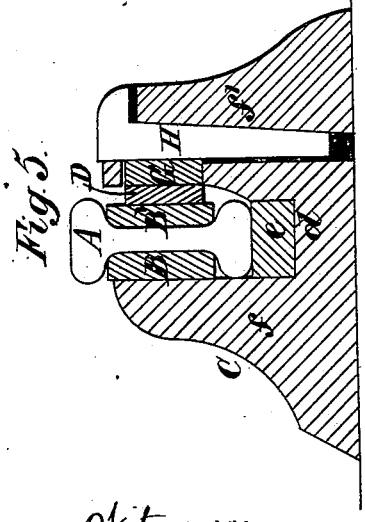
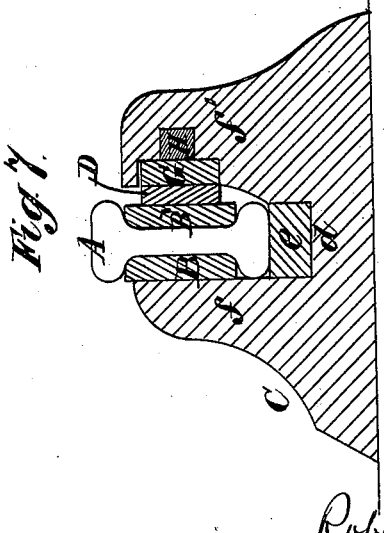


Fig. 7.



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UNITED STATES PATENT OFFICE.

ROBERT DUNN, OF WYLAM, ENGLAND.

IMPROVEMENT IN NUT-LOCKS.

Specification forming part of Letters Patent No. **202,249**, dated April 9, 1878; application filed January 24, 1877.

To all whom it may concern:

Be it known that I, ROBERT DUNN, of Wylam-on-Tyne, in the county of Northumberland and Kingdom of England, have invented Improvements in the Permanent Way of Railways, of which the following is a specification:

My said invention, for which an English Patent, No. 2,780 of 1876, has been granted to me, relates to those parts of the permanent way of railways at which the fish-joints occur; and consists chiefly in the employment, in combination, of a chair situate immediately beneath the point of junction of the rails and between the two inner bolts of the fish-plates, and so constructed that while its seat supports the rails its jaws will inclose such fish-plates and a check-plate inserted in the chair between the fish-plate, which receives the nuts and the corresponding jaw of the chair. This check-plate is formed with perforations to fit over the nuts and prevent them from unscrewing, and is in its turn maintained in position by a set-screw screwed into the chair and bearing against the check-plate, or into a nut which is fitted in a recess in the jaw of the chair, or is formed in one with the check-plate, the jaw of the chair in the latter case being provided with a longitudinal recess to admit of the insertion endwise of the check-plate in its place in the chair; or the check-plate may be inserted from the top of the chair, and in either case be secured by a key or other suitable means.

The seat of the chair may be fitted with a wood cushion, if desired, in order to form an elastic support for the rail. A set-bolt may also be employed as a precaution against the breakage of one of the fish-bolts, such set-bolt being screwed into the chair or into a nut fitted therein, so as to bear against or enter the fish-plate and prevent its displacement in the event of the occurrence of the contingency before mentioned.

And in order that my said invention may be fully understood I shall now proceed more particularly to describe the same, and for that purpose shall refer to the several figures on the annexed sheet of drawings, the same letters of reference indicating corresponding parts in all the figures.

Figure 1 of my drawings represents a transverse vertical section taken through a rail and a pair of fish-plates at the part where a bolt occurs, with the check-plate fitted over the nut of the same, and an end view of the chair situate immediately beneath the point of junction of the two rails, and inclosing the fish-plates and the check-plate. Fig. 2 is a side elevation of the chair, fish-plates, and check-plate complete; and Fig. 3 is a transverse vertical section taken through the point of junction of the two rails. Fig. 4 is a transverse vertical section, illustrating a modification of the preceding arrangement; and Figs. 5 and 7 are transverse vertical sections, and Figs. 6 and 8 corresponding side elevations, illustrating, respectively, two other modifications of my invention. Fig. 9 represents an elevation of the check-plate detached.

A A are the rails; *a*, their point of junction; B B′, the two fish-plates, connecting the two rails together by means of bolts *b b b′ b′*, secured by nuts *c c c′ c′* in the ordinary manner. C is a chair, which I place immediately beneath the point of junction *a* of the rails A A and between the two inner bolts *b′ b′*, which chair is so constructed that while its seat *d* supports the rails either directly or, as preferred and shown in the drawings, through the intervention of the wood cushion *e*, the jaws *f f′* will inclose the fish-plate B B′. In this chair I insert a check-plate, D, having perforations *g g g′ g′*, (see the detail Fig. 9,) which fit over the nuts *c c c′ c′*, so as to prevent them from unscrewing, such check-plate being inserted in the chair endwise at *h*, and then moved laterally into the position shown in the drawing, so as to cause it to engage with the nuts.

The check-plate may be maintained in position by a wedge or set-screw. For example, in the arrangement, Figs. 1, 2, and 3, it is secured by a set-screw, E, screwed into the jaw *f′* of the chair C, and bearing against the check-plate D in the modification, Fig. 4. A set-screw, E, is also employed; but the same is screwed into a nut, F, fitted in a recess in the jaw *f′* of the chair. In the modifications shown in Figs. 5 and 6 and Figs. 7 and 8 a washer, G, inserted endwise, is interposed between the check-plate D and the jaw *f′* of the chair; and the washer, with the check-plate, is

secured in place by means of a key, H, introduced into a recess in the jaw *f'* of the chair C, so as to bear against the washer, such key being driven vertically in the modification Figs. 5 and 6, and horizontally in the modification Figs. 7 and 8.

In Fig. 4 I have shown the application of a set-bolt, I, which may be employed as a precaution against the breakage of one of the fish-bolts. This set-bolt is screwed into a nut, *i*, fitted in the jaw *f* of the chair, and is caused to enter the fish-plate B, and thus prevents its displacement in the event of a fish-bolt failing.

I claim as my invention—

The combination of a rail-fastening and a chair, C, with a check-plate, D, passing through said chair, and having openings adapted to fit over the nuts of the fastening, and with a set-screw or wedge adapted to an arm of the said chair, and serving to retain the check-plate in position, all substantially as described.

In witness whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT DUNN.

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