W. C. HARNER.

NUT-LOCK.

No. 190,583. Patented May 8, 1877.

Fig. 1.

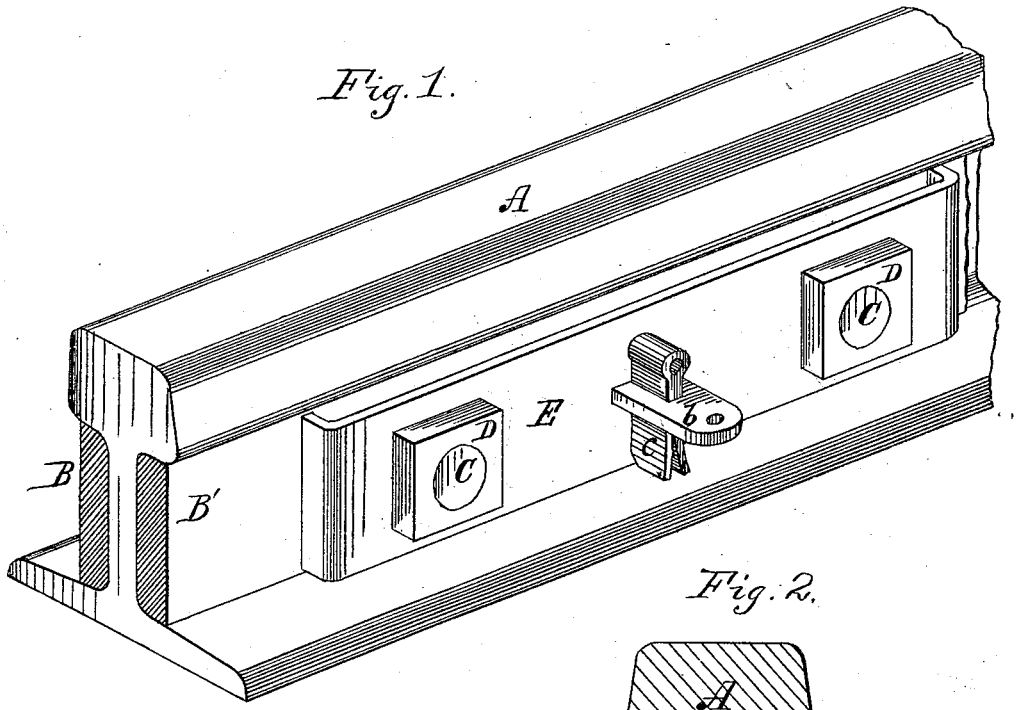


Fig. 2.

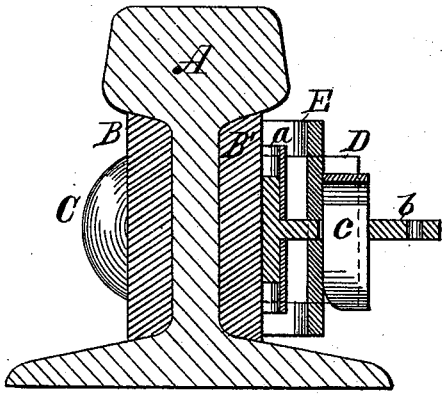
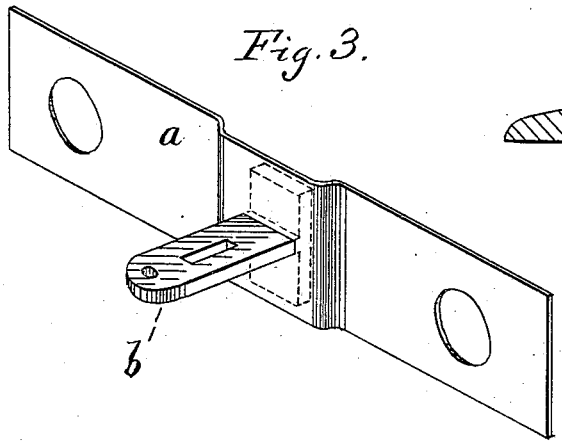


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILSON C. HARNER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN NUT-LOCKS.

Specification forming part of Letters Patent No. **190,583**, dated May 8, 1877; application filed February 27, 1877.

To all whom it may concern:

Be it known that I, WILSON C. HARNER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of one-half of a rail-joint, showing my invention applied complete. Fig. 2 is a transverse section at the middle of a locking-plate. Fig. 3 is a detail, showing relation of slotted post and its anchor-plate.

This invention relates to improvements in nut-locks; and consists in the construction and combination of parts, substantially as hereinafter described, the object being to produce a locking device which can be at once applied without altering or interfering with the ordinary fish-bars of rail-joints.

In the drawings, A designates a rail, and B B′ the fish-bars at the joint. C represents the bolts, and D the nuts, all of the usual form and arrangement. I construct a plate, *a*, with two holes for the passage of the bolts C, adapted, by preference, to fit over the two bolts on each end of the joint. It has also a slot at the middle. Passing through this slot from behind is a T-headed post, *b*, the head resting behind plate *a*, and the post proper passing out through the slot. The post *b* is also slotted, as shown, for a split key, *c*, or other tightening device. The plate *a* is sheet metal, and the post of malleable, cast, or wrought iron. Post *b* has a hole at the end for the reception of a hook in fastening, as explained hereinafter. The fish-bars B B′ being placed in position, and the bolts passed through, the plate *a* (and post *b*, resting, as described, in the slot) is passed down over the pairs of bolts. Then the nuts C are screwed down tightly and squared. After this a lock-plate, E, having openings to fit over the nuts, and a central slot for the post *b*, is slipped on over the nuts, the post protruding through the slot in plate E. A hook is now inserted in the hole at end of post, and the latter drawn out till a split key, *c*, or other device can be inserted in the slot in the post. The key is driven home and its ends spread, or, if made with a slight spring, will spread itself.

Thus applied, the lock is simple and very effective. It can be applied to the ordinary fish-bar or the new angle-bar equally well.

For convenience and economy of material I prefer to lock but two nuts with each plate, though the plates can be constructed to lock four at once, if desired.

The anchor-plates *a* may be struck up with a bend, as in Fig. 3, to make room for the T-head of post *b*; or they may be flat and the proper bend given by turning on the nuts, which will force the plate against the fish-bar and tightly hold the post-head.

In order to give the plate E a firm purchase on the nuts, and at the same time allow space for the recessed or protruding central portion of the anchor-plate *a*, said plate E is made of moderate thickness, and has its ends bent down, as shown, so as to rest against the fish-plate.

It will be observed that the recessing of the anchor-plate and the peculiar construction of the bolt *b* obviates the necessity of rigidly securing the plate and bolt together, and therefore reduces the cost of the nut-lock.

I am aware that the combination, broadly, of an anchor-plate, a center bolt and key, and a slotted lock-plate is not new. I do not, therefore, lay claim to any such broad combination, but limit my claim to the specific construction of parts.

I claim as my invention—

1. The within-described nut-lock, consisting of slotted anchor-plate *a*, perforated for the bolts, and made of sheet metal, T-headed post *b*, slotted as shown, and detachable from plate *a*, lock-plate E, and key *c*, in combination with a fish-plate of ordinary construction, all combined and operating substantially as shown and described.

2. The slotted lock-plate E, having its ends bent inwardly, as shown, in combination with the anchor-plate *a*, key-post *b*, and a fish-plate of ordinary construction, substantially as described and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of February, 1877.

WILSON C. HARNER.

Witnesses:

THOS. J. MCTIGHE,

A. V. D. WATTERSON.