(No Model.)

J. C. MOREHEAD.

NUT LOCK.

No. 397,436. Patented Feb. 5, 1889.

Fig. 1.

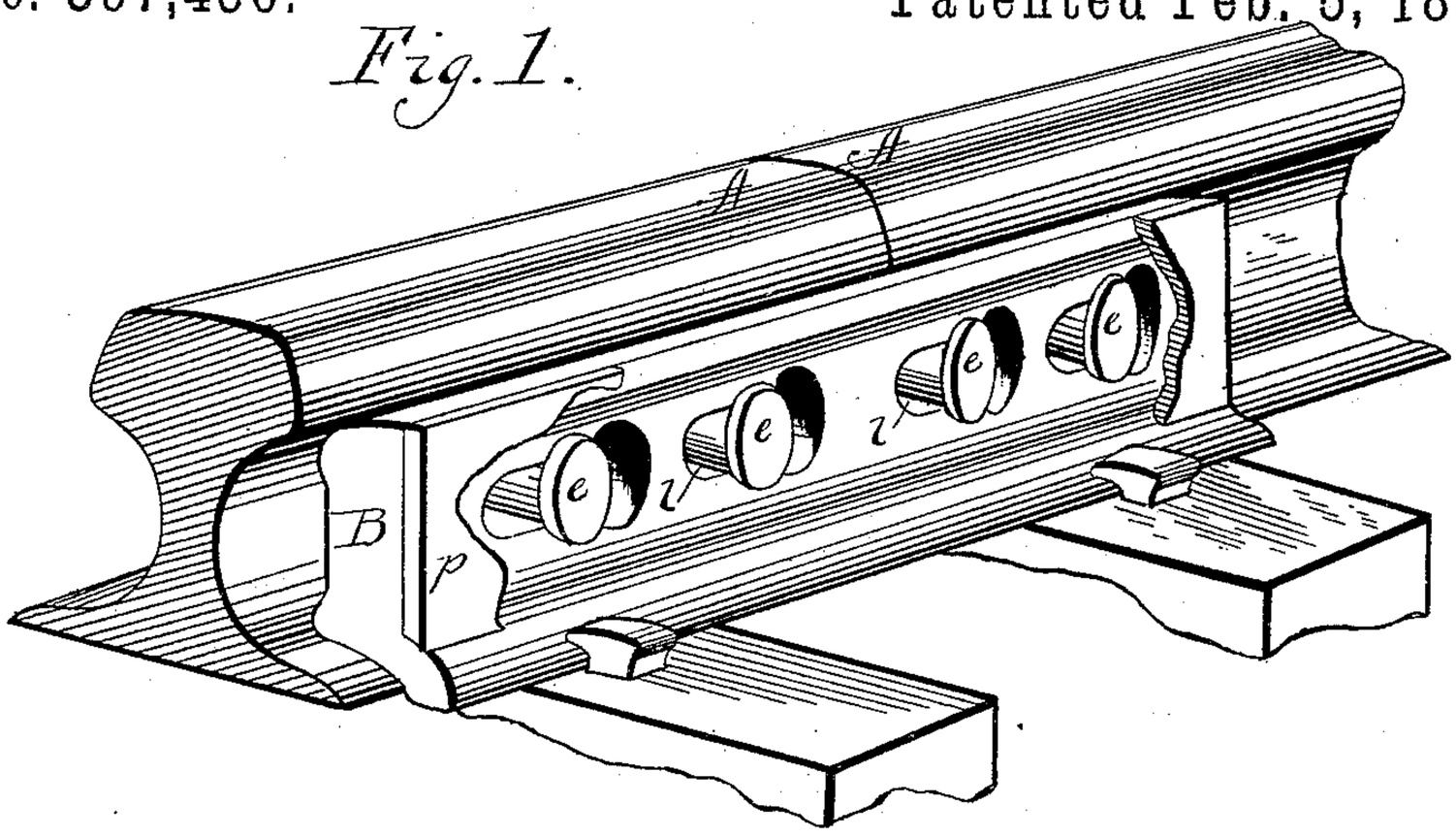


Fig. 2.

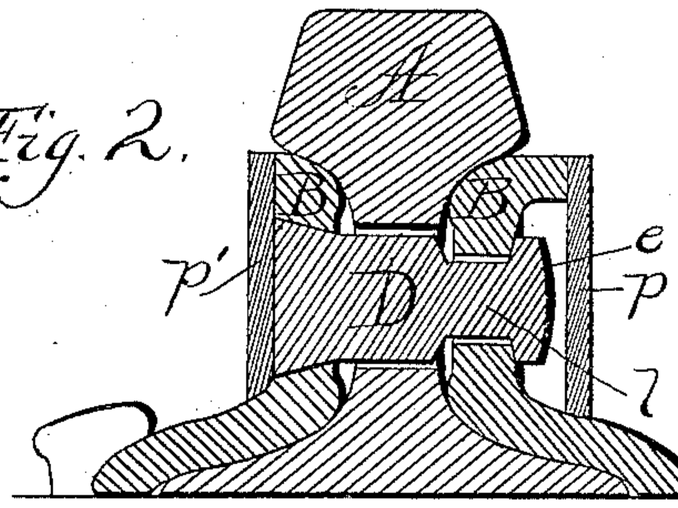


Fig. 4.

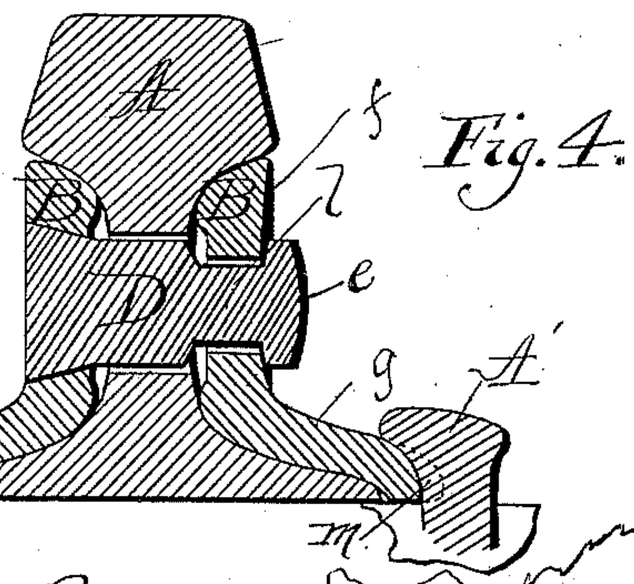
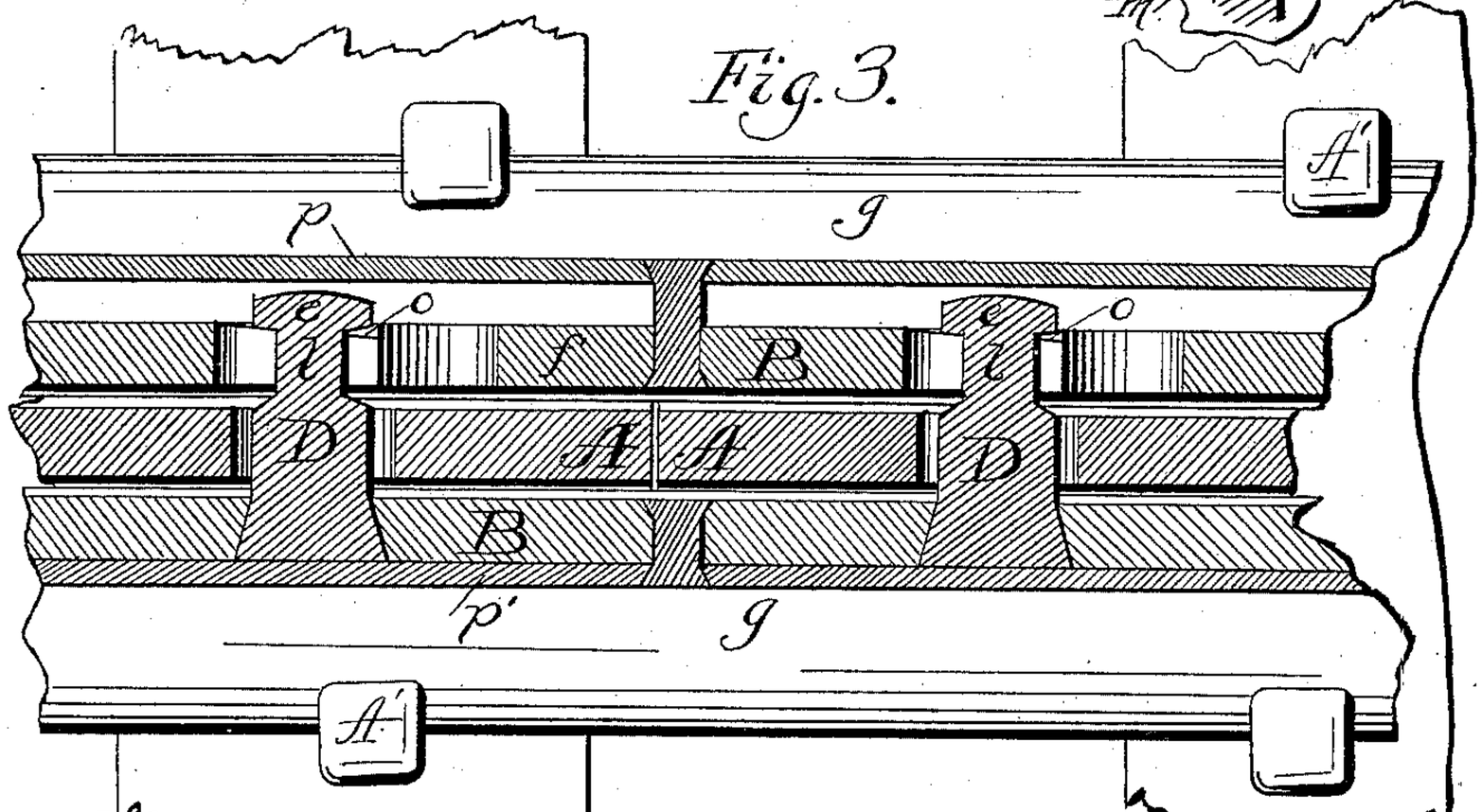


Fig. 3.



Attest.
Walter P. Steere.
F. L. Middleton

Inventor:
James C. Morehead.
by Ellis Spear
Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES C. MOREHEAD, OF GREENCASTLE, PENNSYLVANIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 397,436, dated February 5, 1889.

Application filed September 8, 1888. Serial No. 284,885. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. MOREHEAD, of Greencastle, in the county of Franklin and State of Pennsylvania, have invented a new and useful Improvement in Nut-Locks; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention which is the subject of the following specification relates to the fastenings of splice-pieces—such, for example, as those used on railways.

The embodiment of the invention, as illustrated, is that of a railway-rail splice, and the invention is designed especially for this purpose; but its uses are not necessarily limited to the splicing of rails.

In making the invention I had several objects in view: first, I have sought to obviate the necessity for nut-locks and the loosening of the ordinary railway-rail connections by the jarring and wear occasioned by the passing of trains; secondly, I have sought to provide a fastening which cannot be tampered with and loosened by evil-disposed persons, to the great risk of destruction of life and property; thirdly, I have aimed to provide a simple and durable fastening, whereby the expense is lessened.

Figure 1 is a perspective view. Fig. 2 is a cross-section through one of the bolts. Fig. 3 is a horizontal section through the bolts. Fig. 4 is a cross-section of a modification.

In the drawings, A A represent the ends of contiguous rails. On one side is a splice-piece, B, of the ordinary form, having holes made tapering inward, in which tapering bolts are fitted, in order that there may be no exposed heads liable to be cut off by unauthorized persons. The bolt-holes through the rails are in the ordinary position. The bolts D have the tapering heads fitted snugly to the tapering holes in the fish-piece B, and the other ends are reduced to leave heads *e*. These heads have a full bearing-surface for the locking-plate of the splice-piece on the locking side of the rail. This locking-plate is a part of the splice-piece, and may be the ordinary web thereof, the shape of the piece being that ordinarily used—that is to say, the same as the piece B—there being a vertical web or plate, *f*, and an approximately horizontal flange, *g*, as shown in Fig. 4; but instead of the ordinary round holes, I provide, in addition to these round holes, slots opening thereinto, these slots being parallel with the top and bottom of the splice. The holes are made to admit the head *e* of the bolt, and the slots are fitted to the necks or reduced parts *l* next to the heads of these bolts. The locking-piece is applied when the bolts are in place by setting the locking-piece up against the web of the rail, so that the bolt-heads pass through the web of the locking-piece, and then slipping this piece endwise to bring the necks into the slots. The holes are arranged to register with the bolts, and when so registered to bring the flange of the splice to bear upon the tie or ties. When the splice-piece is in place with the necks of the bolts in the slots, the splice-piece is spiked down through notches *m* or holes in their flanges in the usual manner. This prevents any longitudinal movement of the splice-piece, and therefore any unlocking of the bolts without the drawing of the spikes A′. This requires a special tool of large size, and it is very unlikely to be done by malicious or unauthorized persons.

In order that the locking splice-piece may draw the bolts snugly, I make the faces thereof on the outer side, near the slots, inclined or wedge-shaped, as shown at *o*, the lower part of the wedge being next the hole, so that as the piece is forced aside it wedges underneath the head of the bolts and draws them snugly in place.

I have referred to Fig. 4 as showing a modification. It differs from the other figures only in respect to the locking splice-piece, and this differs from the others only in having no cover over the heads of the bolts.

It is desirable for greater security against violence to cover and conceal the bolt-head entirely. This is accomplished, as shown in Figs. 1, 2, and 3, by forming the locking splice-piece hollow or with another shell, *p*, covering the bolt-heads. This conceals the heads entirely and protects them from injury, and also renders it more difficult for any excepting an expert to remove the fastenings. This hollow piece with the covering-plate is, however, in respect to the locking part, the

same as that heretofore described, and the covering-plate may or may not be used, according as the user may prefer. Without it the heads of the bolts could be removed only by a chisel and with great labor. The bolts may be made of iron or steel, and may be forged or swaged by hand or machine, in any well-known manner.

While I have described the other end of the bolt as formed tapering, I do not confine myself to that form, as the bolt may have an ordinary head; but with the tapered head and lock described it is protected at both ends. I may cover these outer or tapered heads by another plate, *p'*, held upon the splice-piece B by means of locking bolts like those described, as shown in Fig. 2, or in any well-known way.

I claim as my invention—

1. In combination with rail ends having holes for the bolts, bolts having heads fitted to pass through these holes, a splice-piece formed with a web, and a flange adapted to bear on the tie or ties, with holes in the web fitted to the heads of the bolts, and slots fitted to the necks of the bolts, and with holes or notches in the flange, whereby it may be spiked to lock the piece, all substantially as described.

2. In combination with the rail ends having holes for the bolts, bolts having tapering heads fitted to tapering holes in a splice-piece, and heads adapted to pass through the holes in the rail ends, a locking splice-piece with holes fitted to the heads of the bolts, and slots fitted to the necks of the bolts, the locking splice-piece being made hollowed or covered, substantially as described.

3. In combination with the rail ends and with the bolts and locking splice-piece, a splice-piece, B, having tapering holes fitted to the tapering bolts, and with a covering-piece for the tapered bolts, secured to the splice-piece B, substantially as described.

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

JAMES C. MOREHEAD.

Witnesses:

F. L. MIDDLETON,

WALTER P. KEENE.