(No Model.)

M. H. PHILLIPS.

NUT LOCK.

No. 382,054. Patented May 1, 1888.

Fig. 1

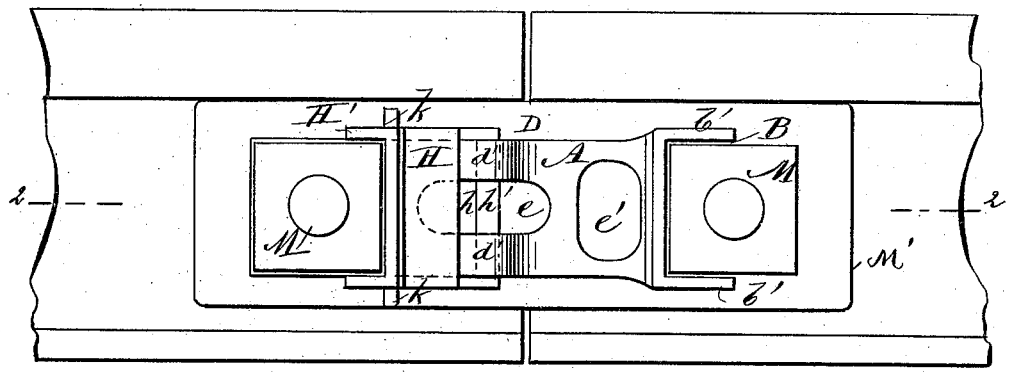


Fig. 2

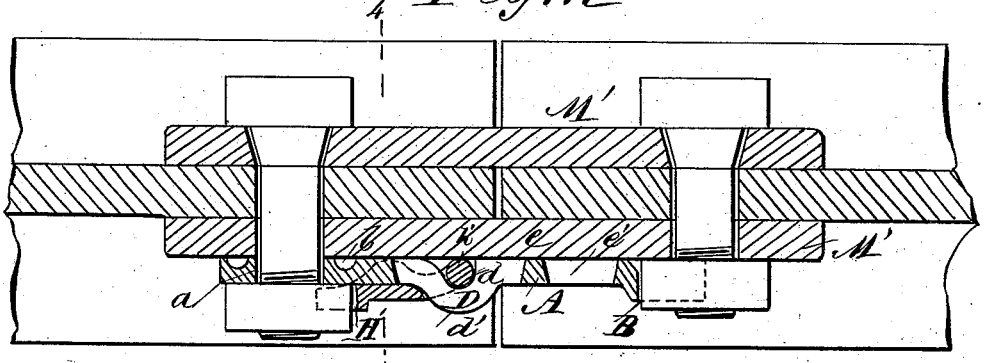
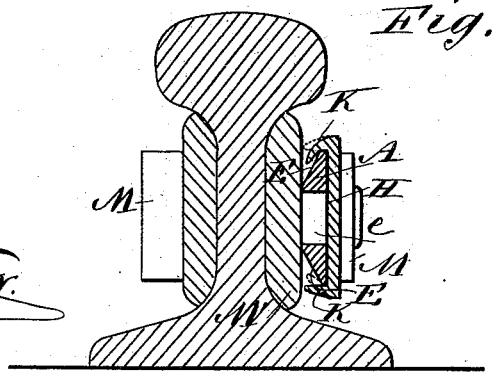


Fig. 3

Fig. 4



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MARSHMAN H. PHILLIPS, OF VERSCHOYLE, ONTARIO, CANADA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 382,054, dated May 1, 1888.

Application filed July 13, 1887. Serial No. 244,194. (No model.)

To all whom it may concern:

Be it known that I, MARSHMAN H. PHILLIPS, of Verschoyle, in the county of Oxford, Province of Ontario, and Dominion of Canada, have invented a new and Improved Nut-Lock, of which the following is a full, clear and exact description.

My invention relates to an improvement in nut-locks for railroad-rails, and has for its object to provide a device of simple and cheap construction, wherein the heads or nuts of the bolts securing the fish-plate will be effectually prevented from turning, and wherein the device may be conveniently removed when a rail is to be replaced.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Figure 1 is a front elevation of the lock applied. Fig. 2 is a longitudinal and horizontal section through line 2 2 of Fig. 1. Fig. 3 is an edge view of the detached device, and Fig. 4 is a transverse vertical section on line 4 4 of Fig. 2.

In carrying out the invention the body A of the lock is substantially rectangular in form and constructed of malleable iron. Near one end of the body, centrally the same, a circular aperture, *a*, is formed, extending through from one side to the other, the inner side of the body surrounding said aperture being preferably grooved, as at *b*, to lessen the weight. The opposite end of the body is made straight and provided at top and bottom with outwardly-projecting parallel arms *b'*, whereby a rectangular recess, B, is formed, adapted to correspond in dimensions with the size of the nuts employed in attaching the fish-plate. About centrally the body and transversely the same a concavo-convex surface, D, is produced, the concavity *d* being in the inner face and the convexity *d'* in the outer face, as shown in Figs. 2 and 3.

Near the concavity *d*, and between said concavity and the end of the body in which the aperture *a* is made, a recess, E, is formed in the inner side of said body at the top and bottom edge, as shown in Figs. 3 and 4, the said recesses being in the same vertical plane and extending only partially through to the outer face.

If found desirable, in order to lighten the body and as an economic measure, an aperture, *e*, may be made longitudinally in the center, and a second aperture, *e'*, be provided near the arm-carrying end, as illustrated in Fig. 1.

A plate, H, also of malleable iron, having a transverse slot, *h*, cut in one end, and the metal at said end rounded off to form the integral circular pin *h'*, is adapted to be hinged upon the body A, the hinged connection being effected by passing the body through said slot *h* and bringing the pin into engagement with the concave surface *d*, the body of the plate resting normally upon the outer face of the body A, as shown in Figs. 1 and 2.

In the free end of the plate H a rectangular recess, H', is formed, similar in size and shape to the body-recess B, and pins *k* are made to project from top and bottom in substantial alignment with the vertical wall of said recess, as shown in Fig. 1. At a point in register with the recesses E of the body the edges of the plate are formed with inwardly-projecting lips K.

In operation one nut M is screwed down upon the fish-plate M', and the recessed end B of the device is brought into engagement therewith, the aperture *a* now being brought into registry with the apertures in the rail and fish-plates, and the bolt designed to be entered through the latter is also passed through the aperture *a*. The nut is thereupon attached to the bolt, and the recessed portion of the hinged plate H is made to engage said nut.

The operation is completed by hammering or otherwise bending down the lips K over the edges of the body A and in the recesses E, as shown in Fig. 4, whereby the device is held securely in engagement with each nut.

To remove the lock, the sharp end of a bar may be passed between the pins *k* and the fish-plate, and the plate H be thereby pried open; or a bent bar may be passed through the slot *e*, fulcrumed upon the pin *h'* and made to bear at its inner end upon the under outer surface of the plate H. By bearing down upon said bent bar the plate is forced out of engagement with the body.

It is obvious that the device may be used in connection with any shaped nuts by altering the shape of the recesses B and H' to correspond.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A nut-lock consisting of the body A, provided with an aperture, *a*, at one end, the recess B at the opposite end, and a central concavo-convex surface, D, and a plate, H, provided with the pin *h*, fitting in the concave surface of the body, the recess H′ at its free end, and the lips K, adapted to be bent over upon the body, substantially as described.

2. The combination, with the body A, provided with an aperture, *a*, at one end, a recess, B, at the opposing end, a central transverse concavo-convex surface, D, and top and bottom recesses, E, between said surface D and the apertured end, of the slotted plate H, provided with pin *h*, a recess, H′, and top and bottom lips, K, the said plate adapted to be hinged to said body at the aforesaid concavo-convex portion and held in connection with said body by compressing the lips K into said recesses E, substantially as set forth.

MARSHMAN H. PHILLIPS.

Witnesses:
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