

(No Model.)

E. D. JAYNES & J. W. HAWKINS.
NUT LOCK.

No. 470,677.

Patented Mar. 15, 1892.

Fig. 1.

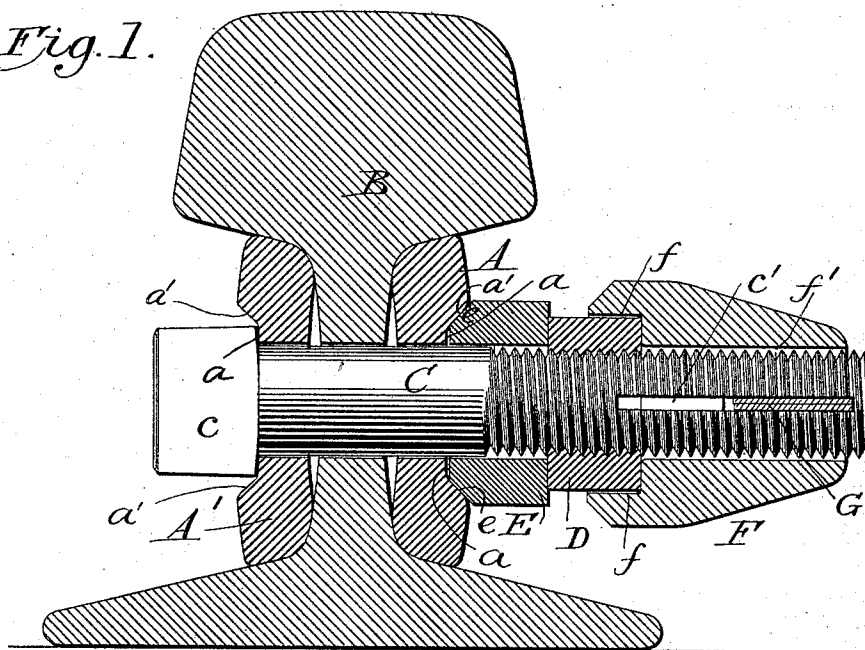


Fig. 2.

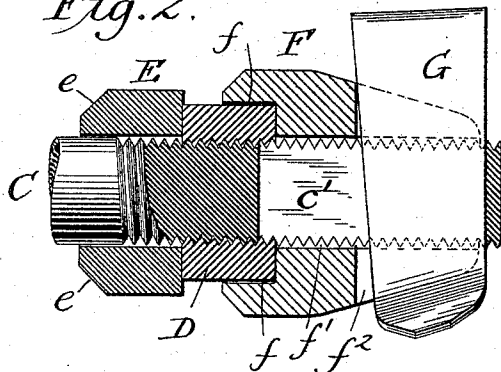


Fig. 3.

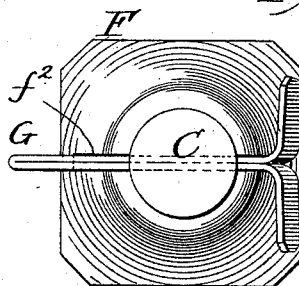
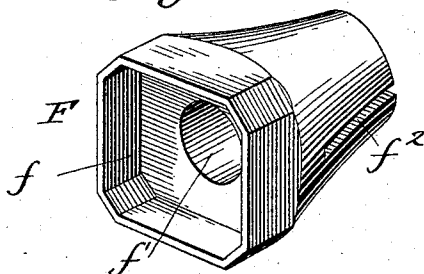


Fig. 4.



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UNITED STATES PATENT OFFICE.

ERASMUS D. JAYNES AND JOHN W. HAWKINS, OF CURRYVILLE, MISSOURI.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 470,677, dated March 15, 1892.

Application filed December 28, 1891. Serial No. 416,371. (No model.)

To all whom it may concern:

Be it known that we, ERASMUS D. JAYNES and JOHN W. HAWKINS, both citizens of the United States, residing at Curryville, in the county of Pike and State of Missouri, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification.

Our improvements are especially designed for use in connection with fish-plates for uniting the abutting ends of railway-rails; but our invention is not thus limited in its application, as some features of the invention may be employed wherever it is necessary or desirable to lock a nut to its bolt.

The details of construction and subject-matter claimed are hereinafter designated.

In the accompanying drawings, Figure 1 is a transverse section through a rail with our improvements applied, the bolt being shown in side elevation, the other parts in section. Fig. 2 is a detail view in section of the nut-locking devices. Fig. 3 is an end view, and Fig. 4 a perspective view, of the nut-shield.

The fish-plates A A' are applied to the rail B in the usual way. The fish-plates are provided with sockets *a*, having beveled edges *a'*. The bolt C is provided with a rectangular head *c*, which, instead of being square, as usual, is oblong and fits in the recess *a* of the fish-plate A' and is held firmly in place, not being able to turn when properly seated. The bolt extends through openings in the rail and in the fish-plate and is screw-threaded in the usual way. It is provided with an elongated slot *c'*, extending from near its outer end inwardly a sufficient distance to provide for all the adjustments usual or possible. The nut D is shown as square in cross-section. Of course it may be made in any polygonal form. Between the nut D and the fish-plate A is interposed a metallic washer E, which fits loosely on the bolt and has a beveled edge *e*, fitting the beveled edge of the fish-plate A. The washer E is somewhat larger in cross-section than the nut D. It serves to hold the nut the proper distance from the fish-plate, afford a bearing-surface for the nut to work against, and also to protect the corners or edges of the nut, so that they shall not be worn or broken, and thus are always in good shape for being manipulated by a wrench or other tool.

F is a shield, made of metal, having at its inner end a recess *f* corresponding in shape to the nut D and adapted to receive it. The shield has a central aperture *f'*, through which the bolt C extends loosely. The shield is slotted at *f*² to receive a wedge-shaped key G. This key when inserted extends through the slot *f*² in the shield and through the slot *c'* in the bolt. It prevents the shield from turning on the bolt, and thus the nut is locked to the bolt and prevented from turning. The key is wedge-shaped, as shown, and it may be inserted to the requisite extent to not only prevent the shield from turning on the bolt, but also to prevent it from moving endwise thereon. The key may be made of granulated tin or other suitable material, but such material as will best stand the weather and will stand bending is preferred. The key, as shown, is formed of a single piece of metal bent in the middle to form two similar parallel arms. When in place, the ends of the arms are spread out in opposite directions, as shown in Figs. 2 and 3, to prevent the key from being withdrawn until properly straightened. The shield F not only forms part of the nut-locking devices but protects the nut from the weather, exposure to which often so deteriorates the nut that it works loose.

Our improvements may be applied not only to railroad-rails, but also in structures and machinery of various kinds, and will be found to work efficiently.

We claim as our invention—

1. The combination, substantially as hereinafore set forth, of a bolt slotted at its threaded end, a nut, a shield having a recess in which the nut is seated and formed with a slot corresponding with the slot in the bolt, and a wedge-shaped key extending through the slot in the shield and the slot in the bolt.

2. The combination, substantially as hereinafore set forth, of a bolt, a washer thereon, a shield through which the bolt extends, a nut interposed between the shield and the washer and seated in a recess in the shield, and a wedge-shaped key extending through a slot in the shield and a slot in the bolt.

3. The combination, substantially as hereinafore set forth, of a railway-rail, fish-plates thereon, a bolt having an oblong polygonal head seated in one fish-plate, a nut on the

screw-threaded end of the bolt, a shield having a recess for the nut and having a central aperture through which the bolt extends, and a wedge-shaped key extending through a slot in the shield and a slot in the bolt.

- 5 4. The combination, substantially as hereinbefore set forth, of a rail, fish-plates on opposite sides thereof, a bolt extending through the rail and the fish-plates and having its head
10 seated in a recess in one fish-plate, a washer having a beveled edge seated in a recess in

the other fish-plate, a shield through which the bolt extends, a nut interposed between the shield and the washer, and a key extending through slots in the shield and the bolt. 15

In testimony whereof we have hereunto subscribed our names.

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Witnesses:

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