(No Model.)

I. L. BLAKESLEE.

NUT LOCK.

No. 437,327. Patented Sept. 30, 1890.

Fig 3

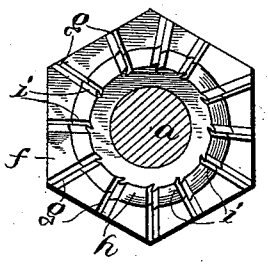


Fig 1

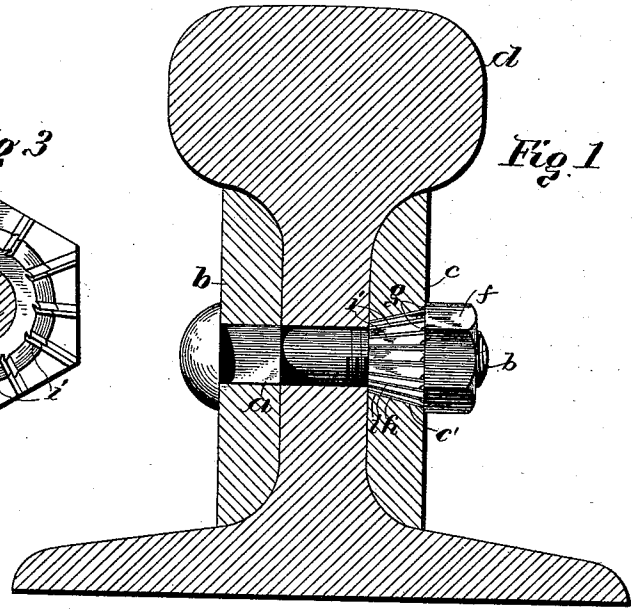
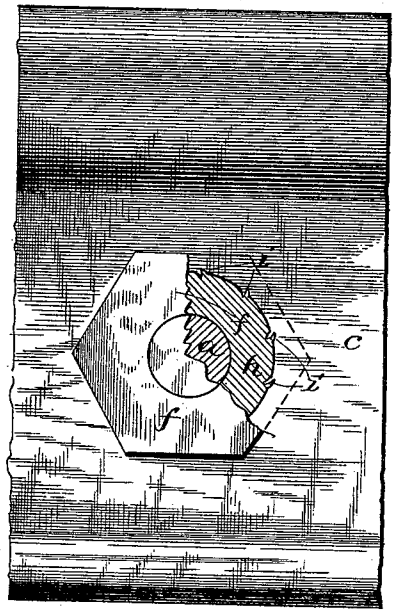


Fig 2



Witnesses
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J. D. Davis.

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per
R. D. Bois
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

IRA L. BLAKESLEE, OF KIRKWOOD, NEW YORK.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 437,327, dated September 30, 1890.

Application filed June 4, 1890. Serial No. 354,257. (No model.)

To all whom it may concern:

Be it known that I, IRA L. BLAKESLEE, a citizen of the United States, residing at Kirkwood, in the county of Broome and State of New York, 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 appertains to make and use the same.

This invention has relation to an improvement in nut-locks more especially for use on railway-rail joints, but which may be employed with equal advantage in other connections, and the object sought to be accomplished is to produce a more simple, cheap, and effective article than has heretofore been known.

With these ends in view my invention consists in certain peculiarities of construction and combinations of parts more fully described hereinafter, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a cross-section through a railway-rail joint, showing my device in side elevation and locked adjustment; Fig. 2, a side view of a portion of the joint with the nut-head broken out to show the ratchet-teeth engaging the fish-plate; and Fig. 3, a detail view of the nut, looking at the inside of the same.

The reference-letter *a* indicates the bolt, which is an ordinary one, and extends through the fish-plates *b c* and the rail *d* in the usual manner. The opening *c'* in the fish-plate *c*, through which the threaded end of the bolt projects, flares outwardly, as seen in Fig. 1, and the purpose of this will be explained hereinafter.

The nut consists of the head *f*, having the form of an ordinary hexagonal or other shaped nut, and it is provided on its under side with teeth or spurs *g*, arranged to bind on the face of the fish-plate and aid in locking the nut in position. The head *f* is provided with an extension or sleeve *h*, formed integral with it and having the form of a truncated cone, its largest portion or base commencing inside the teeth *g* in the under side of the head and diminishing in diameter toward its outer end. This conical extension, as well as the head *f*, is internally threaded to fit the projecting end of the bolt. Teeth or scales *i* are formed at suitable intervals on the surface of the portion *h*, extending at an acute angle thereto, like ratchet-teeth, and running its full length from the under surface of the head *f* to its inner reduced end.

The application of this peculiarly-formed nut will be apparent, and may be briefly stated as follows: The bolt having been introduced through the fish-plates and rail, the nut is applied on its projecting threaded end and screwed down, causing its conical extension *h* to enter the corresponding flaring bore *e* of the fish-plate *c*, and it will be seen that upon further tightening of the nut the teeth *i* will bind upon the wall of said opening *e* and thus securely lock the nut and render turning backward of the same impossible, as the inclined teeth would then act to cut into the fish-plate. When the nut has been screwed home, the teeth *g* on the under side of the head *f* will also bind upon the face of the fish-plate, and thus aid in locking the nut in place. Thus a cheap, simple, and easily-applied nut-lock is produced, which at the same time possesses strength, durability, and efficiency.

Among the other advantages of my device might be stated that the main locking portion of this nut is entirely inside the fish-plate, and is thus fully protected, and so little of the nut projects from the fish-plate that there is little danger of the head being cut off by a wheel in case of a train jumping the track, and should this occur there is still left the conical extension within the fish-plate, which continues to lock the parts together, and thus preserve the rails in their proper position.

It is evident that many slight changes which might suggest themselves to a mechanical mind could be resorted to without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the precise construction herein shown, but consider myself entitled to all such variations.

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

1. As an improved article of manufacture, a nut-lock consisting of an internally-threaded sleeve provided with teeth on its exterior surface and arranged to enter a corresponding opening in the fish-plate, its teeth binding

upon the walls of said opening, substantially as and for the purpose described.

2. As an improved article of manufacture, a nut-lock consisting of a nut having an extension provided with teeth on its outside surface and arranged to enter a corresponding opening in the fish-plate, its teeth binding upon the walls of the same, substantially as and for the purpose described.

3. As an improved article of manufacture, a nut-lock consisting of a nut having a conical extension provided with teeth and arranged to enter a corresponding opening in the fish-plate, its teeth binding upon the walls of said opening, substantially as and for the purpose described.

4. A nut-lock consisting of a nut having teeth on its under side, arranged to bind upon the face of the fish-plate, and a conical extension for said nut, also provided with teeth on its exterior surface and arranged to enter a corresponding opening in the fish-plate, its teeth binding on the walls of said opening, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

I. L. BLAKESLEE.

Witnesses:
C. J. LANGLEY,
H. H. COLBURN