No. 686,504. Patented Nov. 12, 1901.

T. BEACH & W. BAKER.

NUT LOCK.

(Application filed June 22, 1901.)

(No Model.)

Fig. 1.

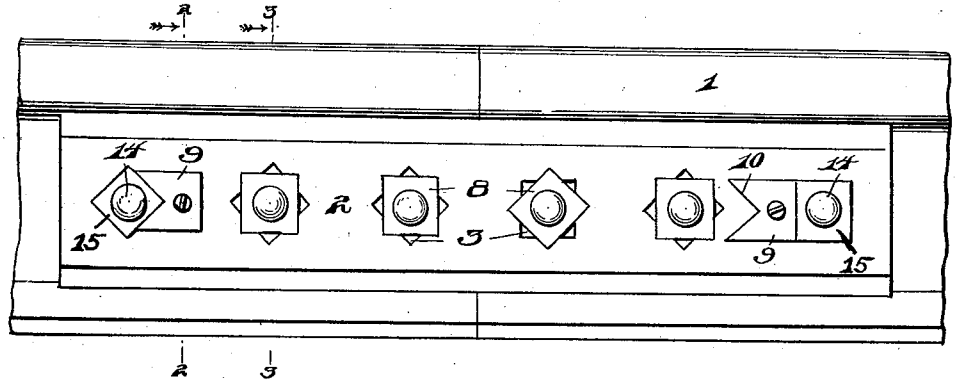


Fig. 3.

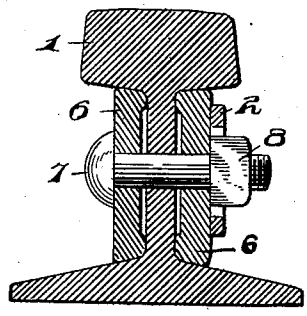


Fig. 2.

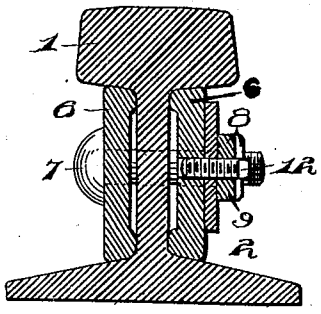


Fig. 4.

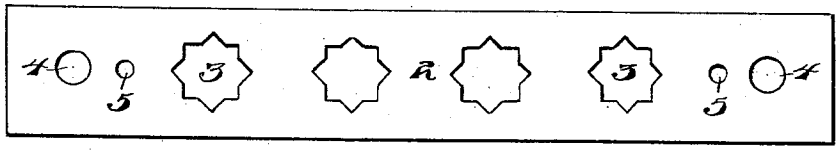


Fig. 5.

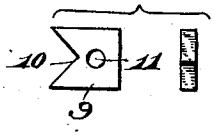
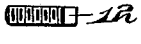


Fig. 6.



Witnesses:
J. S. Fleeman,
E. C. Potter.

Inventors
T. Beach.
W. Baker.
By
A. C. Evert & Co.
Atty's

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

UNITED STATES PATENT OFFICE.

THOMAS BEACH AND WILLIAM BAKER, OF FREEPORT, PENNSYLVANIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 686,504, dated November 12, 1901.

Application filed June 22, 1901. Serial No. 65,566. (No model.)

To all whom it may concern:

Be it known that we, THOMAS BEACH and WILLIAM BAKER, citizens of the United States of America, residing at Freeport, in the county of Armstrong and State of Pennsylvania, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in rail-joints, and relates more particularly to a fish-plate and lock carried by said fish-plate to retain the same firmly in position.

The present invention has for its further object to construct a rail-joint of the above-described character that may be easily applied to the rails and readily removed therefrom when desired.

The present invention still further aims to construct a fish-plate that will be extremely simple in construction and strong, durable, and comparatively inexpensive to manufacture; furthermore, one that will be highly efficient in its operation.

With the above objects in view the invention consists of a fish-plate having star-shaped openings arranged therein and a lock arranged on each side of the fish-plate.

The invention still further consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is a side elevation of two sections of the rail having our improved fish-plate and rail-joint attached thereto. Fig. 2 is a vertical sectional view taken on the line 2 2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a similar view taken on the line 3 3 of Fig. 1 looking in the direction of the arrow. Fig. 4 is a plan view of the plate. Fig. 5 is a side and end view of the lugs. Fig. 6 is a side elevation of the screw securing the lock in position.

In the drawings the reference-numeral 1 indicates the rails.

2 indicates the plate, having star-shaped openings formed therein which are indicated by numeral 3.

4 indicates a round opening formed in each end of the plate, and the reference-numeral 5 indicates an aperture formed in the plate in close proximity to the openings 4.

The reference-numeral 6 indicates the fish-plates, of the ordinary construction, and 7 indicates a series of bolts extending through the fish-plates 6 and also extending through the web of the rail.

The reference-numeral 8 indicates the nuts, engaging the screw-threaded portion of the bolt. These nuts may be either square, hexagonal, or octagonal.

The reference-numeral 9 represents a wedge-shaped lock, one of its sides forming a V-shaped end 10. Said lock has formed therein an aperture 11 to receive the screw 12, said screw being adapted to extend through the aperture 5 and engage in the fish-plate.

The reference-numeral 14 represents the end bolts, extending through the openings 4 to receive the nuts 15, which are securely locked by means of the lock 9, which lock is reversible to either engage the square side of the nut or engage two sides thereon, both forms of locking being illustrated in Fig. 1 of the drawings.

The operation of our device is as follows: The ordinary fish-plates being first applied in the well-known manner, the bolts extending through the web of the rail, the nuts are then tightened, the plate having the star-shaped openings applied in the manner that will engage the sides of the nuts and prevent the same from turning, as illustrated in Fig. 3. The end nuts are then locked in position by means of the lock, either engaging one side of the nut or both sides of the nut. These end locks serve to secure the plate firmly in position, and the star-shaped openings of the plate will prevent their nuts from turning. It will be seen that it will be impossible to turn the nuts after the device has been placed in proper position.

The many advantages obtained by the use of our improved device will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of our invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination with rails having fish-plates secured thereto and a series of bolts extending through the fish-plates and rail-web, of a rectangular plate of less width than said fish-plate having a series of star-shaped openings formed therein extending entirely through said plate, said opening being located intermediate of the ends of the said plate, the walls formed by said star-shaped openings engaging the peripheral faces of the nuts, said plates further having an opening formed in the ends thereof through which extend two of the said bolts carrying nuts on their threaded ends engaging the outer face of said plate, a lock composed of a flat plate one end of which is square and the other end of which is notched forming engaging faces, said faces engaging the nuts, said plate having an opening formed therein, a screw engaging the said opening and said plate and extending into one of the said fish-plates, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

THOMAS BEACH.
WILLIAM BAKER.

Witnesses:
ROBIN MCKEE,
A. J. BOLE.