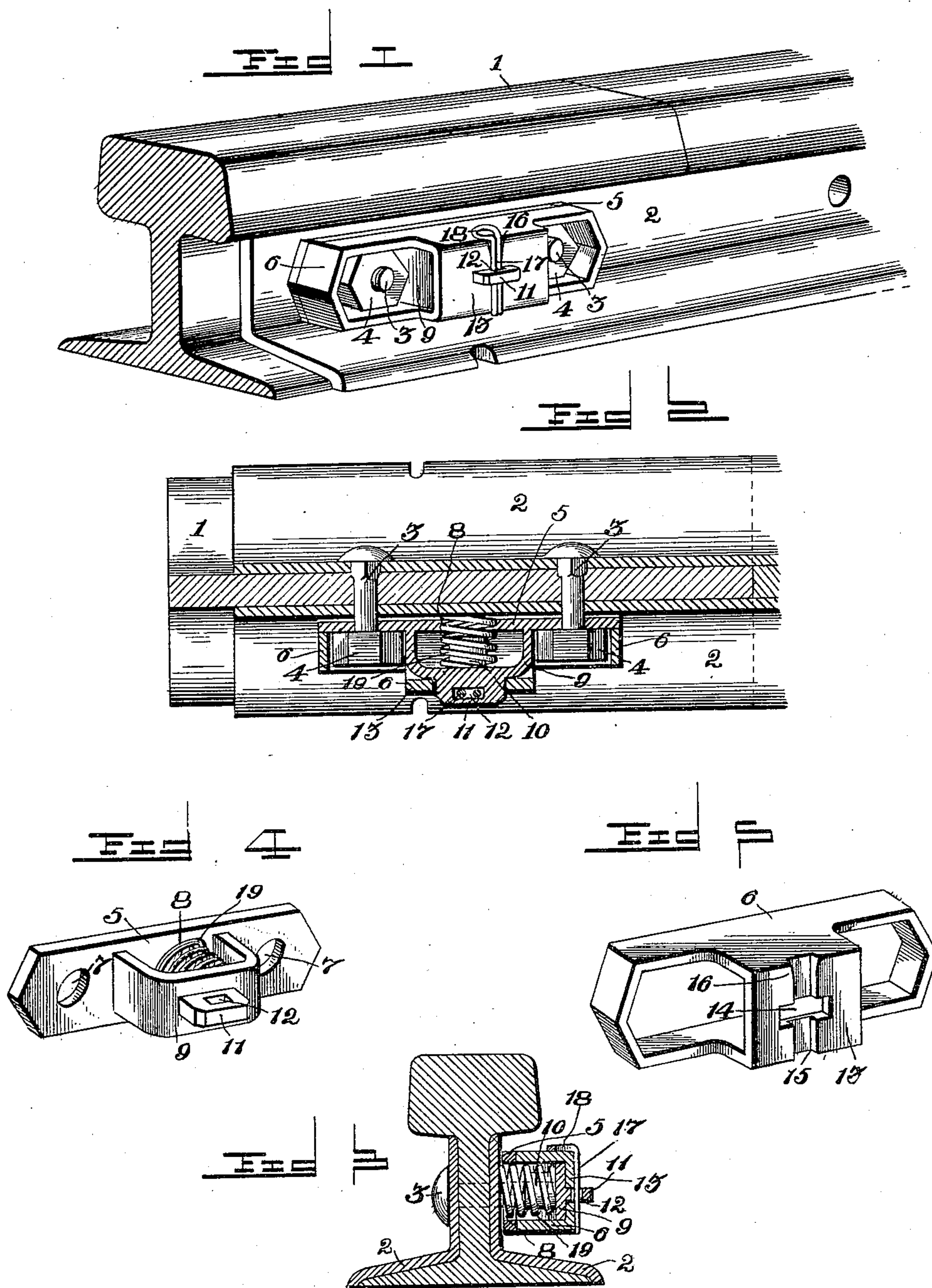


Patented Jan. 9, 1900.

L. WADE.
NUT LOCK.

(Application filed May 18, 1899.)

(No Model.)



Witnesses

Lilburn Wade Inventor

By *his* Attorney

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UNITED STATES PATENT OFFICE.

LILBURN WADE, OF ESCALON, CALIFORNIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 640,849, dated January 9, 1900.

Application filed May 18, 1899. Serial No. 717,352. (No model.)

To all whom it may concern:

Be it known that I, LILBURN WADE, a citizen of the United States, residing at Escalon, in the county of San Joaquin and State of California, have invented a new and useful Nut-Lock, of which the following is a specification.

This invention relates to nut-locks, and is especially designed for use to connect the fish-plates at the ends of the abutting rail-sections of a railway-track.

The object of the invention is to provide a simple and improved device having means for taking up the longitudinal play of the bolts, which is frequently caused by the wear of trains passing over the track.

To this end the present invention consists in the combination and arrangement of parts, which will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of the device applied to a rail-section. Fig. 2 is a horizontal sectional view thereof. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a detail perspective view of the base-plate. Fig. 5 is a detail perspective view of the locking cap-plate.

Corresponding parts are designated by like reference characters in all the figures of the drawings.

Referring to the accompanying drawings, 1 designates a rail-section having the usual fish-plates 2, arranged at opposite sides of the rail and provided with the bolts 3, extending through the same and provided at their threaded ends with the fastening-nuts 4. These parts are shown to more fully illustrate the operation of the device.

The present invention comprises, essentially, a yielding base-plate 5, against which the nuts are adapted to be set, and a locking cap-plate 6, adapted to embrace the nuts and having an interlocking engagement with the base-plate, whereby the nuts are adapted to be locked against accidental loosening.

The base-plate is best illustrated in Fig. 4 and comprises a flat body portion having bolt-openings 7 provided therethrough and located near opposite ends thereof. Intermediate of the bolt-openings there is provided another opening 8, preferably circular in form. Span-

ning the latter opening longitudinally of the base-plate is a bridge-piece or housing 9, having an inwardly-extending lug or pin 10, aligned with the opening 8. Extending outwardly from the outer face of the bridge-piece is a flat ear 11, which is provided with a vertical opening 12. This base-plate is applied in position before the nuts have been fitted to the bolts, the latter being received through the bolt-openings 7, and then the nuts are fitted to the bolts tightly against the outer face of the plate. As the plate is engaged near its opposite ends by the bolts, the said plate is prevented from being accidentally turned, as will be understood.

The locking cap-plate, as shown in Fig. 5, is in the form of a link having an offset plate 13 connecting the opposite sides of the link-shaped cap intermediate of the ends thereof. This plate is provided with a slot 14, extending longitudinally of the cap-plate, and provided in the outer face of the offset plate is a vertical groove 15, extending entirely across said plate and intersecting the slot 14. The upper end of this groove is enlarged, as shown at 16.

The base-plate being in position, as hereinbefore described, to lock the nuts against accidental turning, the cap-plate is fitted in position by receiving the nuts between the opposite sides and near the respective ends thereof and the ear 11, projecting outwardly through the slot 14, formed in the offset plate 13. By reason of the bridge-piece 9 fitting snugly between the sides of the cap-plate the latter is prevented from turning upon the base-plate, and the sides of the cap-plate embracing the sides of the nuts effectually prevent the latter from being accidentally turned or loosened, as will be understood. To prevent accidental displacement of the cap-plate, a substantial U-shaped or split spring-key 17 is inserted through the vertical opening 12 in the ear 11 and received in the groove 15, which is formed in the offset plate 13. The upper end of this key is provided with a head 18, preferably by bending or upsetting the same, and adapted to engage the upper side of the cap-plate to prevent the key from dropping entirely through the vertical opening 12.

In order that any longitudinal movement of the bolts may be taken up, I provide a

coiled spring 19, which embraces the lug or pin 10, carried by the bridge-piece 9, and extends through the intermediate opening formed through the base-plate. As clearly shown in Figs. 2 and 3, the opposite ends of this spring bear against the inner face of the bridge-piece and the outer face of the adjacent fish-plate, respectively, whereby there is a normal tension against the base-plate to force the same outward from the rail-section toward and against the nuts 4, whereby the bolts are effectually held against longitudinal movement.

The present invention provides a simple and improved nut-lock for locking the nuts of adjacent bolts against accidental displacement and permits of a ready positioning and removal of the device without damaging or destroying the bolts or nuts, and thereby permits of the renewed use of the device.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. In a nut-lock, the combination with adjacent bolts and the nuts thereof, of a base-plate having opposite bolt-openings adapted to receive the bolts, a locking cap-plate adapted to embrace the nuts and having an interlocking engagement with the base-plate, and a spring projecting from the inner face of the base-plate, whereby the latter is yieldingly mounted upon the bolts, substantially as and for the purpose set forth.

2. In a nut-lock, the combination with adjacent bolts and the nuts thereof, of a base-

plate having opposite bolt-openings adapted to loosely receive the bolts, an opening intermediate of the bolt-openings, and a housing or bridge-piece spanning the latter opening, a spring bearing against the inner side of the housing and projecting through the intermediate opening, and a locking cap-plate adapted to embrace the nuts and having an interlocking engagement with the base-plate, substantially as and for the purpose set forth.

3. In a nut-lock, the combination with adjacent bolts and the nuts thereof, of a base-plate provided with opposite bolt-openings adapted to loosely receive the bolts, an intermediate opening located between the bolt-openings, and a housing or bridge-piece spanning the intermediate opening and having a lug extending inwardly toward the base-plate in line with the intermediate opening, and an outwardly-extending ear provided with a vertical opening, a locking cap-plate in the form of a link having an offset plate intermediate of its ends provided with a longitudinal slot and a transverse groove intersecting the slot, the cap-plate being adapted to embrace the nuts and the bridge-piece and receive the ear through the slot in the offset plate, and a key adapted to be passed through the opening in the ear and received in the groove of the offset plate, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LILBURN WADE.

Witnesses:

T. S. MILLER,
B. SPLITHOFF.