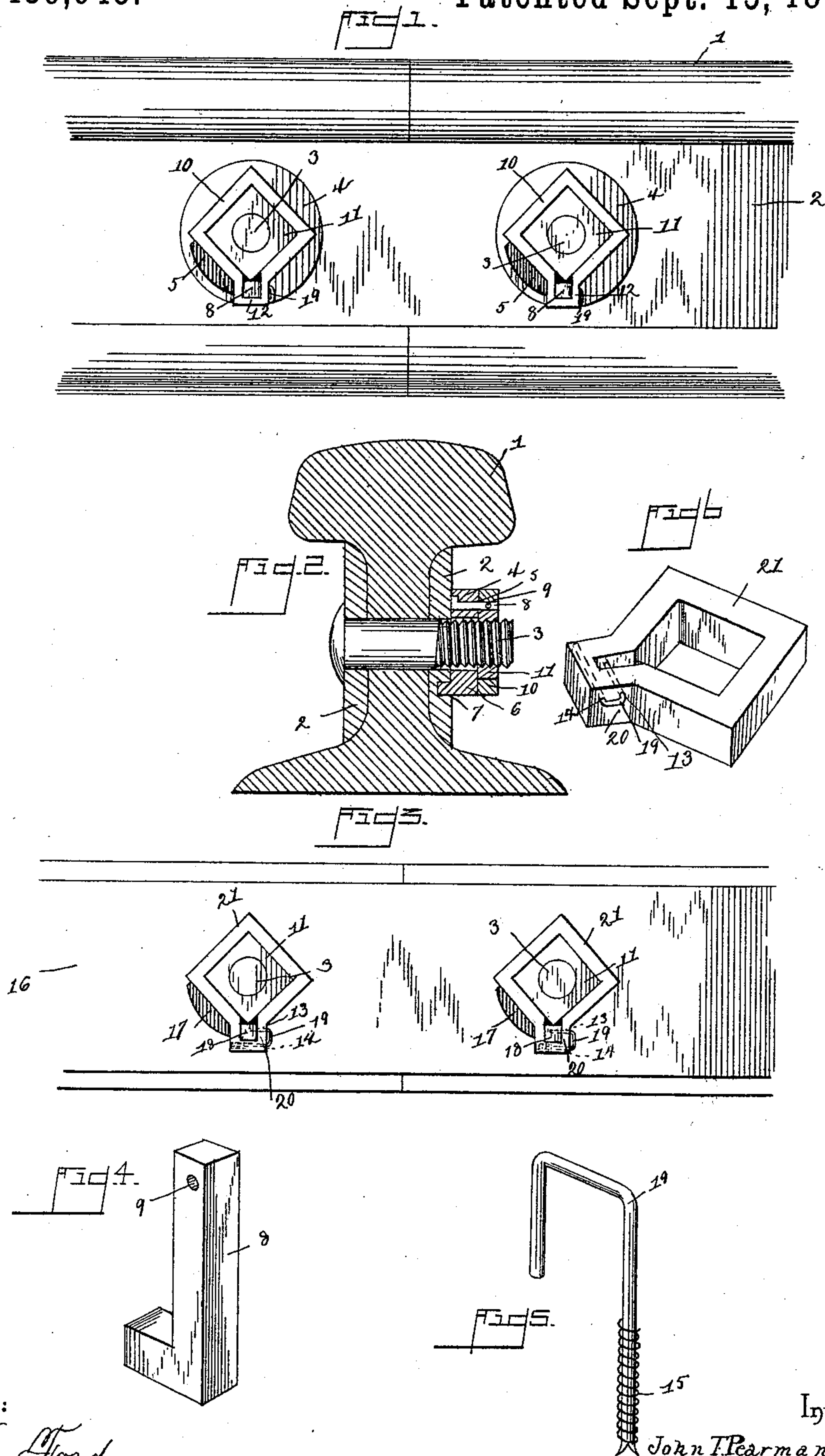


(No Model.)

J. T. PEARMAN.
NUT LOCK.

No. 459,645.

Patented Sept. 15, 1891.



Witnesses:

Chas. A. Ford.

M. S. Duval.

By his Attorneys,

C. A. Snow & Co.

Inventor

John T. Pearman.

UNITED STATES PATENT OFFICE.

JOHN THOMAS PEARMAN, OF CORDELE, GEORGIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 459,645, dated September 15, 1891.

Application filed May 9, 1891. Serial No. 392,139. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS PEARMAN, a citizen of the United States, residing at Cordele, in the county of Dooly and State of Georgia, have invented a new and useful Nut-
5 Lock, of which the following is a specification.

This invention relates to improvements in nut-locks; and the objects in view are to provide a nut-lock of cheap and simple construction and effective and durable in operation.
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A further object in view is to provide a nut adapted to be employed upon the bolts of railway-joints or any other position and use to which a bolt may be placed.

15 Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a portion of a railway-joint the nuts of the bolts of which are locked in accordance with my invention. Fig. 2 is a vertical longitudinal section through the bolt. Fig. 3 is a side elevation illustrating my nut-
25 lock in position upon bolts passed through a beam or other object. Fig. 4 is a detail in perspective of the locking-key. Fig. 5 is a similar view of the locking-pin. Fig. 6 is a detail in perspective of the locking-frame.

30 Like numerals of reference indicate like parts in all the figures of the drawings.

Referring more particularly to Fig. 1, 1 designates the two meeting rail-sections, to the opposite sides of the flanges of which are applied the fish-bars 2, through which and the rail-sections pass the bolts 3.
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4 designates a washer, one for each of the bolts, said washers being circular in shape and provided with central openings for the reception of the bolts. Each washer is provided near its edge with a quadrant-shaped slot 5, the same being concentric with the bolt and being of an L shape in cross-section. By reason of the slot the solid side of the washer
45 becomes the heaviest, and consequently the lower side when loosely suspended upon a bolt. Each washer is provided with a lug 6, which takes into a corresponding countersunk recess 7, formed in the face of the fish-bar, whereby, when the nut is tightened upon the
50 bolt, the lug is locked within the recess and the lug cannot move either to the right or left.

Located in each of the slots of the washers is an L-shaped locking-key 8, said key conforming at its lower end to the shape of the L-shaped slot 5, and hence cannot be withdrawn therefrom. The key is also provided with a transverse perforation 9 near its upper end and is square in cross-section.

10 designates a rectangular locking-frame adapted to fit loosely over and conform to the shape of the nut 11, mounted upon the bolt, said frame lying upon the outer face of the washer. At one corner the frame is provided with a rectangular offset 12, which fits loosely over the upper end of the locking-key. The offset and key are perforated in alignment, as indicated at 13, in the key, and a second perforation is located at one side of the first-mentioned perforation in the offset, as indicated at 14. In the second perforation there is located a U-shaped locking-pin, the short terminal of which enters the perforation of the offset and key and is yieldingly maintained in position by a coiled spring 15, mounted in the outer perforation of the offset.
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In operation the bolts are passed through the openings, the washers mounted in position upon the bolts, the nuts mounted upon the bolts and washers, and the locking-frame placed in position upon the nut, the locking-pin of the frame being withdrawn against the tension of its spring, so as to permit of the upper end of the locking-key being received by the offset of the frame. As soon as released the spring serves to throw the pin to a locked position, and the frame is locked against accidental withdrawal from over the nut or the end of the locking-key.
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From the above it will be obvious that the nut serves to lock the washer in position upon the bolt and against the fish-plate, while the locking-frame serves to lock the nut against turning, and the locking-pin secures the frame to the key against removal from the nut. It will also be obvious that by slightly withdrawing the key (by inserting a tool of suitable form under the bent portion of the same) the locking-frame may be removed.
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As shown in Fig. 3, in instances where no fish-plate is provided or where the lock is not applied to the present forms of rail connections I provide what I would term the "locking" or "coupling" bar 16, the same being
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provided with L-shaped slots 5, similar to those formed in the washer. The slots are L-shaped to receive the keys 8, which keys are connected by the pins 19 to the offsets 12 of the locking-frames 10, the construction being identical with that heretofore described.

By the term "washer" as herein and hereinafter employed, unless specifically designated, I shall mean to cover or include either the circular washer shown in Fig. 1 or the coupling washer or bar 16.

Having described my invention, what I claim is—

1. The combination, with the bolt, its nut, the underlying object through which the bolt passes, said object being provided with an L-shaped concentric slot with the bolt-hole, of an L-shaped key mounted in the slot, a locking-frame fitting the nut and having an offset for receiving the key, and a pin passed through the key and the opposite sides of the offset, substantially as specified.

2. The combination, with the bolt, the nut, the underlying object having the curved concentric slot, with the bolt-hole L-shaped in cross-section, of the rectangular locking-frame having an offset located at one side thereof, an L-shaped pin mounted in the slot and received by the offset, a pair of openings formed

in the offset, the inner one of which registers with that of the key, and the U-shaped locking-pin mounted in said perforations, and a spring for retracting the same mounted in the outer perforation of the offset, substantially as specified.

3. The combination, with the rail-sections and the fish-bar having an L-shaped curved slot and a countersunk recess, of a bolt passed through the fish-bars, a nut mounted on the bolt, an L-shaped locking-key mounted in the slot of the fish-bar, a locking-frame receiving and fitting the nut and having an offset for fitting and receiving the key, and a locking-pin removably inserted in the offset and key, substantially as specified.

4. The combination, with the bolt, its nut, the washer through which the bolt passes, said washer being provided with an L-shaped concentric slot, of an L-shaped key mounted in the slot, a locking-frame fitting the nut and receiving the key, substantially as specified.

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

JOHN THOMAS PEARMAN.

Witnesses:

MARTIN F. MORGAN,
R. W. LOCKETT.