

U. R. HATFIELD.
RAIL JOINT.
APPLICATION FILED MAR. 1, 1910.

959,218.

Patented May 24, 1910.

Fig. 1.

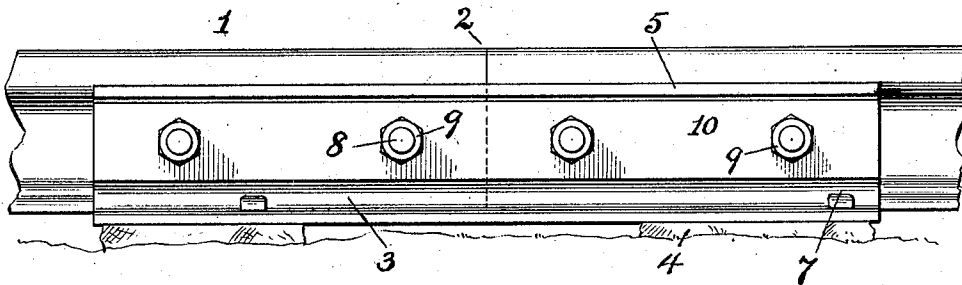


Fig. 2.

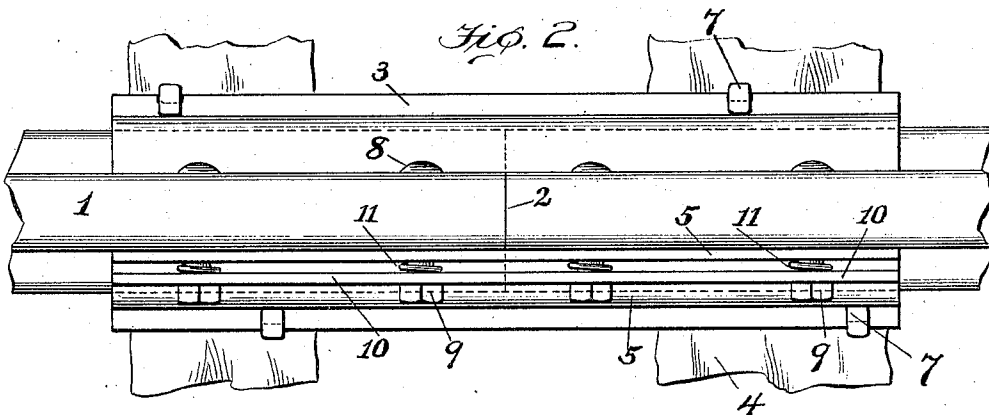
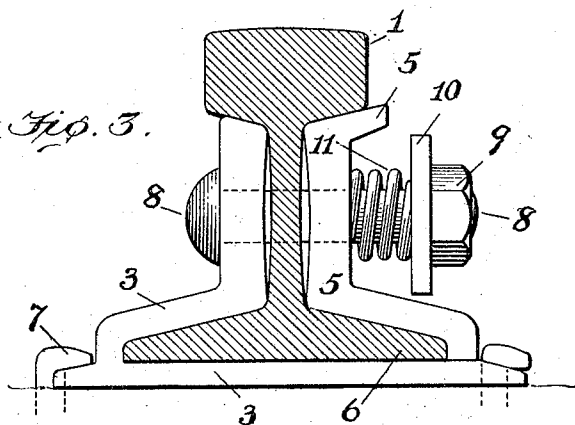


Fig. 3.



Witnesses
Edwin L. Bradford
G. Ferdinand Vogt.

Inventor
U. R. Hatfield
By Mann & Co. Attorneys

UNITED STATES PATENT OFFICE.

ULCY R. HATFIELD, OF MACON, GEORGIA.

RAIL-JOINT.

959,218.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed March 1, 1910. Serial No. 546,611.

To all whom it may concern:

Be it known that I, ULCY R. HATFIELD, a citizen of the United States, residing at Macon, in the county of Bibb and State of Georgia, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to a certain improvement in rail-joints of rail-roads.

It is well-known that the nuts on the bolts of rail-joints are loosened by the jar and vibration caused by the rapid movement of the car-wheels passing over the rails. To overcome this difficulty various devices, such as nut-locks, have been provided.

The present invention has for its object to provide an improved device for co-acting with the bolt-nuts of rail-joints to prevent the nuts from being loosened by the jar and vibration referred to.

The invention is illustrated in the accompanying drawing in which,—

Figure 1 is a side view of the rail-joint. Fig. 2 is a top view of the same. Fig. 3 is an end view of the joint device, showing a cross-section of the rail.

The numeral, 1, designates the ordinary T-rail such as are commonly used on rail-roads; the abutted two ends of rails are designated, 2. A chair bar, 3, of suitable construction extends below and also at one side of the said abutted rail-ends, 2, and this chair rests upon the cross-ties, 4. A channel plate, 5, is at the opposite side of the two rail ends, and fits in the concaved side of the said two rail-ends—the upper edge of the channel-plate being in contact with the under side of the head of the rail and the lower edge of said plate in contact with the base, 6, of the rail. Spikes, 7, are used to confine the chair-plate to the cross-ties, 4. Bolts, 8, pass through the side wall of the chair-plate, the web of the rail, and the channel plate, as usual, and a nut, 9, is on each bolt.

In practice it is common for four bolts, sometimes six bolts, to be used in these rail joints.

The parts thus far described are well-known and have been used.

The improved device which is the subject

of the present invention includes what I term a "vibration bar," 10, which extends parallel with the channel plate, 5, and has holes through which the several bolts, 8, pass loosely. The bolt-nuts, 9, are at the outer side of the said vibration bar and bear or press in direct contact therewith; these nuts draw on the bolts, 8, and keep them tight. Suitable springs, 11, are interposed between the vibration bar and the channel plate and exert a pressure on both, and said springs keep the vibration bar pressed outward against the nuts. It will be seen that the addition of the bar, 10, and the springs, 11, and their combination with the plate, 5, the bolts, 8, and nut, 9, on each bolt, but at the outer side of said bar, operates to prevent the nuts from being loosened by the vibration of either track-rail, 1, the chair, 3, or the channel plate, 5. In operation, there is no bending or torsional strain on the vibration bar, 10, the latter simply being interposed between the several nuts, 9, and springs, 11. The frictional contact of the nuts, 9, with the steady and quiet bar, 10, obviates in great degree the liability of the nuts becoming loose. It is obvious the particular form of chair, and channel plate is immaterial.

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

The herein-described rail-joint device, comprising the combination of two rails with ends abutted; plates on opposite sides of said abutted ends; a plural number of bolts, 8, through the rails and said plates; a vibration bar through which all of said bolts extend; a spring on each bolt and interposed between the said vibration bar and one of said side plates, and a nut on each bolt and at the outer side of said vibration bar.

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

ULCY R. HATFIELD.

Witnesses:

JOHN B. HARRIS,
WALTER A. HARRIS.