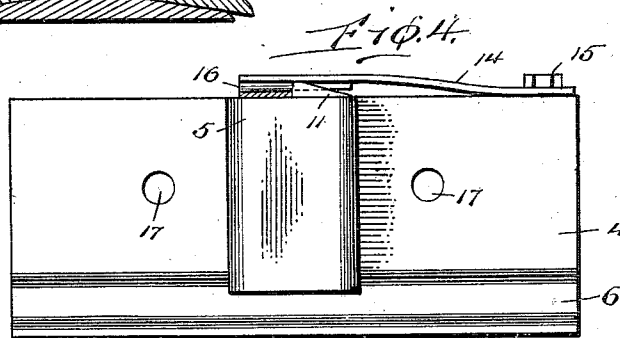
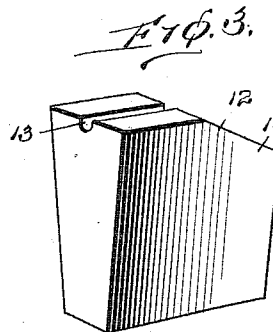
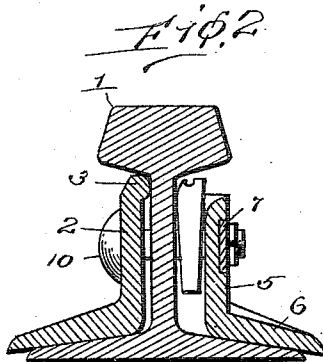
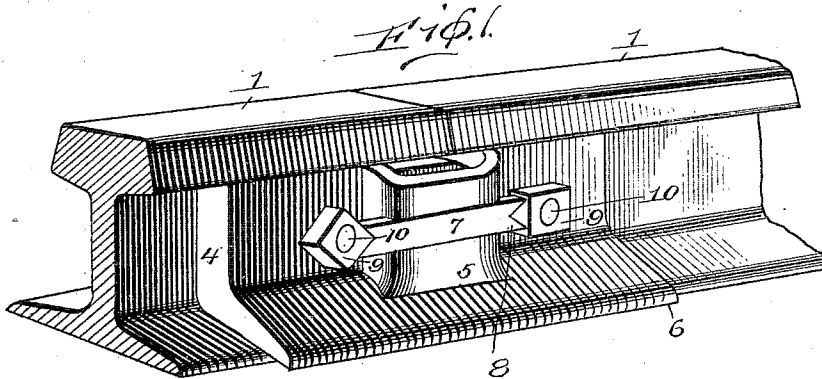


H. T. HUGHES.
 AUTOMATIC RAIL JOINT LOCK.
 APPLICATION FILED JUNE 13, 1910.

985,810.

Patented Mar. 7, 1911.



Witnesses

J. M. Fowler Jr.
A. M. Sauner.

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By

[Signature]
 Attorney

UNITED STATES PATENT OFFICE.

HUGH T. HUGHES, OF SHARON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO SAMUEL HITCHINGS, OF SHARON, PENNSYLVANIA.

AUTOMATIC RAIL-JOINT LOCK.

985,810.

Specification of Letters Patent.

Patented Mar. 7, 1911.

Application filed June 13, 1910. Serial No. 566,542.

To all whom it may concern:

Be it known that I, HUGH T. HUGHES, a citizen of the United States, residing at Sharon, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Rail-Joint Locks, of which the following is a specification.

This invention relates to self-tightening rail joints, and one of the principal objects of the same is to provide simple, reliable and efficient means for preventing the separation of the meeting ends of railway rails by providing means which will lock the nuts from turning and which will take up any looseness in the joint automatically.

Another object of the invention is to provide means for automatically holding the joint at the meeting ends of railway rails and to take up the wear at that point and prevent the loosening of the bolts and nuts, thus eliminating the work of the track walker in tightening the nuts.

Still another object of the invention is to provide reliable and efficient means to always hold the meeting ends of the rails in firm connection to prevent pounding and clinking of the rolling stock as it passes over the joint, and thus prevent the wearing of the rails at the ends.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which,

Figure 1 is a perspective view of a self tightening rail joint made in accordance with my invention and shown in applied position. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail perspective view of the tightening wedge. Fig. 4 is a side elevation and partial section of a modified form of my invention designed more especially for use at railway crossings.

Referring to the drawing the numeral 1 designates the meeting ends of railway rails of the usual or any suitable type. A fish plate 2 of the usual or any suitable construction may be used for the inner sides of the rails at the joint, said fish plate preferably being provided with a bead 3 at its upper edge which bears against the web under the head of the rails.

Upon the outer sides of the rails at the joint, I employ a locking device comprising a plate 4 adapted to fit tightly against the web of the rails at opposite sides of the cen-

ter and provided with an outwardly projecting wedge socket 5. The plate 4 is provided with a flange 6 which extends over the base flange of the rails at the joint. In the outer face of the socket portion 5 a recess is provided in which is seated a strip of malleable metal 7 provided with a notch 8 at each end to fit against the side or at the corner of the nuts 9 fitted to the bolts 10, said bolts passing through holes in the fish plate 2 through the webs of the rails and through the plate 4. Fitted in the wedge socket 5 is a metal wedge 11, said wedge having tapering sides, a beveled corner 12 and a longitudinal groove 13. The wedge 11 is inserted in the socket 5 and will fall in the socket to keep the bolts tight and prevent the joint from loosening. As shown in Fig. 4 the plate 4 is identical in construction with that shown in Figs. 1 and 2, excepting that I have secured a spring 14, by means of a bolt 15, to the plate, said spring having a longitudinal rib 16 on its free end which is adapted to fit in the groove 13 in the wedge 11 to force the wedge downward to lock the joint.

Bolt holes 17 are formed at opposite sides of the wedge socket, but it will be understood that any suitable number of bolts may be used in my device and it may be extended any required distance beyond the joint, depending upon the character of the road and the volume of traffic.

My invention is of simple construction, will reliably hold the bolts and nuts from turning and will automatically lock the joint and prevent jarring of the parts owing to the action of the wedge 11.

I claim:

1. A rail joint comprising a plate having a wedge socket formed therein, a wedge inserted in the socket and bearing against the web of the rail to hold the joint in alignment and to take up the wear, in combination with a nut lock comprising a strip of metal secured in the outer surface of the wedge socket and bearing at its ends against the nuts on the bolts.

2. A rail joint comprising a fish plate upon one side of the rail, a plate upon the opposite side of the rail provided with a wedge socket, a wedge inserted in said socket to bear against the webs of the rails at the joint, a nut lock secured to the wedge socket and engaging the nuts on the bolts and a spring for bearing downward upon the

wedge to take up the wear and hold the joint in alinement.

3. In a rail joint, a plate provided with a wedge socket, a wedge disposed in said
5 socket, said wedge having a groove therein, and a spring secured to the plate, and provided with a rib to engage said groove for holding the wedge in position to lock the joint.

10 4. A rail joint comprising a fish plate upon one side of the joint, a plate upon the opposite side of the joint provided with a

wedge socket, a wedge inserted in said socket, means for locking the nuts on the bolts at opposite sides of the socket, and a 15 spring for pressing downward upon the wedge.

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

HUGH T. HUGHES.

Witnesses:

G. G. GILBERT,
FRANK GILBERT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
