

D. K. REEDER.
Railway Rail-Joint.

No. 160,032.

Patented Feb. 23, 1875.

FIG. 1

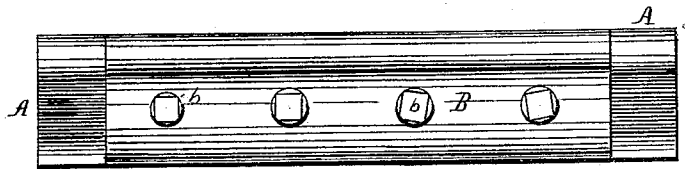


FIG. 2

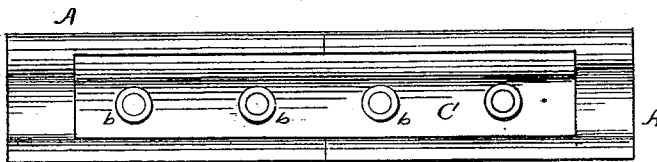


FIG. 3

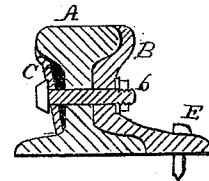
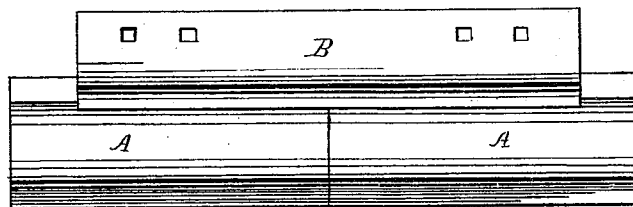


FIG. 4



WITNESSES

Chas. L. Coombs
Wm. H. Minnie BY

INVENTOR

D. K. Reeder

UNITED STATES PATENT OFFICE.

DANIEL K. REEDER, OF RENOVO, PENNSYLVANIA.

IMPROVEMENT IN RAILWAY-RAIL JOINTS.

Specification forming part of Letters Patent No. **160,032**, dated February 23, 1875; application filed October 24, 1874.

To all whom it may concern:

Be it known that I, DANIEL K. REEDER, of Renovo, in the county of Clinton and State of Pennsylvania, have invented certain Improvements in Combined Joint and Joint-Protector, of which the following is a specification:

My invention relates to certain improvements in a combined joint and joint-protector, for uniting, supporting, and protecting the ends of the ordinary rails usually employed in the construction of railroads, to prevent the wear and abrasion which usually take place where such rails are joined, and to firmly bind and secure the same together, as will be fully hereinafter described.

My invention consists of a stay-plate fitted to the outside of the rails, and extending across the joint of the same, and a spring-plate on the opposite side of the rails, also extending across the joint, said spring-plate being set between the upper and lower flanges of the rails, resting upon the lower flange and against the web of the rail at its lower edge, and setting off from said web at its upper edge, which is shaped to correspond with the under side of the upper flange, against which it rests, giving support to said flange, and preventing the same from being broken or injured by the weight of the train. The stay-plate is provided at its lower edge with a broad flange, which is secured to the ties, and prevents the rails from being tipped or thrown over, and at its upper edge is formed flush with the top of the rail, and extends partly over the same, in order to receive the tread of the wheels, and bear a portion of the weight of the train. The two plates are secured to the rails by means of screw-bolts passing transversely through both plates and rails.

In the drawings, Figure 1 represents an elevation of the outside of the rails, showing my improved joint and protector. Fig. 2 represents an elevation of the inside of the rails with my invention attached. Fig. 3 represents a transverse section through the plates and rails, and Fig. 4 a view looking down upon the top of the rails.

A A represent the rails, of the ordinary

construction; B, the stay-plate; and C, the spring-plate attached to the rails, and extending across the joint at their ends, as shown. The plates B and C are of wrought-iron, rolled into proper shape in the same manner as the ordinary rails. These plates are fastened to the rails A A by means of bolts *b*, extending transversely through the plates and rails.

The stay-plate B is formed with a broad flange at its lower edge, which sits over the outer flange of the rails, and is secured to two of the ties by means of bolts or spikes *E*, Fig. 3. This flange will effectually prevent the rails from being thrown over by the train at short curves, and will thus obviate the necessity of braces. The upper edge of said plate is formed flush with the top of the rails, and is shaped to fit over the flange, as shown in Figs. 1 and 3, so as to receive the tread of the wheels of a passing train, and partially sustain the weight of the same, thereby obviating the great wear and tear to which the rails are usually subjected at this point of junction. The plate B is also made to correspond exactly in shape to the outside of the rails, setting closely to the web and under the upper flange, so as to support the same, and prevent it from being broken or injured.

The plate C on the inside of the rail rests upon the lower flange of the same, and against the web at its lower edge. Said plate, however, is set away from the web at its upper edge, which is shaped to receive and support the upper flange, as plainly shown at Fig. 3.

By this construction the plate C performs the part of a spring, and whenever the weight of the train has a tendency to depress the rails it will give slightly, drawing the plate B closely to the outside of the rails by means of the bolts *b*, so as to keep its upper edge in position to receive the tread of the wheels, and will throw the rails into their original position after the passage of the train, the plates C and B assuming their proper positions at the same time.

What I claim, and desire to secure by Letters Patent, is—

The combination of the stay-plate B, made to conform to the outside of the rail and embrace the same closely, with the spring-plate C on the inside of the rail, its lower edge resting against the lower flange and web of the rail, and its upper edge extending away from the web and resting against the

edge of the upper flange, in order to support the same, as and for the purposes herein set forth.

D. K. REEDER.

Witnesses:

CHAS. L. COOMBS,
WM. H. MINNIX.