No. 808,040. PATENTED DEC. 19, 1905.

J. S. GOODWIN.

RAILWAY RAIL JOINT.

APPLICATION FILED MAY 19, 1904. RENEWED OCT. 6, 1905.

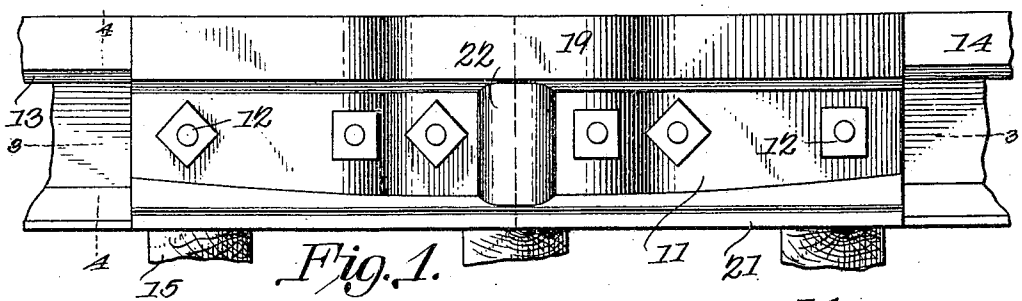

Fig. 1.

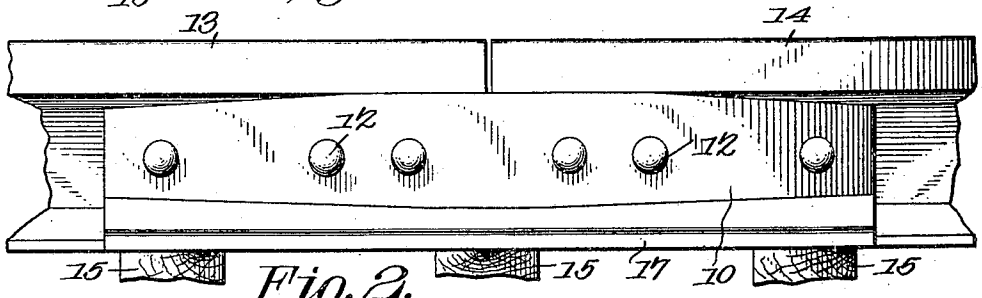

Fig. 2.

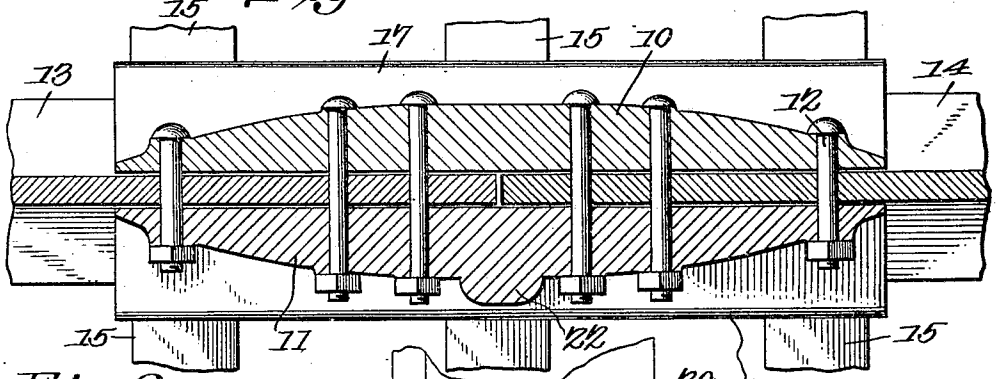

Fig. 3.

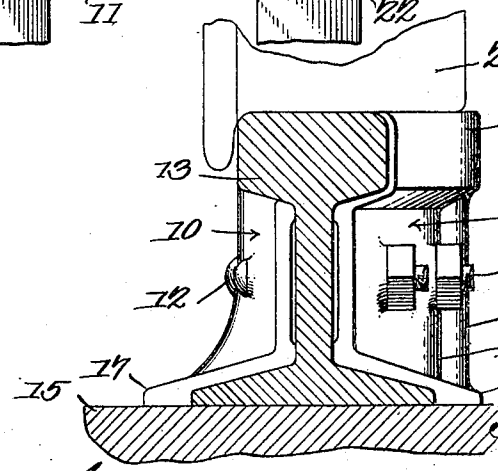

Fig. 4.

Witnesses
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RAILWAY-RAIL JOINT.

No. 808,040. Specification of Letters Patent. Patented Dec. 19, 1905.

Application filed May 19, 1904. Renewed October 6, 1905. Serial No. 281,679.

To all whom it may concern:

Be it known that I, JAMES S. GOODWIN, a citizen of the United States, residing at Centralia, in the county of Lewis and State of Washington, have invented a new and useful Railway-Rail Joint, of which the following is a specification.

This invention relates to the devices for uniting the adjacent ends of railway-rails, and has for its object to improve and strengthen the construction, whereby deflection and lateral displacement of the rails and the tendency to break under the severe strains to which they are subjected are avoided.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claim made therefor.

In the drawings thus employed, Figure 1 is a side view from the outside of the rail, and Fig. 2 is a similar view from the inside of the rail. Fig. 3 is a longitudinal section on the line 3 3 of Fig. 1, and Fig. 4 is a transverse section on the line 4 4 of Fig. 1.

The improved device comprises two plates 10 11, secured by bolts 12 to the rails 13 14 and preferably long enough to reach over three of the ties 15. The central portions of the plates are increased in thickness, and the outer face of each inside plate 10 is flush with the vertical face of the head of the rail. The plate 10 is further provided with a laterally-extended flange 17 for engagement with the foot of the rail, the flange also engaging the rails and also extended for engagement with the adjacent portions of the ties 15. The central portion of the plate 11 is also thickened and provided with an upwardly and laterally extended head 19, the head engaging the outer face of the rail-heads and with its upper surface substantially flush with the treads of the rail-heads, so that the widened head will be engaged by the tread 20 of the passing car-wheels when they pass the juncture of the rails and protect the latter and prevent the hammering or bending of the latter, as hereinafter more fully described. The plate 11 is also formed with a lateral flange 21, similar to the flange 17 on the plate 10 and likewise engaging the opposite portion of the tie-flanges of the rails and the adjacent portions of the ties 15. Disposed between the laterally-extended head 19 and flange 21 is an integral brace 22 to support the rail-head at the point where the greatest strains occur. By this means the rails are firmly clamped together and effectually supported from both deflecting and lateral movement and the adjacent ends of the rails protected from the impact exerted by the passing wheels.

A railway-track equipped with joints of this character will successfully resist all tendency of the rails to move either laterally or vertically and will enable trains to be run with increased speed and require a materially-decreased power to move them, with a consequent reduction of expense and wear and tear both of the road-bed and rolling-stock. The relatively long plates 10 11, thickened centrally and with the upper surfaces of the outside members extended flush with the "treads" of the rails and truss-like extensions of the rails themselves, are formed, which receive the severe pounding strains of the passing trains and effectually protect the ends of the rails, and by extending the plates over a plurality of the ties the strains are so uniformly distributed that the track settles to a correspondingly-uniform extent, thus entirely obviating the objectionable and dangerous deflection or "sagging" at the joints. These deflections at the joints, so common in ordinary rail-joints, are the source of constant annoyance and result, if neglected, in increasing in degree by the pounding of the passing trains and often result in the bending and breakage of the rails.

The labor incident to maintaining the rail-joints in a level condition and restoring low joints is a very material and heavy item of expense in railway operations. Hence the value and importance of the invention herein described will be obvious, as by its use this large item of expense is very largely prevented.

The value and advantage of the device herein described will be especially increased when used on railway-tracks constructed over sandy and other soft soils, as will be obvious, where the ties have a greater tendency to be depressed under the pressure to which they are subjected.

Having thus described the invention, what is claimed is—

In a rail-joint, the combination with the rails, of combined clamping and supporting plates bolted to the opposite sides of the rails for securing them together and having enlarged central portions and tapering toward the ends, one of said plates having a laterally-extending head engaging the side faces of the rail-heads and in transverse alinement with the rail-treads in position to be engaged by the treads of the car-wheels, said plates having laterally-extended flanges their whole length for engagement with the tie-flanges of the rails and the adjacent portions of the ties and with an integral central brace between the widened head and the adjacent laterally-extended tie-flange-engaging portion.

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

JAMES S. GOODWIN.

Witnesses:

M. M. GOODWIN,

GEORGE W. GOODWIN.