J. G. SNYDER.

METALLIC RAILWAY TIE.

APPLICATION FILED JULY 2, 1908.

921,298.

Patented May 11, 1909.

Fig. 1.

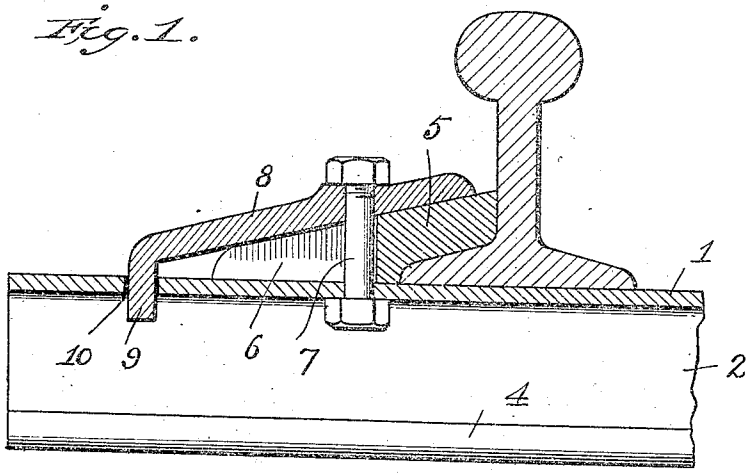



Fig. 2.

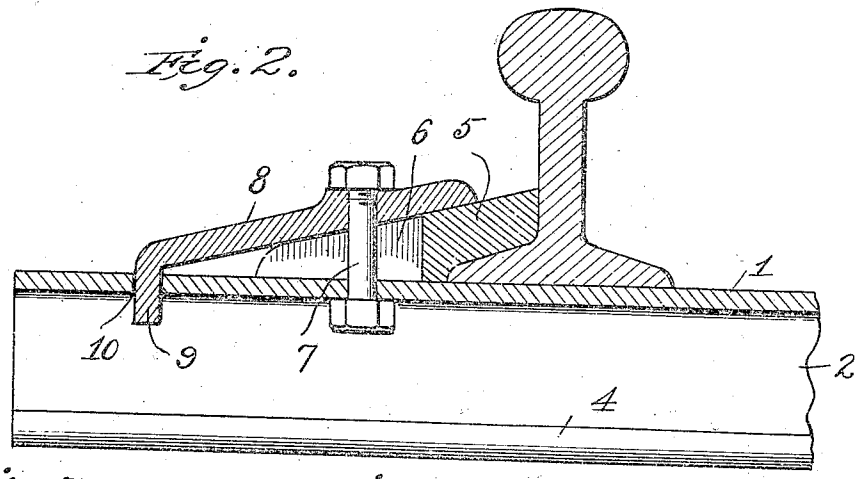



Fig. 3.

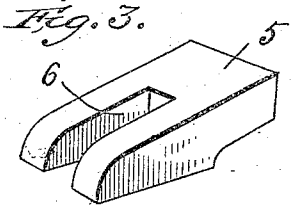



Fig. 5.

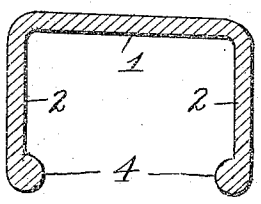
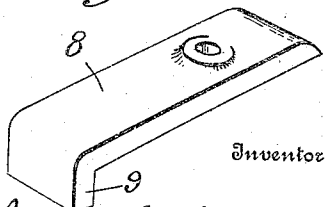



Fig. 4.




Witnesses

Edwin L. Yewell

Edwin F. Fay

Inventor

John G. Snyder

By Grant Burnaugh,

Attorney

# UNITED STATES PATENT OFFICE.

JOHN G. SNYDER, OF ALTOONA, PENNSYLVANIA.

## METALLIC RAILWAY-TIE.

No. 921,298. Specification of Letters Patent. Patented May 11, 1909.

Application filed July 2, 1908. Serial No. 441,595.

*To all whom it may concern:*

Be it known that I, JOHN G. SNYDER, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a specification.

The invention consists in the novel construction, combination and arrangement of parts, hereinafter fully described, pointed out in the appended claim and illustrated in the accompanying drawings.

In the drawings, in which similar reference characters designate corresponding parts, Figure 1 is a sectional view of a device embodying the invention, the clamp being shown in one adjustment. Fig. 2 is a similar view showing the clamp in another adjustment. Fig. 3 is a detail perspective view showing the clamp. Fig. 4 is a similar view of the clamping-plate. Fig. 5 is a cross-sectional view of the tie.

The body of the tie is formed of a casing or shell of sheet metal and in general shape and dimensions is like the ordinary wooden tie. It comprises the upper flat surface or crown 1 and the sides 2, the latter being spaced apart at their lower edges to form a wide opening extending longitudinally through the bottom of the tie. On the inside of the lower edges of the sides are the ribs 4 extending longitudinally of the tie. The casing or shell is adapted to receive an elastic filling of such a nature as to give the required stability to the tie and which will also permit it to yield to take up the shock of the passing load. The filling is held within the tie by the ribs 4. The wide opening in the bottom of the tie allows the filling to contact with the material of the road-bed over a considerable area so that the two may unite to hold the tie against displacement. The ribs not only serve to aid in holding the filling within the tie, but prevent injury to the edges of the flanges from the tamping-tools employed to lay the tie.

The rail is held in place on the tie by the wedge-shaped clamp 5, formed at its inner or butt-end to fit over the base and against the web of the rail. In the outer end of the clamp is the longitudinal recess 6 through which extends the bolt 7 fast in the crown of the tie. Extending over the outer end of the clamp is the holding or clamping-plate 8 through which the bolt 7 also extends. At the outer end of the holding-plate is the downwardly turned flange 9 engaging the slot 10 in the crown of the tie.

In securing the rail to the tie, after the former has been positioned on the latter, the clamp 5 is moved until its butt-end projects over the base and against the web of the rail. This adjustment of the clamp is allowed by the longitudinal recess 6 through which the bolt 7 passes. By tightening the nut on the upper end of the bolt the several parts are forced together and held in place. When the under face of the holding-plate is forced against the upper face of the clamp, the flange 9 moves vertically in the slot 10 to accommodate the plate to the clamp. In Fig. 1 the clamp is shown as extending a considerable distance beneath the holding-plate, so that the flange 9 projects somewhat above the tie. In Fig. 2 the clamp is shown extending a less distance beneath the holding-plate, consequently the flange projects to a less extent above the tie. After the parts are assembled and secured the several parts are firmly held in place. The holding-plate through the bolt holds the clamp down upon the tie and base of the rail, and the flange 9 registering with the slot 10 prevents any outward movement of the plate and clamp.

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

A metallic railway-tie comprising a casing or shell provided with a slot in its crown, a rail resting on the crown of said tie, a wedge-shaped clamp formed at its inner end to fit over the base and against the web of the rail and having a longitudinal recess in its outer end, a holding-plate extending at its inner end over the outer end of said clamp, a flange on the outer end of said holding-plate registering with and vertically movable in said slot in the crown of the tie, and a bolt passing through the crown of the tie, the recess in said clamp and the holding-plate.

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

JOHN G. SNYDER.

Witnesses:

GRANT BURROUGHS,

EDWIN F. FREY.