No. 791,106. PATENTED MAY 30, 1905.

J. E. OWENS.

RAILWAY TIE.

APPLICATION FILED FEB. 6, 1905.

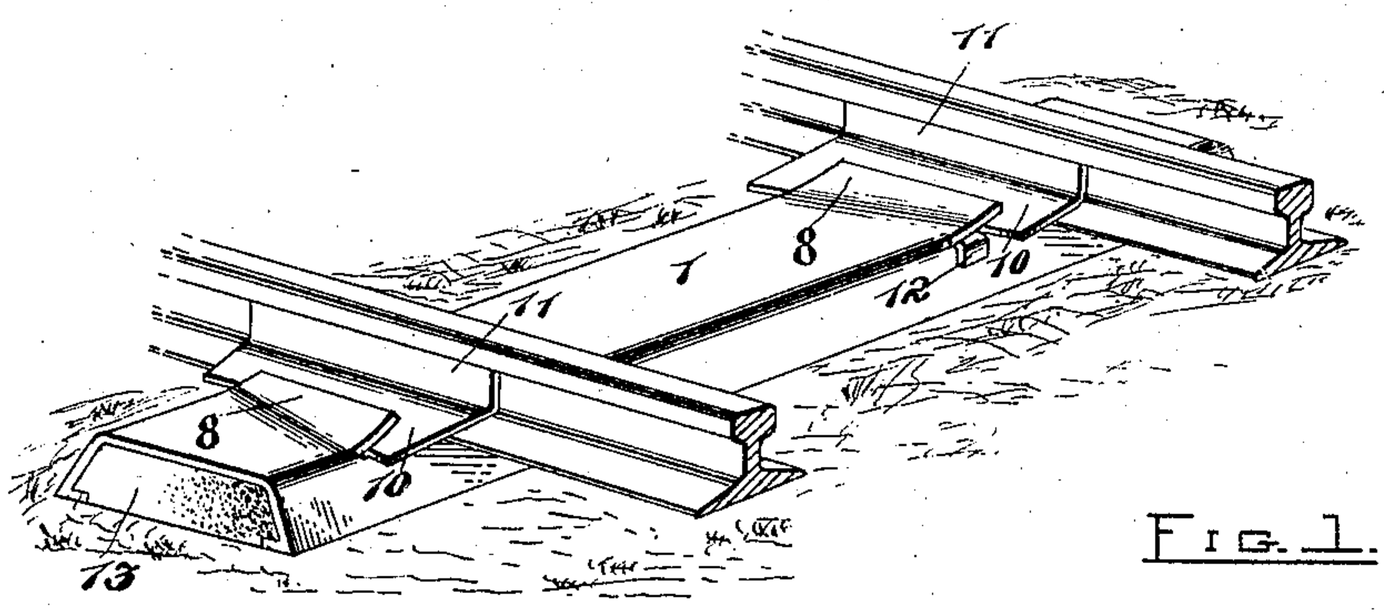
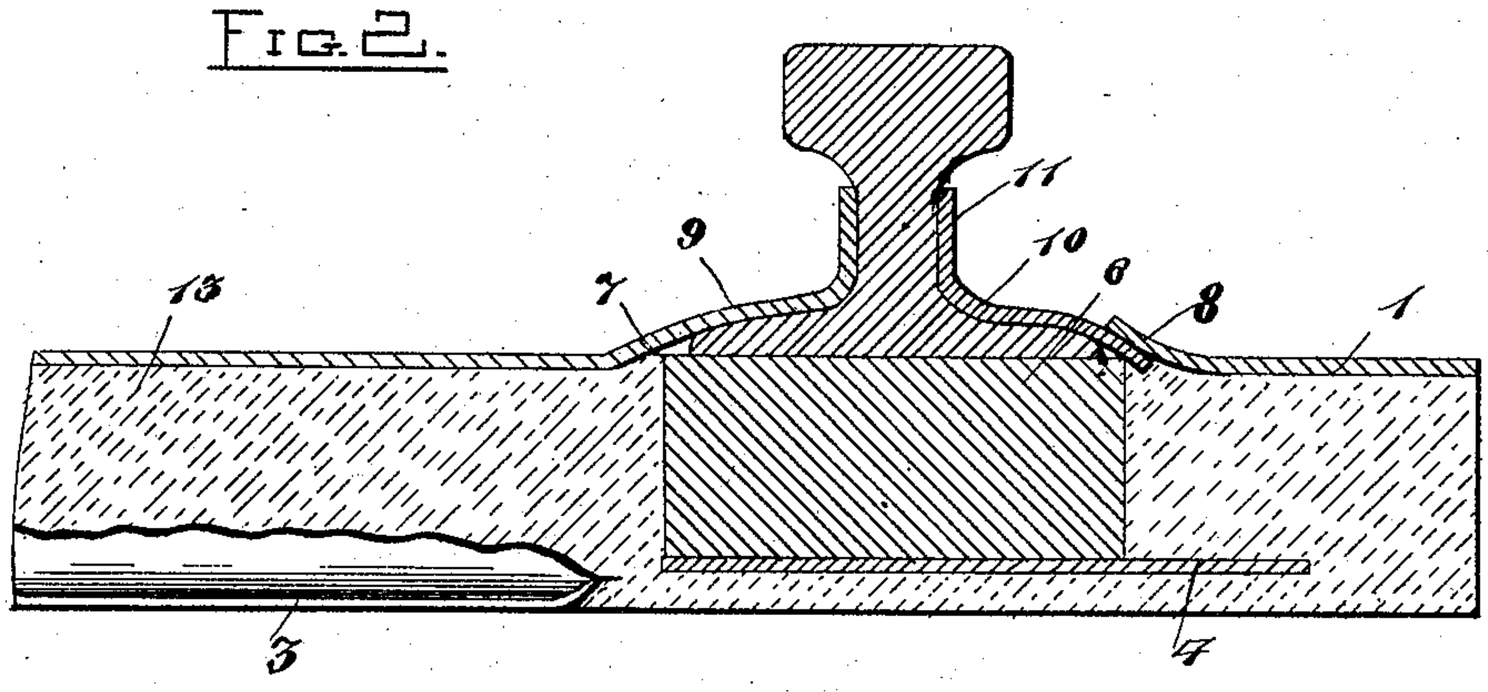


FIG. 1.

FIG. 2.



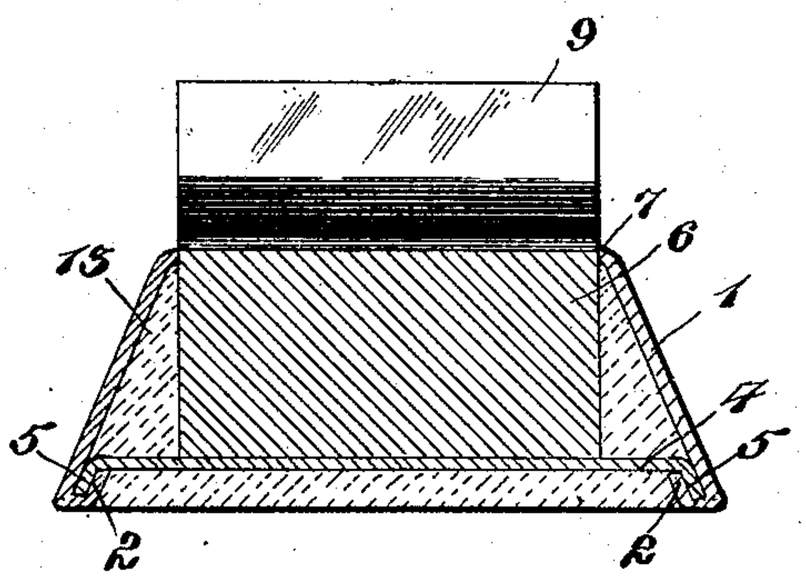


FIG. 3.

Witnesses
Forrest G. Smith.
C. H. Griebauer.

Inventor
J. E. Owens
by H. B. Wilson
Attorney

No. 791,106. Patented May 30, 1905.

UNITED STATES PATENT OFFICE.

JAMES E. OWENS, OF PORTER, WASHINGTON.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 791,106, dated May 30, 1905.

Application filed February 6, 1905. Serial No. 244,520.

To all whom it may concern:

Be it known that I, JAMES E. OWENS, a citizen of the United States, residing at Porter, in the county of Chehalis and State of Washington, have invented certain new and useful Improvements in Railway-Ties; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improved railway-tie; and it consists in the construction, combination, and arrangement of devices hereinafter described and claimed.

The object of my invention is to provide an improved railway-tie which is made of metal with cement or other plastic filling, wooden blocks to support the rails, which are removable from the ties, so that they may be renewed when the same becomes necessary, and it also includes means for securing the rails thereto so that the rails cannot spread.

In the accompanying drawings, Figure 1 is a perspective view of a railway-tie embodying my improvements. Fig. 2 is a longitudinal sectional view of the same, and Fig. 3 is a transverse sectional view of the same.

My improved railway-tie has a shell 1, which is made of metal and is bent at its lower side and at its ends. The sides of the tie near their lower edges are provided with inturned flanges 2, which extend inwardly for a suitable distance from the ends of the tie, and the latter is also provided between the said flanges 2 with flanges 3. Brace and support plates 4, which are made of metal, fit between the sides of the tie, are removable therefrom through the ends of the tie, and are provided with flanges 5, which flanges engage the flanges 2 and serve to removably support said plates. On the said plates are blocks 6, which are preferably of wood and the upper sides of which project through openings 7 in the top of the tie at suitable points to engage the bases of and to support the rail. The tie is formed on opposite sides of each of said openings with an inclined securing-flange 8 and with a flange 9, the latter of a size and shape to bear against one side of one of the rails and to also bear against the upper side of one of the base-flanges thereof. Key-plates 10, which are substantially wedge-shaped, are formed each with a flange 11 to bear against one side of one of the rails, so as to secure the rail between the flange 11 and the flange 9. The said key-plates are engaged by the flanges 8 of the tie and bear on the blocks 6 and are driven across the tie to the extent required to firmly clamp the rails between them and the said flanges 9, the front projecting ends of the said key-plates being then downturned, as at 12, at their outer corners, so that the said downturned portions are caused to bear against the sides of the tie, and thereby the said key-plates 10 are locked in position.

The hollow tie is filled with cement or other suitable filling 13, which renders the same solid and very greatly strengthens the tie.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention

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

1. A railway-tie made of metal, hollowed on its under side and having its sides provided with inwardly-extending flanges, in combination with a supporting-plate on said flanges, and a rail-supporting block on said supporting-plate, substantially as described.

2. A railway-tie made of metal, hollowed on its under side and having a filling, as of cement, substantially as described.

3. A railway-tie having a flange to engage one side of a rail, and a locking-flange opposite the first-named flange, in combination with a key-plate to bear under the locking-

flange and adapted to bear against one side of the rail, said key-plate being wedge-shaped, to adapt it to clamp the rail, and being further provided at its forward end with a portion which is adapted to be turned down to bear against one side of the tie to lock the key-plate in place.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES E. OWENS.

Witnesses:
J. WILL ANDMON,
E. S. AVEY.