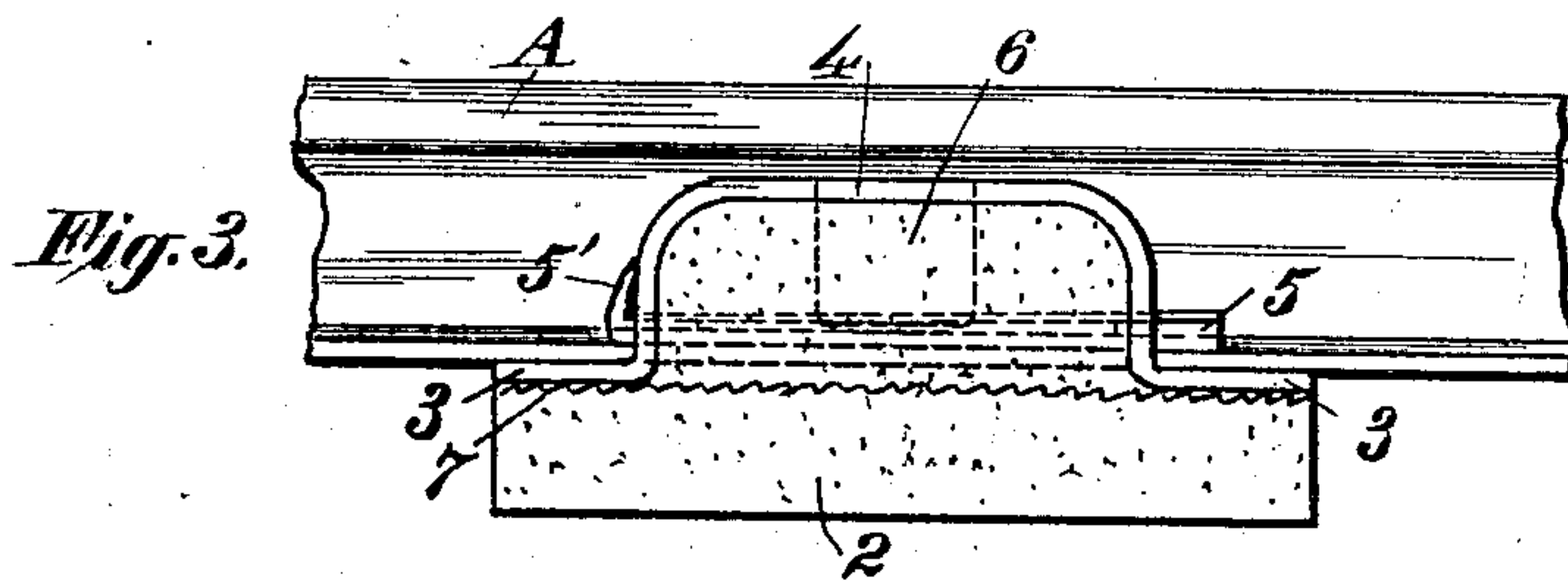
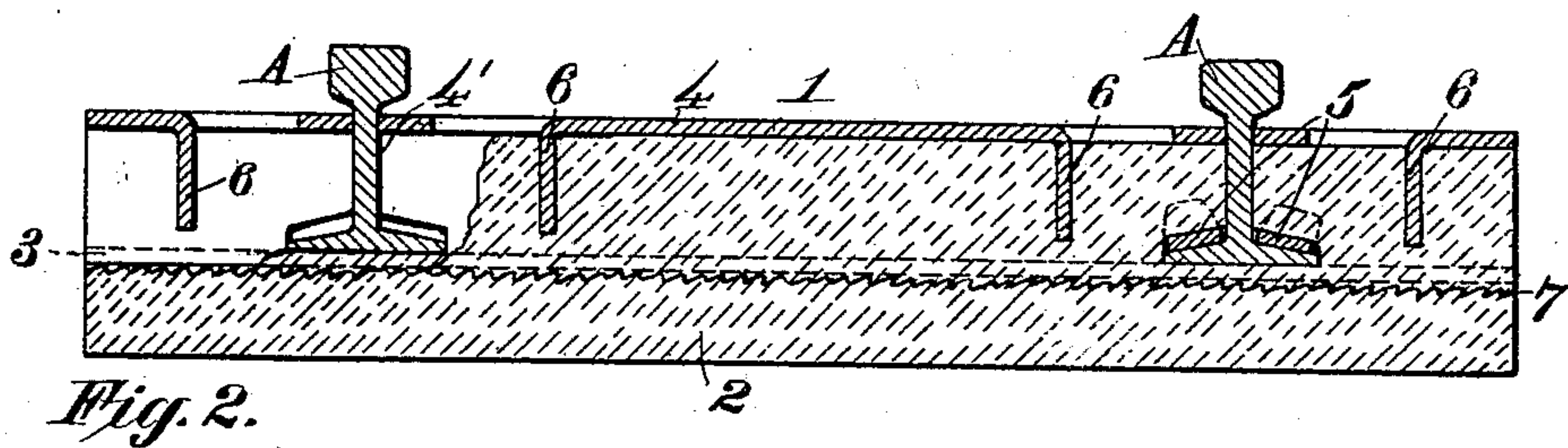
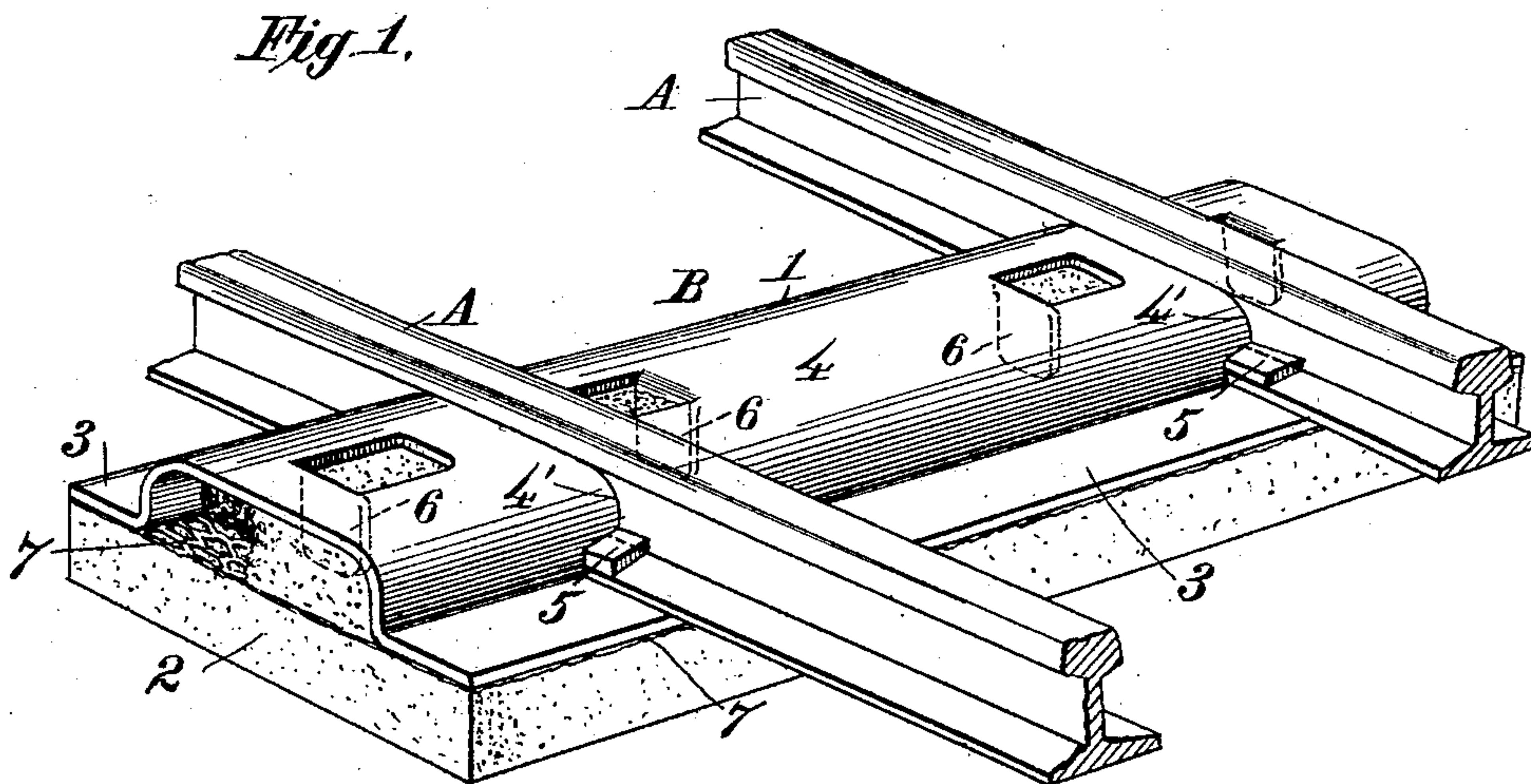


A. W. JENKINS.
STEEL RAILWAY TIE.
APPLICATION FILED OCT. 9, 1907.

907,502.

Patented Dec. 22, 1908.



Witnesses:
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UNITED STATES PATENT OFFICE.

ABISHAI WILLIAM JENKINS, OF CHICAGO, ILLINOIS.

STEEL RAILWAY-TIE.

No. 907,502.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed October 9, 1907. Serial No. 396,619.

To all whom it may concern:

Be it known that I, ABISHAI WILLIAM JENKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Steel Railway-Ties, of which the following is a specification.

My invention relates to railroad ties and has particular reference to improvements in cross ties of that type comprising a sheet or cast metal shell provided with a concrete filling or base.

The object of my invention is to provide a railway tie of such improved construction as to entirely prevent the spreading of the rails.

A further object is to provide a railway tie as mentioned which shall be comparatively inexpensive to manufacture and of great durability.

A further object of my invention is to provide a tie which may be readily applied to the rails and secured thereto without the use of bolts or spikes.

Further objects will appear hereinafter.

With these objects in view, my invention consists in the railway tie comprising the various novel features of construction and arrangements of parts all as will be fully described hereinafter and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which,

Figure 1 is a perspective view of a cross tie embodying my invention in its preferred form and illustrating the rails in place, Fig. 2 is a central longitudinal section thereof and Fig. 3 is an end elevation of the same.

Referring to the drawings, A designates the ordinary T rails of a railroad track and B one of the cross ties. The tie comprises a metal shell, 1 which may be made of sheet metal or a casting, as desired, and a cement or concrete filling or base, 2. The middle portion of the tie is arched in transverse cross section throughout its length and extending from opposite sides of the arched middle portion are horizontal longitudinal flanges, 3, upon which the base of the rails rest. The arched portion, 4 of the tie is provided

with transverse slots, 4', shaped to correspond approximately to the web and base flanges of each rail, so that the tie and rails can be assembled by passing the rails longitudinally through the slots. In order to facilitate assembling, the portions of the slots which receive the flanges of the rail are made somewhat larger than said flanges and after the rails and ties are properly positioned wedges, 5 are driven through the remaining space above said flanges and their ends 5' turned up as shown in Fig. 3. This securely locks the rails and ties together, and the edges of the slots, 4' by abutting against the web of the rails prevent lateral movement of the rails.

The concrete, 2 may be filled in the arched portion of the shell alone if desired, or it may be formed so as to extend under the flanges 3, as shown, forming a strong and durable structure. The arched portion of the shell is provided with projections, 6 stamped or molded thereon and constituting means whereby the shell is anchored on the concrete filling and prevents relative movement between them. Beneath the flanges, 3 and extending from the outer edge of one to the outer edge of the other throughout the length of the tie, is a metal grating, 7 which is embedded in the concrete. This may be a coarse mesh wire grating or may be formed of expanded sheet metal and constitutes a tie or strengthening member for the concrete portion of the structure.

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

1. A cross tie comprising a metal body having an arched center and horizontally extending flanges at the base thereof, said arched portion having transverse rail receiving slots conforming to the shape of the web and flanges of the rail, a concrete base underlying said metal body and a metal grating embedded in said concrete base, substantially as described.

2. A cross tie comprising a metal body having an arched center said arched center having transverse rail receiving slots conforming to the shape of the cross-section of the rail and the portion of the slot adapted to

receive the base flanges of the rail being of greater depth than the thickness of said flanges, and wedge members adapted to be driven in said slots above said flanges after
5 the rail is in position, substantially as described.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

A. WILLIAM JENKINS.

Witnesses:

ADDIE S. POTTS,

HELEN F. LILLES.