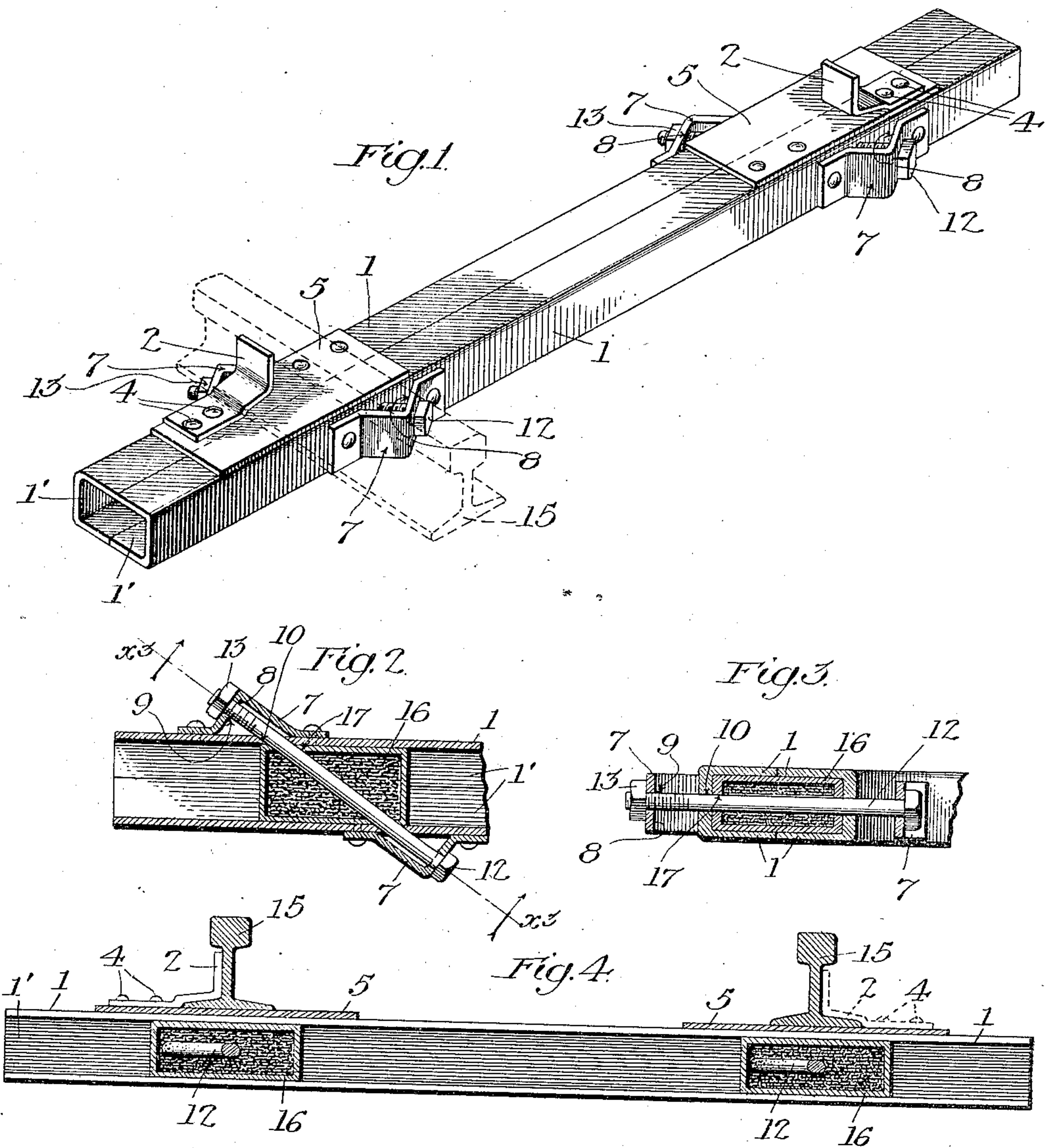


997,893.

O. W. BEACH.  
METALLIC RAILROAD TIE.  
APPLICATION FILED JULY 20, 1910.

Patented July 11, 1911.

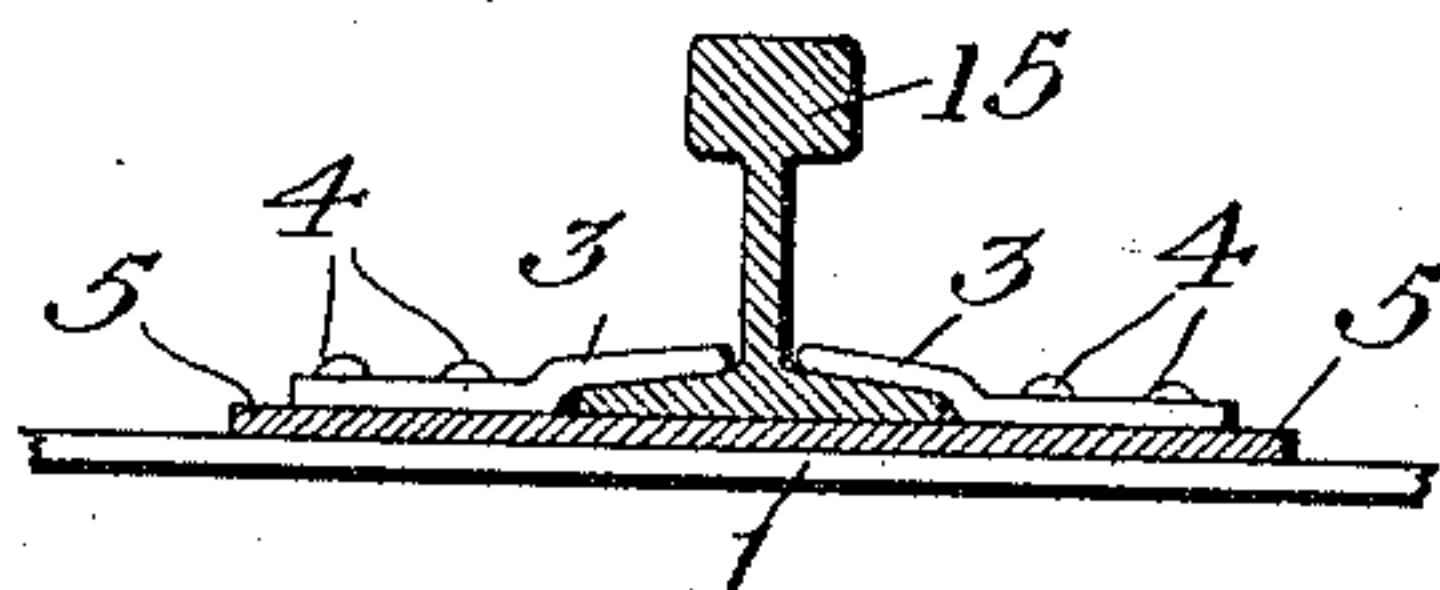


Witnesses:

*Lute A. Allen*

*Lester H. Fulmer*

Fig. 5.



Inventor:  
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attys.



# UNITED STATES PATENT OFFICE.

OSCAR W. BEACH, OF LOS ANGELES, CALIFORNIA.

METALLIC RAILROAD-TIE.

997,893.

Specification of Letters Patent. Patented July 11, 1911.

Application filed July 20, 1910. Serial No. 572,905.

*To all whom it may concern:*

Be it known that I, OSCAR W. BEACH, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Metallic Railroad-Tie, of which the following is a specification.

This invention relates to metallic railroad ties which are formed of two channel iron members provided with rail engaging projections and relatively adjustable to clamp the rails between said projections, giving a hollow tie construction which is firmly secured to the rails without the use of spikes, or exposed bolts, and the main object of the present invention is to provide means for interior support of such hollow ties at the parts where the greatest strain occurs, namely, directly under the rails.

A further object of the invention is to provide means for deadening the vibration or jar of the parts of the tie and of the road bed under the movement of the train, thereby reducing the noise and the wear and tear of the structure.

Other objects of the invention will appear hereinafter.

The accompanying drawings illustrate the invention, and referring thereto: Figure 1 is a perspective of the tie. Fig. 2 is a horizontal section of an end portion of the tie. Fig. 3 is an oblique section on the line  $x^3-x^3$  in Fig. 2. Fig. 4 is a vertical longitudinal section of the tie in the plane of the joint between the two members of the tie. Fig. 5 shows a side elevation of the tie plate and fastening device applied to a rail.

The tie comprises two members which are identical in construction, each of said members consisting of a channel iron 1, rail-flange engaging lugs 2 rigidly connected to said channel members 1 as by rivets 4 and a plate 5 rigidly secured to each of the channel members 1, said lugs 2 of each member 1 being, for example, secured on top of the plate 5, the same rivets 4 serving to hold the lug 2 and the plate 5, and said plate extending inwardly from the lug a sufficient distance to form a seat or chair for the rail, and preferably projecting laterally so as to extend over the other channel member when the same are assembled, as shown in Fig. 1. Each of said channel members is further provided with a bracket member 7 riveted or otherwise secured thereto, and extending obliquely therefrom and provided with an

oblique shoulder 8 and a perforation 9 so that when the two members are assembled with their channels 1' facing one another as shown in Fig. 1, the perforations 9 in the brackets 7 are in alinement with perforations 10 in the channel members 1 and serve to receive a bolt 12 which extends through said perforations; the end of said bolt and a nut 13 of the bolt engaging with the oblique shoulders 8 of said brackets to draw the channel members 1 longitudinally with respect to one another, thereby causing the lugs 2, on said channel members to engage the rails at opposite sides of the track, as indicated at 15 in dotted lines in Fig. 1, to hold the rails firmly from spreading.

The above described construction of the tie is especially adapted for use at switches, where it is desired to prevent the rails from spreading. The construction shown in Fig. 5 may be used in the case of the ordinary ties, the plates 5 in that case being provided with two lugs 3 engaging on opposite sides of the rail to clamp the same in place.

A block or internal supporting member is inserted within the hollow tie formed by the channel members 1, near each end thereof, in such manner as to provide a reinforcing support directly beneath the rail, said block being preferably hollow, and consisting of a casing or box 16 adapted to fit within the space formed by the channel portions 1' of the channel members 1, so as to engage with the top, bottom and side walls of said space and perforated as at 17 for passage of the fastening bolt 12 aforesaid, said box or casing 16 being filled with suitable filling material, such as sand, cement or other material capable of furnishing necessary support, and at the same time acting as a deadening agent. When sand or other material is used for this purpose, it will be understood that the same is packed tightly into the box 16, and its escape and movement is prevented by the tight fitting parts so that it is effective as a supporting means, but acts to absorb or deaden the sound and vibration.

What I claim is:

1. A metallic railroad tie comprising two channel members extending side by side with their channels placed together forming a hollow tie, means clamping said channel members together, said channel members being provided with lugs for engagement with the rail, and blocks within said channel members filling the same at portions adja-



cent to said lugs to form a reinforced support beneath the rail, and sound deadening filling in said blocks.

2. A metallic railroad tie comprising two  
5 channel members extending side by side  
with their channels placed together forming  
a hollow tie, means clamping said channel  
members together, said channel members  
being provided with lugs for engagement  
10 with the rail, and blocks within said chan-  
nel members filling the same at portions ad-  
jacent to said lugs to form a reinforced sup-  
port beneath the rail, said blocks being hol-  
low and filled with a sound-deadening fill-  
15 ing.

3. A metallic railroad tie comprising two  
channel members extending side by side  
with their channels placed together forming  
a hollow tie, means clamping said channel  
20 members together, said channel members be-  
ing provided with lugs for engagement with  
the rail, and blocks within said channel  
members filling the same at portions adja-  
cent to said lugs to form a reinforced sup-  
25 port beneath the rail, said blocks and the  
walls of said channel members being perfo-  
rated, and the said clamping means com-

prising a bolt extending through said per-  
forations, and obliquely through the block  
and channel members.

4. A metallic railroad tie comprising two  
channel members extending side by side  
with their channels placed together forming  
a hollow tie, means clamping said channel  
members together, said channel members be- 30  
ing provided with lugs for engagement with  
the rail, and blocks within said channel  
members filling the same at portions adja-  
cent to said lugs to form a reinforced sup-  
port beneath the rail, said blocks being hol- 40  
low and filled with a sound-deadening fill-  
ing, the walls of said blocks and of said  
channel members being perforated, and said  
clamping means consisting of a bolt extend- 45  
ing through said perforations, and obliquely  
through the block and channel members.

In testimony whereof I have hereunto set  
my hand at Los Angeles, California, this  
13th day of July 1910.

OSCAR W. BEACH.

In presence of—

G. T. HACKLEY,  
P. H. SHELTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."