

H. H. RANJE.
RAILROAD TIE.
APPLICATION FILED AUG. 27, 1909.

942,745.

Patented Dec. 7, 1909.

Fig. 1.

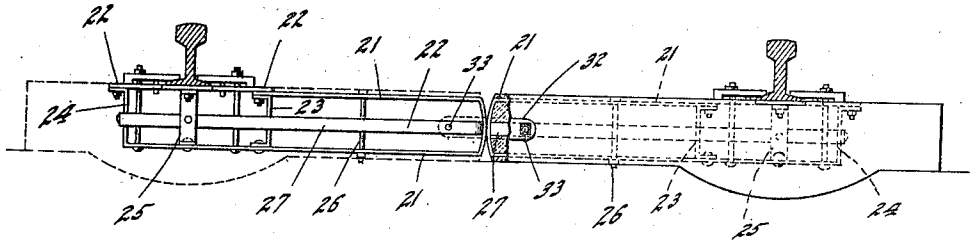


Fig. 2.

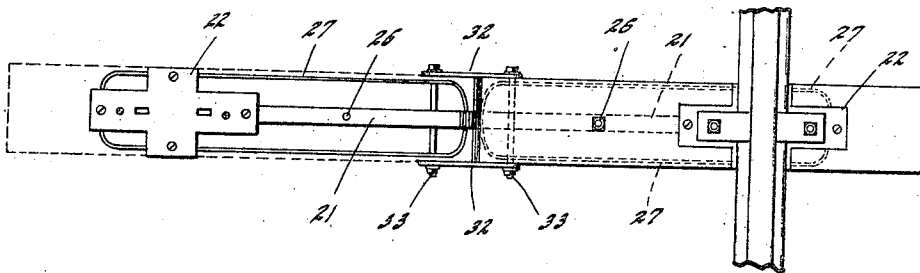
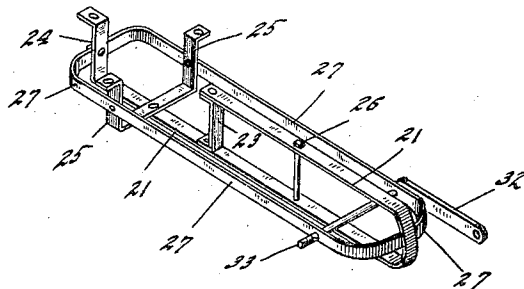


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

HUGH H. RANJE, OF INDIANAPOLIS, INDIANA.

RAILROAD-TIE.

942,745.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed August 27, 1909. Serial No. 514,890.

To all whom it may concern:

Be it known that I, HUGH H. RANJE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

My present invention consists in certain improvements upon that forming the subject-matter of my Letters Patent No. 906,067, dated December 8, 1908, whereby greater strength, durability and efficiency are obtained, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a view, partially in side elevation and partially in skeleton form, illustrating my improved tie, fragments of railway rails being shown thereon in section; Fig. 2 a top or plan view of a structure substantially the same in form and arrangement as that shown in Fig. 1, except that one of the fragments of railway rail and the clamps holding the same to the tie are removed, and Fig. 3 a perspective view illustrating the skeleton metal framework around which the concrete is placed in forming my improved tie—the plate upon which the railway rail immediately rests being however omitted.

In my present construction the tie is formed in two parts, instead of in one as in my former patent; and, instead of a single tie bar, I construct a skeleton framework consisting of two U-shaped members, one of which 21 is in part similar to the bar 21 of my said former patent, but, instead of extending entirely across the tie, extends only to the center where it bends up, and then returns and is riveted or bolted to the plate 22. The vertical members or struts 23, 24 and 25 correspond to the similar parts in my former patent, and there is a connecting bolt 26 which ties the upper and lower portions of bar 21 together at a central point. The other U-shaped member 27 extends around the structure just described horizontally, and forms the sides of the cage-like skeleton, of which the bar 21 forms the principal portion of bottom and top,—all these members being united together by bolts or rivets, and thus forming a strong and rigid skeleton structure, as shown. There are two of these skeleton structures, as indi-

cated by the drawings, and these are counterparts of each other. Both are entirely embedded in concrete, except the vertical portions of the bars 21 at the points where they come together, where they come to the surface and are designed to be in contact. These portions are curved or rocker-shaped in form, so that the two parts may have some movement in relation to each other at this point without breaking or shattering any part of the structure. The two complete members are connected together by coupling plates 32 and bolts 33 by means of which the rail-bearing portions are held from separation longitudinally, but are permitted the slight movement previously spoken of.

The rails and rail clamps are exactly the same as in my former patent, and need not be described herein.

The concrete body, besides being divided into two sections, differs from that of my former patent, in that the body of concrete is increased directly below the point where the rails rest upon the tie, as illustrated in Fig. 1, where it is shown as swelled out, and its under side of a curved formation.

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

1. The combination, in a railway tie, of two sections each composed of a metal skeleton and a cement body, the plates of the metal skeleton extending to the surface where the two parts come together and having at that point a curved form, coupling plates for uniting the sections, and bolts extending through the sections and the coupling plates and holding the same together.

2. The combination, in a railway tie, of a metal skeleton composed of two U-shaped longitudinal members secured together, rail bearers, struts connecting said several longitudinal members, and bolts connecting the several parts together.

3. The combination, in a railway tie composed of two parts, each embodying a metal skeleton composed of two U-shaped longitudinal members secured together, rail bearers, struts connecting said several longitudinal members, bolts connecting the several parts together, and coupling plates and bolts connecting the sections.

4. The combination, in a railway tie, of two sections each composed of a metal skeleton and a cement body, the plates of the

metal skeleton extending to the surface where the two parts come together and having at that point a curved form, coupling plates for uniting the sections, and bolts extending through the sections and the coupling plates and holding the same together, the cement body of each section being thickened downwardly below the point where the rail rests upon the tie.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this twenty-fifth day of August, A. D. one thousand nine hundred and nine.

HUGH H. RANJE. [L. s.]

Witnesses:

CHESTER BRADFORD,
THOMAS W. McMEANS.