O. P. MEGAHAN.

RAILWAY TIE STRUCTURE.

APPLICATION FILED SEPT. 3, 1912.

1,067,827. Patented July 22, 1913.

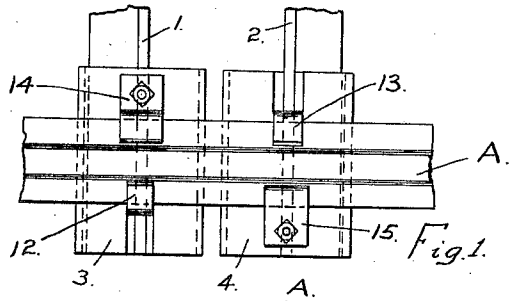


Fig. 1.

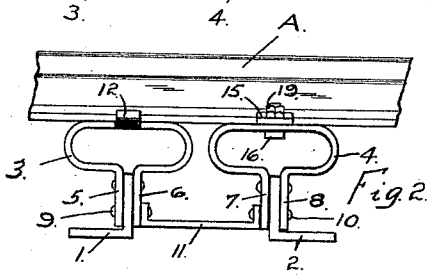


Fig. 2.

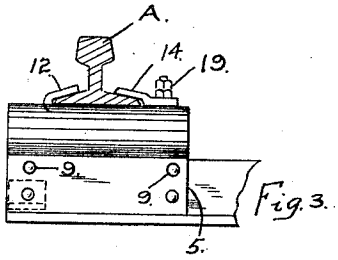


Fig. 3.

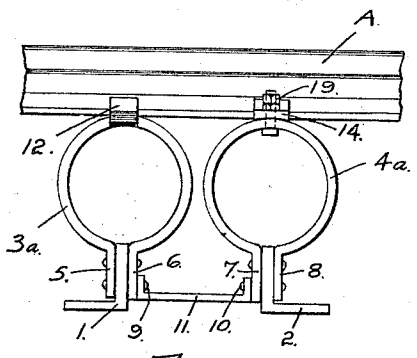


Fig. 4.

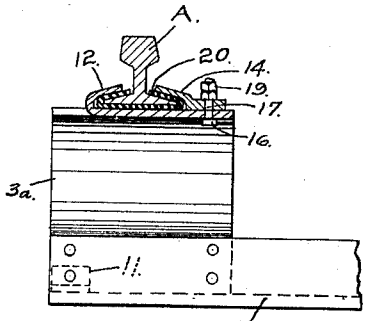


Fig. 7.

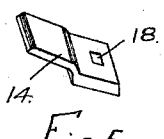


Fig. 5.

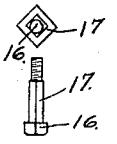


Fig. 6.

Witnesses
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RAILWAY-TIE STRUCTURE.

1,067,827. Specification of Letters Patent. **Patented July 22, 1913.**

Application filed September 3, 1912. Serial No. 718,232.

To all whom it may concern:

Be it known that I, OLIVER P. MEGAHAN, a citizen of the United States, residing at Westerville, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Railway-Tie Structures, of which the following is a specification.

Numerous endeavors have been made in the art of railway tie structure to perfect a tie having a maximum longevity and which will still be sufficiently resilient for practical use in the formation of suitable rail beds to be subjected to heavier stresses occurring in railroad construction. These endeavors have taken the form of cementitious ties and of metallic ties. The former have generally been found to be too heavy and to have other qualities of an undesirable nature. The latter have generally been found to be lacking in resiliency and consequently unsuitable for practical purposes.

My invention represents an endeavor to obviate this drawback in metal ties and to produce a metal tie structure of suitable strength which is not lacking in resiliency and which, in fact, provides practically the amount of resiliency required.

The preferred embodiment of my invention takes the form of rigid base elements and superimposed resilient elements upon which the rails preferably rest and are supported, such rails being desirably directly contacting with these resilient elements. In the desired form of my invention, the resilient elements comprise supporting surfaces which are raised above their feet at the centers thereof and consequently give an increased amount of resiliency. In the preferred form, these resilient members are loop-shaped in cross section.

The preferred embodiment of my invention is shown in the accompanying drawings, in which similar characters of reference designate corresponding parts, and in which:

Figure 1 is a plan view of one section of tie structure, Fig. 2 is an end elevation of the structure shown in Fig. 1, Fig. 3 is a side elevation of this structure, Fig. 4 is an end elevation of a modified form, Fig. 5 is a perspective of one of the clamping plates preferably utilized by me and shown as having a square bolt hole therein, Fig. 6 is a detail view of the square bolt and nut structure which I prefer to use, and, Fig. 7 is a sectional view taken centrally through one of the cushion elements of Fig. 4, but showing the application of an insulating fiber element to adapt the invention to electrical railroad structure.

In the specific description of the drawings, it may be pointed out by reference thereto that I utilize a structural iron base comprising spaced L-beams 1 and 2 extending in the same direction with the normal tie and individually provided at either end with a loop element, which loop elements are designated 3 and 4 and are provided upon their lower sides with spaced legs 5 and 6 and 7 and 8, which legs are adapted to and straddle the vertical legs of the L-members 1 and 2, to which they are preferably secured by riveting as at 9 and 10. These L-shaped members with the loops carried thereon are preferably braced and held apart by spanning bars 11. It will be noted that the upper portions of the loop members are substantially in the form of a collapsed cylinder in the sense that their longer sides are parallel or substantially so. The upper of these longer sides are desirably in the same plane and the adjacent units of the pairs are stamped out as at 12 and 13, so as to provide diagonally opposite hook flanges which form receptive sockets for opposite sides of the rail base, designated A. The rails are held against movement in position in the sockets formed by the members 12 and 13, by the complemental plates 14 and 15, which are respectively positioned upon the upper surfaces of the loops 3 and 4 in diagonally opposite relation and which are held against movement by means of bolts 16 having square shanks 17 for passage through the squared apertures 18 in the plates 14 and 15, these bolts being desirably locked in position by lock nuts 19. This description applies to the structure shown in Fig. 4 with the exception that the loop members, which may be designated 3^a and 4^a, are practically circular in cross section and consequently produce a rail tie less resilient than the structure shown in Fig. 2, although still sufficiently resilient for certain uses.

The structure shown in Fig. 7 is practically identical with that shown in Fig. 4, with the addition of the insulating element 20 which may be of fiber or other suitable material.

It will be apparent from the above description that I have provided a support for railway rails which is sufficiently rigid to

be serviceable under all varying conditions of actual service and which is yet provided with a certain degree of resiliency so as to accommodate and compensate for the various stresses and strains which inevitably occur in the use of railroad ties.

What I claim is:

1. A metallic railway tie comprising a structural iron base member formed with a flat bottom portion and an upwardly extending leg, and a strap element bent to form a loop extending upwardly from each end of said base member and having both its ends rigidly secured to said upwardly extending leg.

2. A metallic railway tie comprising a base of spaced structural iron members, said members each being formed with a flat base and an upwardly extending leg, and a strap element bent to form a loop extending upwardly from each end of each member having both its ends rigidly secured to the same upwardly extending leg.

3. A metallic railway tie comprising spaced angle iron base members and a strap element bent to form a loop extending upwardly from each end of each angle iron and having both its ends rigidly secured to the same angle iron member.

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

OLIVER P. MEGAHAN.

Witnesses:
WALTER E. L. BOCK,
H. M. GILLESPIE.

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