

1,048,598.

Fig.1.

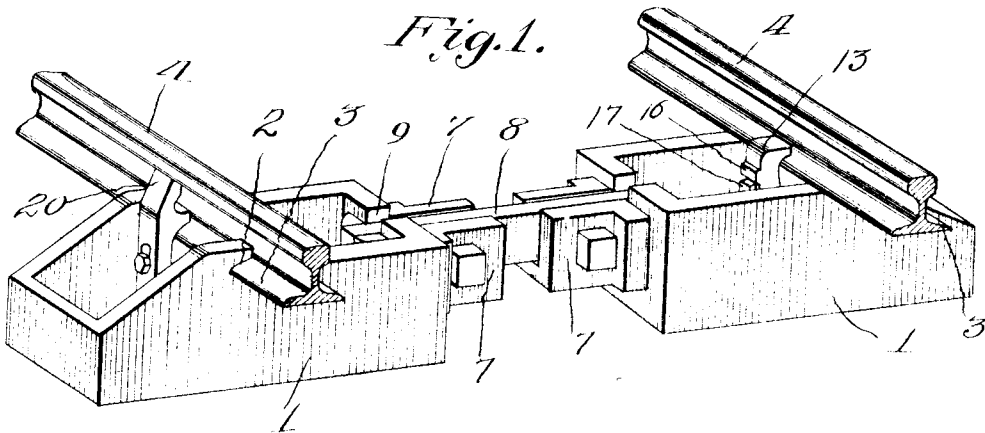


Fig. 2.

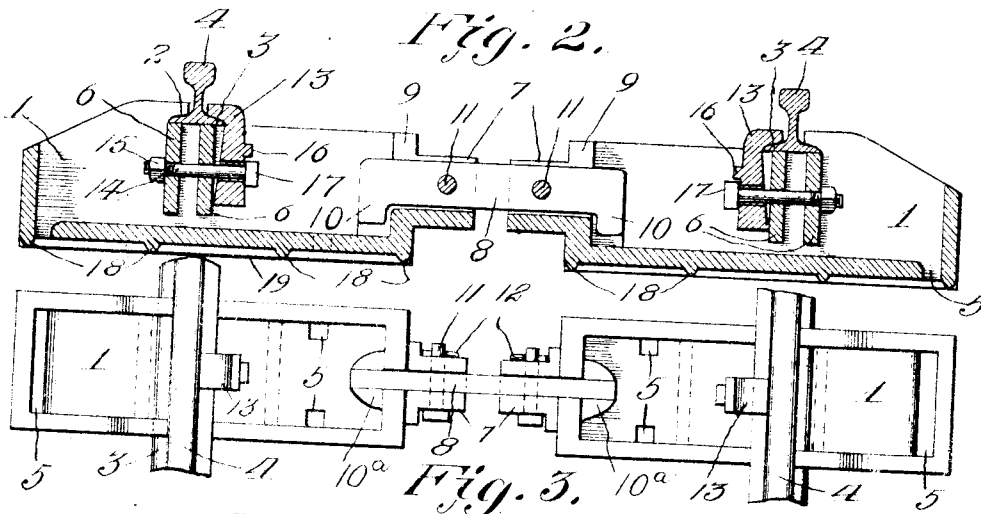
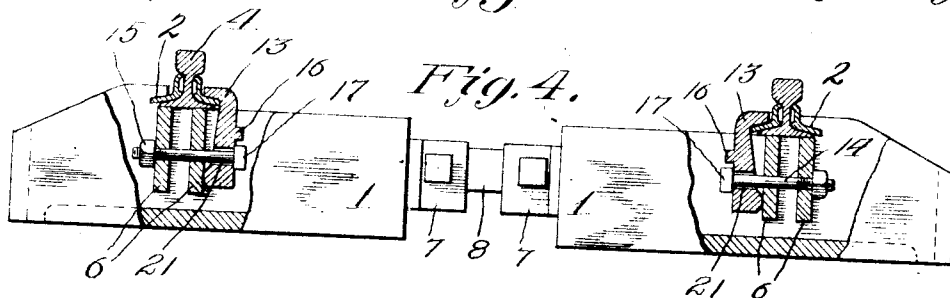


Fig. 3.



Witnesses.
Philip H. Wall
Sylvia Boron.

By Bond & Miller

Attorneys

UNITED STATES PATENT OFFICE.

BARNHART F. SIBER, OF MASSILLON, OHIO.

RAILWAY-TIE.

1,048,598.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed September 18, 1912. Serial No. 721,036.

To all whom it may concern:

Be it known that I, BARNHART F. SIBER, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

My invention relates to improvements in railway ties formed of metal in which railway bases are employed, which bases are connected together and it further consists in providing means for securing the railway rails upon the bases or supporting heads.

The objects of the present invention, are first, to form a railway tie of metal and of separate parts, second, to provide means for rigidly connecting the parts together, and third, to provide means for securely holding the railway rails. These objects, I attain by the construction illustrated in the accompanying drawing, although my invention may be embodied in other mechanical forms without departing from the nature of the invention.

In the accompanying drawings—Figure 1 is a perspective view showing railway rails properly connected to the tie. Fig. 2 is a longitudinal section. Fig. 3 is a top view. Fig. 4 is a side elevation showing parts broken away and illustrating a railway rail holding device applied at a railway rail joint.

Similar numerals of reference indicate corresponding parts in all the figures of the drawing.

In the accompanying drawing, 1 represents the railway rail bases or supports which are formed hollow but of sufficient size to properly support the railway rails and provide suitable foundations for the proper supporting of the railway rails upon the road bed. The outer and upper vertical portions of the railway supporting heads are provided with notches 2, which notches are for the purpose of receiving the outer base flanges 3 of the railway rails 4. For the purpose of providing suitable drainage the bases 1 are provided with suitable openings 5, which may be arranged as shown or they may be differently arranged.

For the purpose of providing sufficient supports for the railway rails 4 the bases are provided with the cross bars or supports 6, which are arranged so as to come directly under the railway rails 4, as best illustrated

in Figs. 2 and 4. These supports 6 are preferably formed integral with the vertical walls of the bases 1, but they may be made separate and attached in any convenient and well known manner. The bases 1 are provided with the parallel flanges 7, which flanges are spaced from each other for the purpose of permitting the tie-bar 8 to be located between said parallel flanges 7, which tie-bar is also located in the vertical slots or openings 9 formed in the inner end walls of the bases 1.

The tie-bar 8 is provided at its ends with the heads 10, which heads are so formed that their inner faces will lie in close proximity with the inner faces of the inner end walls of the bases 1 below the openings 9.

For the purpose of assisting in holding the tie bar 8 in rigid condition with reference to the bases 1, the inner walls of said bases are provided with the flanges 10^a, which flanges are spaced from each other and are for the purpose of providing a greater surface of metal on which the tie-bar 8 may come in contact. The tie-bar 8 is securely connected to the bases 1 by means of the cross-pins or bolts 11, which pins or cross-bolts are held by means of the keys 12 or their equivalents. The purpose of providing the flanges 10^a and seating the faces of the tie-bar against the faces of the flanges is to assist in removing the lateral strain of the heads 1 with reference to the tie bar 8 or in other words removing from the parallel flanges 7 a portion of the lateral strain or thrust.

For the purpose of securing the railway rails 4 upon the bases 1, the dogs 13 are provided, which dogs are so formed that their top or upper hooked ends will come over and upon the inner flanges of the railway rails 4; and for the purpose of holding the dogs in fixed positions the clamping bolts 14 are provided, which clamping bolts pass through the railway supports 6.

It is well understood that in railway constructions, rail fastening means must be employed to properly connect the rails to the ties where the railway rails are joined together and when it is desired to employ the railway fastening means at the joints the dogs 13 are formed as shown in cross section, Fig. 4. For the purpose of providing means for preventing the bolts 14 from rotating during the time the nuts 15 are be-

ing tightened so as to bind the dogs 13 upon the base flanges of the railway rails 4, said dogs are provided with the ribs 16, said ribs being so located as to prevent the rotation 6 of the heads 17 formed upon the bolts 14.

For the purpose of preventing the slipping of the bases 1 upon the road bed, said bases are provided with the cross ribs 18 and the longitudinal ribs 19 in some instances, 10 especially at the curved portions of a railway track where it is desired to brace the rails, an outer brace clamp 20 should be employed, and is located substantially as illustrated at the left hand end of Fig. 1, the 15 bolt 14 passing through said outer base, but in straight portions of the track and where no lateral thrust or pressure comes upon the railway rails, the braces 20 may be dispensed with.

For the purpose of allowing the dogs 13 20 to assume the proper angle when brought down to clamp the railway rails, the apertures 21 through which the clamping bolts 14 pass are formed of a diameter somewhat 25 greater than the diameter of the clamping bolts, thereby allowing the clamping dogs to shift as to their angularity with reference to the clamping bolts.

It will be understood owing to the fact 30 that there is a single pivotal point as between each base or support 1 and the tie bar 8 there can be a slight vertical movement of each base independent of each other and independent of the tie bar, thereby pro- 35 ducing a certain yielding connection as between the parallel railway rails 4.

Having fully described my invention what

I claim as new and desire to secure by Letters Patent, is—

1. In a metallic railway tie comprising in 40 combination rail supporting bases, said bases provided with notches adapted to receive the outer base flanges of the railway rails, rail supporting bars located below the rail- 45 way rails, rail holding dogs adapted to clamp the railway rail flanges, clamping bolts located through the rail supporting bars and the clamping dogs, said clamping dogs pro- 50 vided with apertures formed of diameters greater than the diameters of the clamping bolts and a tie bar adapted to connect the bases together, substantially as and for the purpose specified.

2. In a railway tie, the combination of 55 railway supporting bases provided with notches adapted to receive the outer flanges of the railway rails, railway supporting bars connected to said bases, flanges ex- 60 tended from the inner ends of the rail supporting bases, a tie bar provided with heads at its inner ends and spaced flanges located 65 upon the inner end walls of the railway base, railway rail clamping dogs, and means for clamping the dogs upon the flanges of the railway rails, substantially as and for the purpose specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

BARNHART F. SIBER.

Witnesses:

JOHN H. BISHOP,
F. W. BOND.