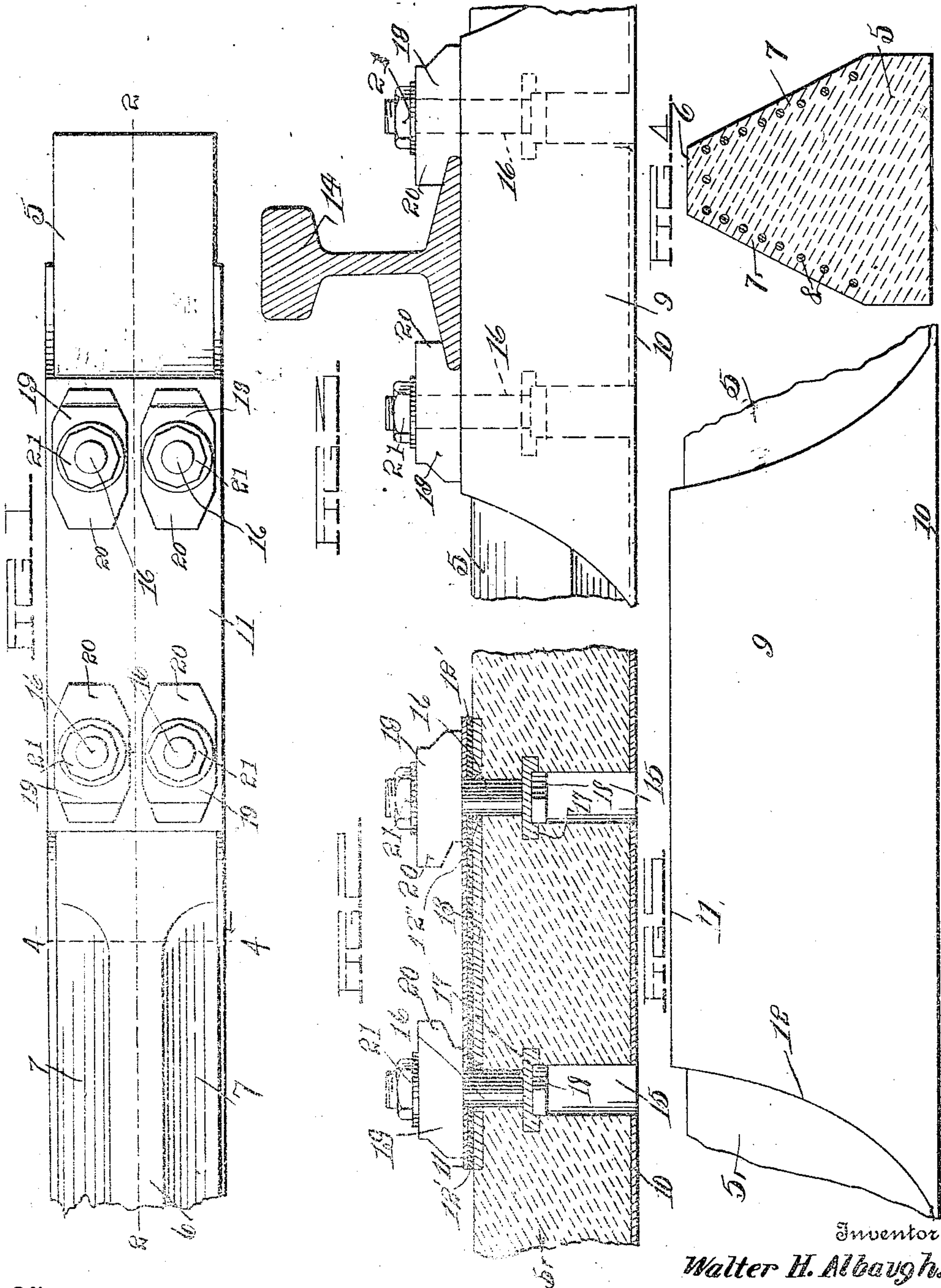


W. H. ALBAUGH.  
 REINFORCED CONCRETE TIE.  
 APPLICATION FILED AUG. 30, 1910.

999,139.

Patented July 25, 1911



Witnesses  
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# UNITED STATES PATENT OFFICE.

WALTER H. ALBAUGH, OF COLUMBUS, OHIO.

## REINFORCED-CONCRETE TIE.

999,139.

Specification of Letters Patent. Patented July 25, 1911.

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*To all whom it may concern:*

Be it known that I, WALTER H. ALBAUGH, a citizen of the United States, residing at Columbus, in the county of Franklin, State of Ohio, have invented certain new and useful Improvements in Reinforced-Concrete Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in concrete ties and the leading object of the invention is the provision of a concrete tie with bearing collars mounted thereon to support the rails and to reinforce the tie at the points where it receives the train load.

Another object of the invention is the provision of a concrete tie having its central portion reinforced by longitudinal embedded rods and its outer bearing portions reinforced with steel collars mounted on the bearing portions to support the rails and clamping devices for the rails.

With the above and other objects in view the invention consists in certain constructions, combinations and arrangements of parts, clearly described in the following specification, and clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view. Fig. 2 is a longitudinal sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a side elevation of one of the sleeves with the rail shown in section. Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 1. Fig. 5 is a detail side elevation of one of the sleeves on an enlarged scale.

Referring to the accompanying drawings illustrating the preferred embodiment of the invention 5 denotes a concrete tie which is formed square shape or rectangular at its ends and with an upwardly converging central portion 6, whereby sloping side faces 7 are presented. The tie is provided with longitudinally extending reinforcing rods 8 embedded therein near the sloping faces 7 and the top of the tie whereby the central portion 6 of the tie is effectively reinforced.

On the outer or bearing portions of the tie, steel collars 9 are mounted. The base portions 10 of said collars being of considerably greater length than the top portion

11 thereof and the opposite ends of the collars being curved at 12. The top portion 11 of each collar is disposed slightly above the top face of the tie 5 and a sheet of insulation 12' is interposed between the top 11 and the upper face of the tie. A second strip or plate 13 is embedded in the upper surface of the tie against the lower side of the strip of insulation 12' and said strip or plate 13 serves to cushion the rail 14. The ends of the insulation strip or plate 12' and the strip or plate 13 terminate with the ends of the top portion 11.

The tie 5 is provided with vertical recesses 15 which receive the rail clamping bolts 16. The insulation strip 12' is formed with tubular extensions or sleeves 12'' which serve to insulate the bolts 16, and the insulation strip is provided for the purpose of insulating the rails from each other on an electric track. The upper ends of the recesses 15 are enlarged and washer plates 17 are embedded therein, said washer plates being recessed on their lower side to receive the heads 18 of the clamping bolts 16. The upper threaded ends of the bolts 16 extend a distance above the top portion 11 of the collar through the rail engaging clamping members 19, said members being provided with inwardly projecting overhanging portions 20 to engage the base of the rail 14, said clamping members 19 being held on the bolts 16 and against the base of the rail by means of nuts 21. Each collar is provided with four clamping bolts, two bolts being arranged on each side of each rail and serving to secure two clamping members 19 against the base of the rail.

The improved tie is simple in construction, forms a solid support for the rails and the fastening means carried thereby serve to effectively hold the rails in place on the tie.

What is claimed is:—

A railroad concrete tie having square shaped supporting ends, steel collars mounted on said square shaped supporting ends, plates embedded in the upper surface of the tie beneath the top portions of the steel collars, insulation means interposed between the plates and the top portions of the steel collars, said tie having vertical recesses, washer plates embedded in the recesses, said plates being formed with recesses.

bolts extended through the washer plates and above the top portions of the collars and provided with heads fitting in the washer plate recesses, rail clamping members on the upper ends of the bolts, and nuts threaded on the bolts against the rail clamping members.

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

WALTER H. ALBAUGH.

Witnesses:

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