

R. HAYES.
 REINFORCED COMPOSITION RAILWAY TIE.
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990,650.

Patented Apr. 25, 1911.

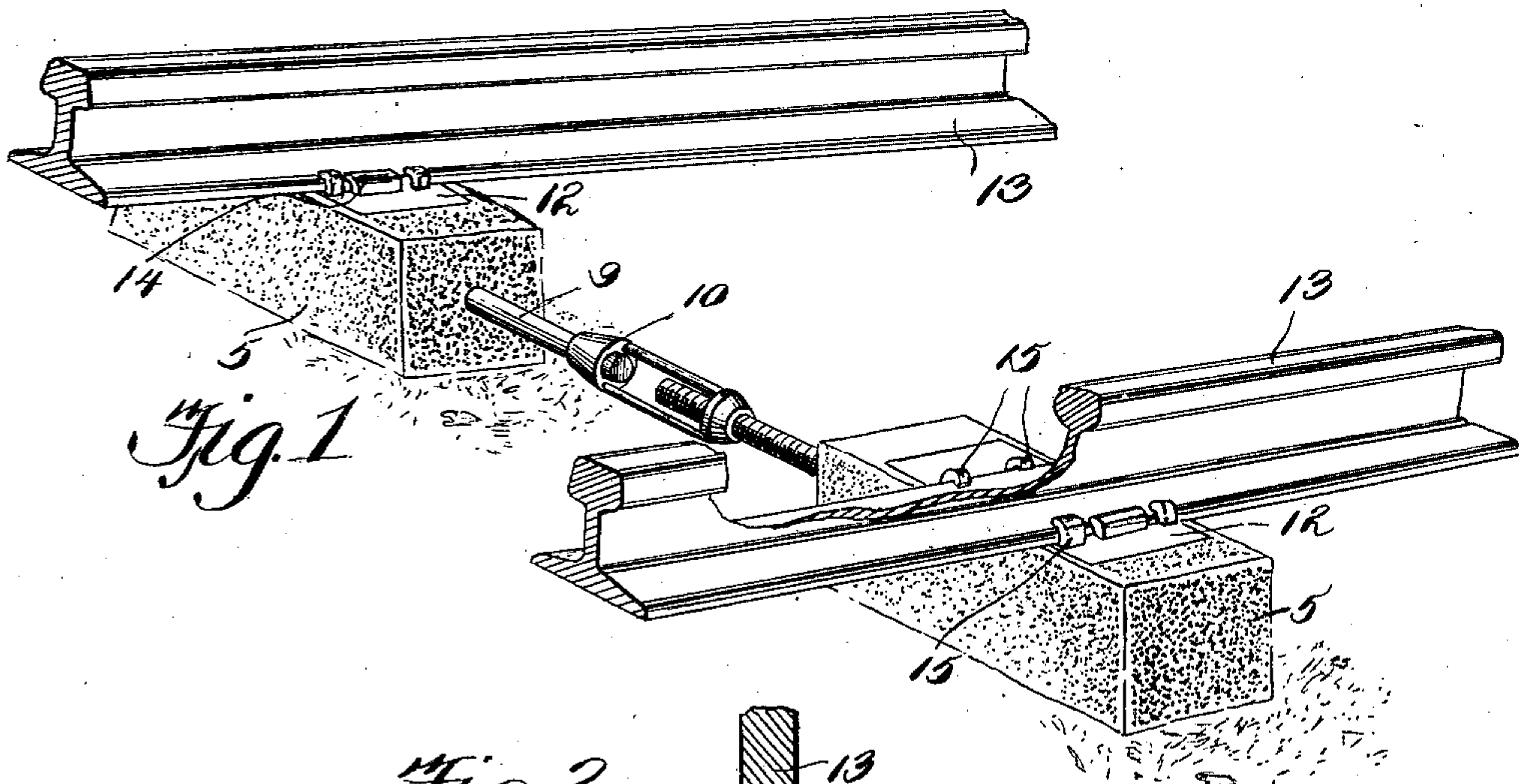


Fig. 1

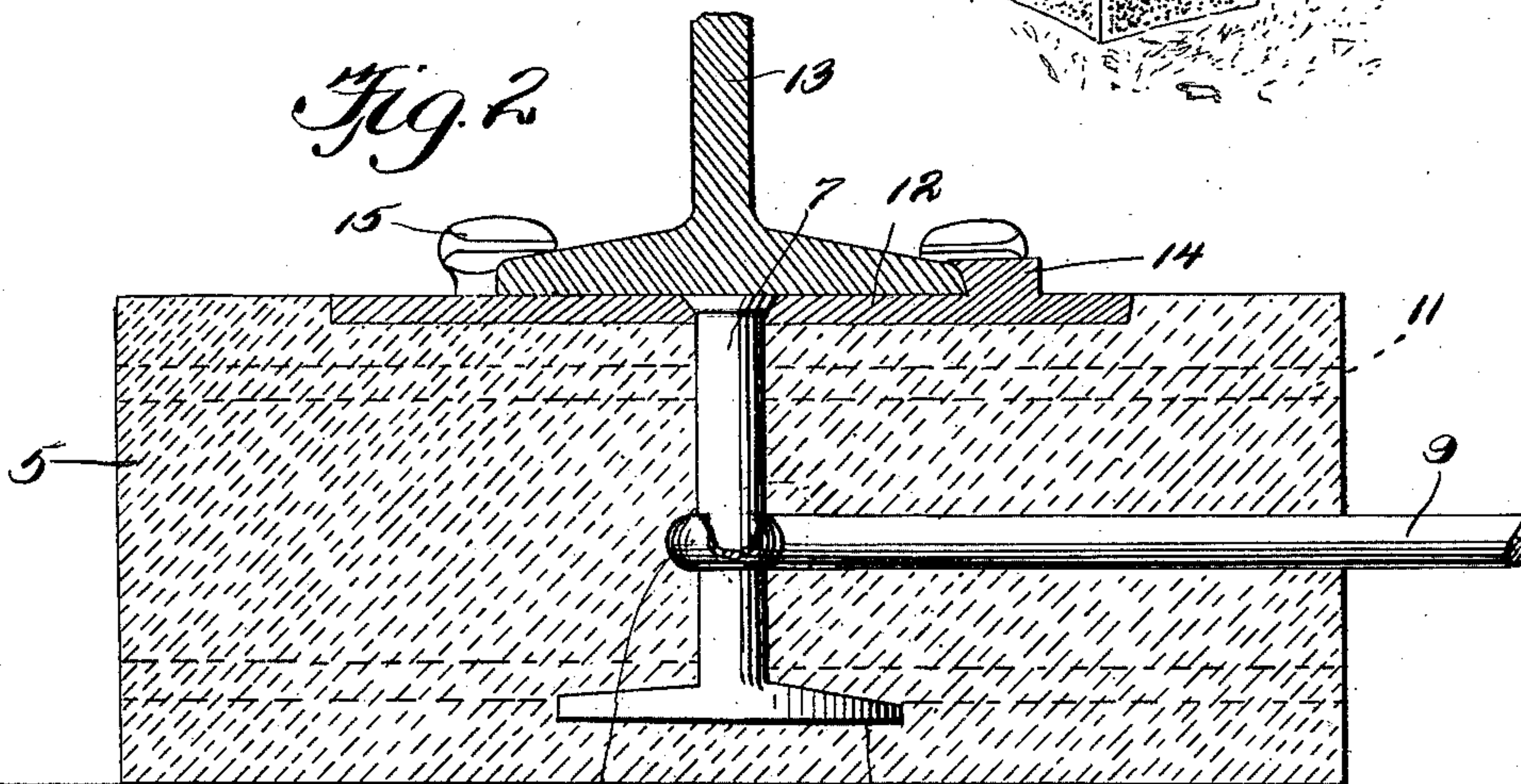


Fig. 2

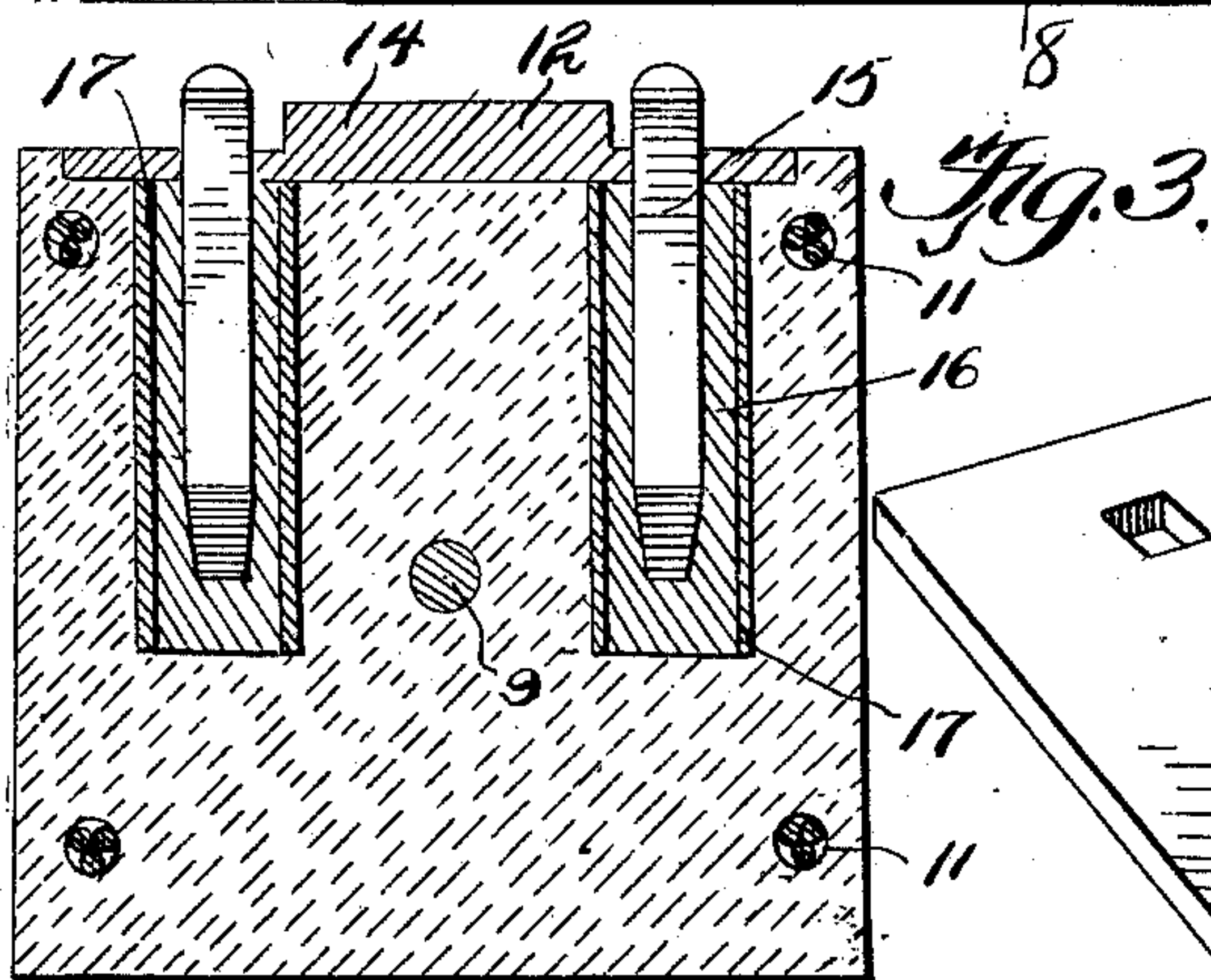


Fig. 3

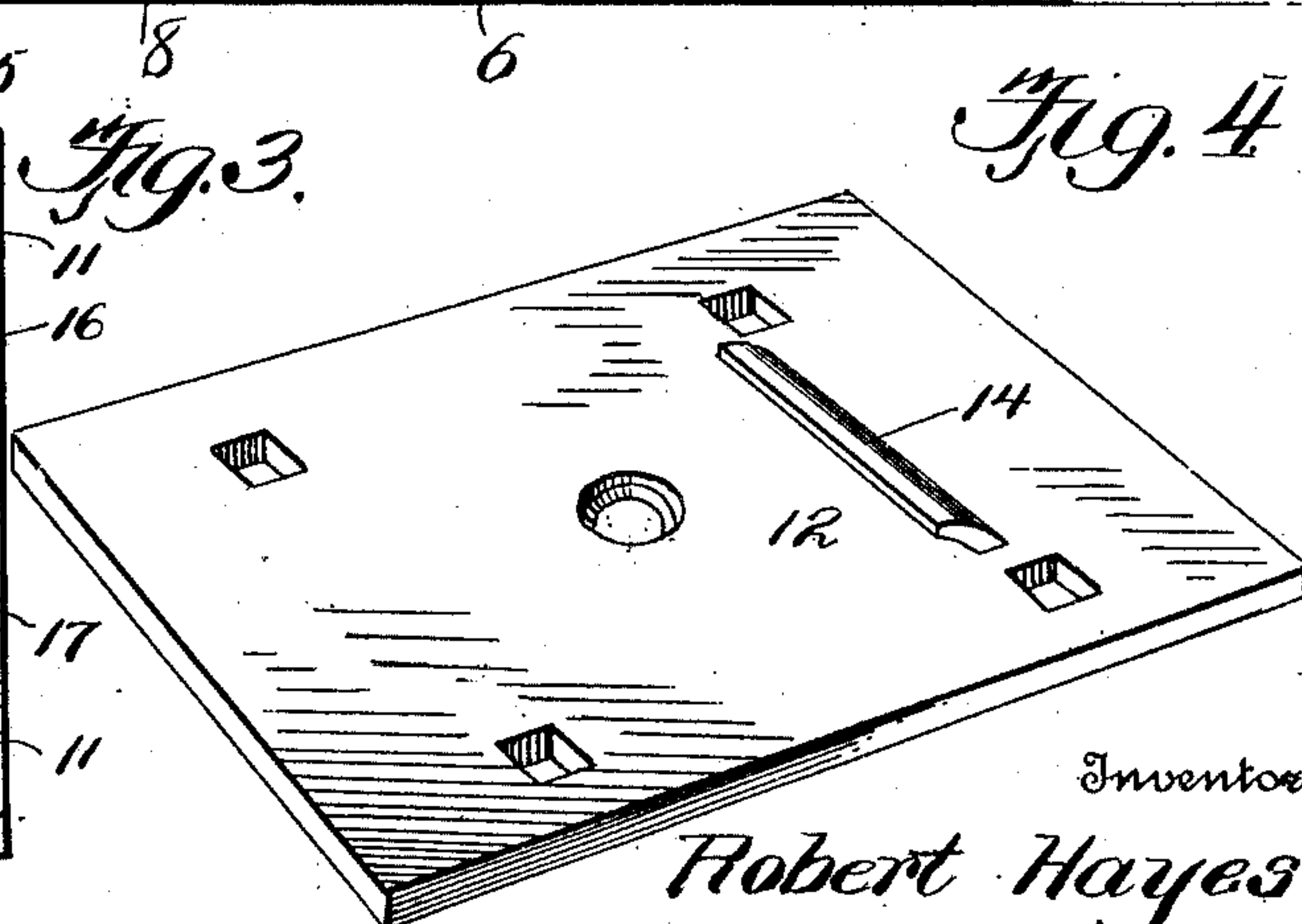


Fig. 4

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ROBERT HAYES, OF VAN HORN, IOWA.

REINFORCED-COMPOSITION RAILWAY-TIE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT HAYES, a citizen of the United States, residing at Van Horn, in the county of Benton and State of Iowa, have invented new and useful Improvements in Reinforced-Composition Railway-Ties, of which the following is a specification.

The invention relates to rail ties, and more particularly to the class of reinforced composition ties.

The primary object of the invention is the provision of a tie of this character in which there are arranged two spaced concrete sections, each being provided with a metallic bearing plate for the rail, and the said sections are capable of adjustment with respect to each other for the proper gaging of the rails of a railway track.

Another object of the invention is the provision of a tie in which the rail supporting sections thereof are adjustably connected through the medium of a brace, the same being suitably anchored in the sections, and may be conveniently shortened and lengthened for the positioning of the rails of a track to the required gage.

A further object of the invention is the provision of a tie in which the rail supporting sections are materially reinforced for withstanding the heavy loads subjected thereto and have therein suitable sockets for receiving the spikes, whereby the track rails may be securely fastened to the sections.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claim hereunto appended.

In the drawings: Figure 1 is a perspective view of a rail tie constructed in accordance with the invention, and showing rails secured thereto. Fig. 2 is a vertical transverse sectional view of one of the ties. Fig. 3 is a detail sectional view through one of the sections, showing the manner of securing the rails to the ties by spikes ordinarily used for this purpose. Fig. 4 is a perspective view of one of the rail bearing plates removed from its tie section.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, 5

designates cementitious or composition blocks which are set and hardened in suitable molds, thereby giving the proper conformation thereto which may be of any desirable shape, as the occasion may require, and embedded centrally within each block 5 is an anchoring member, comprising a base plate 6 having rising therefrom a stem or shank 7, these anchoring members being embedded in the blocks while held in the molds.

Engaging the shanks or stems 7 are the eye terminals 8 of connecting rods 9 which extend inwardly from the blocks toward each other through the inner faces thereof, the contiguous ends of the rods 9 being threaded in the usual manner, and with these threaded ends is engaged an ordinary turnbuckle 10 which, when turned in one direction, will bring the blocks in close relation to each other, and when turned in the opposite direction, will separate the same from each other to the desired degree. Also embedded in the blocks 5 and extending longitudinally thereof, is a series of reinforcing cables 11, each being formed from at least three strands of wire twisted together. Thus the said cables will materially strengthen the blocks and prevent the same from breaking into particles, thereby enabling them to withstand heavy loads to which the said blocks may be subjected.

In the upper faces of the blocks 5 seated in suitable counter seats are metallic rail bearing plates 12, upon which are superimposed the bases of usual well-known railway rails 13, each plate 12 being formed with an abutment rib or flange 14 rising therefrom, and with which engages one longitudinal edge of the base of the rail superimposed upon the bearing plate, thus preventing the rail from spreading laterally outwardly away from the other rail beyond their normal set gage. These bearing plates 12 may be formed integral with the upper ends of the stems 7 of the anchoring members. It will be apparent that the upper faces of the bearing plates 12 lie flush with the upper faces of the sections 5 of the tie, and said plates 12 are provided with suitable openings, through which are passed the usual spikes 15, the latter being driven into wooden pins 16 snugly fitted within tubes 17 embedded in the blocks 5 in vertical disposition beneath the plates 12 and in alinement with the openings therein, the spikes being engaged with the base flanges of the rails 13

for the securing thereof to the sections 5 of the tie.

The sections 5 of the tie may be adjusted toward and away from each other by the turning of the turn-buckle, thus enabling the positioning of the rail and the gaging of the track. Also, it will be pointed out that if found desirable, the stems or shanks 7 rising from the bases 6 of the anchoring members may be separate from the bearing plates 12, and in this instance, the upper ends of the said stems or shanks 7 may protrude into suitable openings formed in the said bearing plates 12 for the reception thereof.

15 What is claimed is:

In a tie of the class described, spaced cementitious blocks, anchoring members embedded medially within the said blocks and having vertical shanks, rods extending 20 through the inner ends of the blocks and

having eyes engaging the said shanks, a turn buckle adjustably engaging the said rods, reinforcing mediums embedded within said blocks, rail bearing plates mounted in the upper faces of the blocks to lie flush therewith 25 and having abutment ribs rising therefrom for engagement with the contiguous edges of the base flanges of rails superimposed upon said plates, the latter being provided with spike receiving openings, and cored tubes 30 embedded in the blocks in alinement with the openings in the plates for receiving spikes when passed through said openings.

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

ROBERT HAYES.

Witnesses:

JOHN H. KNAACK,
ARTHUR REINHARDT.

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