

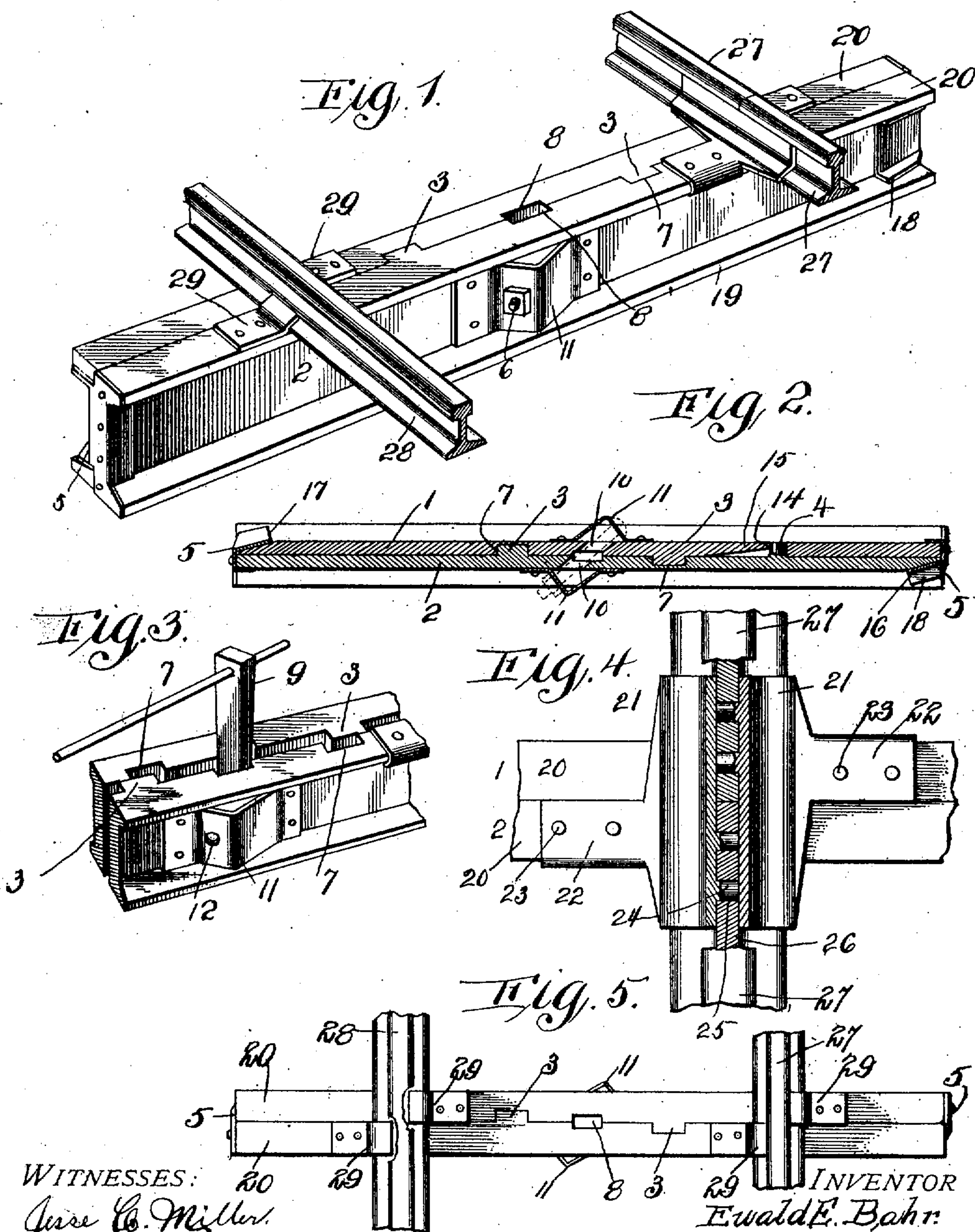
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E. E. BAHR.

METALLIC TIE, RAIL FASTENER, AND RAIL JOINT COMBINED.

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WITNESSES:

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METALLIC TIE, RAIL-FASTENER, AND RAIL-JOINT COMBINED.

No. 847,148.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed October 26, 1906. Serial No. 340,743.

To all whom it may concern:

Be it known that I, EWALD E. BAHR, a citizen of the United States of America, residing at Blair Station, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in a Metallic Tie, Rail-Fastener, and Rail-Joint Combined, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in metallic ties and rail-fasteners; and the invention has for its primary object to provide a novel sectional tie and rail-fastener wherein the assembling of the tie-sections clamps the fastener upon rails mounted on the tie.

Another object of this invention is to provide a sectional tie wherein novel means are employed for locking the tie-sections together.

A further object of this invention is to provide a simple and inexpensive tie which will be strong and durable, while its rail-fastener prevents the lateral displacement of rails upon the tie.

With these and other objects in view, which will more readily appear as the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described and then specifically pointed out in the appended claims.

Referring to the drawing forming part of this specification, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of my metallic tie and rail-fastener. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a perspective view of a portion of the tie, illustrating the manner of separating the sections thereof. Fig. 4 is a horizontal sectional view of the rail-fastener, illustrating a portion of the tie in plan; and Fig. 5 is a plan of the complete tie.

To put my invention into practice, I construct my tie of two channel-shaped beams 1 and 2 of a length corresponding to an ordinary tie or sleeper. The beams 1 and 2 are arranged whereby their webs will abut or be "back to back," and to maintain them in this position I employ vertically-disposed ribs 3, a dowel-pin 4, clamps 5, and a tie-bolt

6, these elements being advantageously arranged to insure solidity and a positive interlocking of the beams.

The ribs 3 are alternately arranged, one rib being carried by the beam 1 and one rib by the beam 2, said ribs engaging in vertically-disposed recesses 7, alternately formed in the beams. The beams are also provided with two registering recesses 8, forming a vertically-disposed opening for a bar 9, employed for separating the interlocking beams 1 and 2.

Intersecting the recesses 8 are two obliquely-disposed openings 10, and mounted upon the outer sides of the beams adjacent to said openings are brackets 11, having openings 12 formed therein. The tie-bolt 6 is mounted in the brackets 11 and the openings 10 to draw the beams 1 and 2 together and lock them in a fixed position. The bar 9 is only used to separate the beams 1 and 2 after the tie-bolt 6 is removed, it only being necessary to partially turn the bar 9 within the recesses 8 in order to move the beams 1 and 2, whereby they may be easily separated.

The dowel-pin 4, carried by the beam 2 and entering an opening 14 formed in the beam 1, is simply used to prevent vertical displacement of one beam with relation to its adjoining beam while the tie-bolt 6 is being placed through the beams. In order that the dowel-pin 4 may enter the opening 14 when joining the beams 1 and 2 together, I provide the beam 1, adjacent to the opening 14, with a beveled surface 15.

One end of the beam 1 carries a clamp 5, adapted to engage the beveled end 16 of the beam 2, while said beam carries a similar clamp at its opposite end adapted to engage the beveled end 17 of the beam 1. The clamps 5 are preferably made of separate pieces suitably secured to the ends of the beams, and they are provided with flanges 18, resting upon the laterally-projecting flanges 19 and 20 of the beams 1 and 2.

My rail-fastener can be employed for holding the confronting ends of two rails upon the beams 1 and 2, also for simply holding the rails thereon. In the former instance the fastener comprises two fish-bars 21, having tongues 22 riveted or otherwise secured to the lateral flanges 20 of the beams 1 and 2, as at 23. One fish-bar is preferably carried by the flange 20 of the beam 1, while its associate bar is carried by the flange 20 of the beam

2. The fish-bars 21 are provided with studs 24, adapted to enter openings 25, formed in the web portions 26 of the rails 27. Where the fastener is employed for simply holding the sections of rails 28 upon the beams 1 and 2, the flanges 20 of the beams 1 and 2 are provided with rail-plates 29, said plates overlying the base-flanges of the rail 28 and firmly holding the same upon the tie.

10 In assembling the beams 1 and 2 to form a tie said beams are placed together with the beveled ends of said beams engaging the clamps 5. The beams are then moved until the ribs 3 register with the recesses 7, at which time the beams can be moved to contact with each other. The length of the beams allows a certain amount of resiliency to exist, whereby the ends can be moved out of alinement with the central portion of said beams, this occurring when the beveled ends of the beams are placed in engagement with the clamps 5, and consequently the minute the ribs 3 register with the recesses 7 the beams will spring together. It is therefore necessary to use the rectangular bar 9 or similar instrument to separate the beams, the placing of the bar in the recesses 8 and a partial rotation of the same tending to simultaneously move the beams outwardly as well as longitudinally, as illustrated in Fig. 3.

My invention particularly resides in the novel construction of the tie, and I do not care to confine myself to the type of rail-fastener used in connection with the same.

35 What I claim, and desire to secure by Letters Patent, is—

1. The combination with rails, of channel-shaped beams having interlocking web portions and laterally-projecting flanges, clamps carried by the ends of said beams and adapted to overlie the adjoining beam, said beams having registering obliquely-disposed openings formed therein, brackets carried by said beams adjacent to said openings, a tie-bolt passing through said brackets and said openings, and rail-fasteners carried by the flanges

of said beams, and embracing said rails, substantially as described.

2. In a railway cross-tie, rail-supporting members formed of channel-bars placed web to web, each bar having a vertical groove in its web intermediate its ends, and a vertical rib on each bar entering said groove, the web of one bar having an opening and provided on its inner face with an inclined wall leading into said opening, and a dowel-pin carried by the web of the other bar to engage in said opening.

3. In a railway cross-tie, rail-supporting members formed of channel-bars placed web to web, a clamp on the end of one bar engaging a beveled face on the corresponding end of the associate bar, said associate bar having a clamp on its opposite end engaging a beveled face on the corresponding end of the first-mentioned bar, each bar having a vertical groove, a rib formed on each bar for engagement in said grooves, a dowel-pin carried by the web of one bar to engage in the opening provided therefor in the web of the associate bar, and a tie-bolt passed through obliquely-disposed openings in the webs of the bars, substantially as described.

4. In a railway cross-tie, two rail-supporting members formed of channel-bars placed web to web, a rib on each bar engaging in a groove in the opposite bar, a clamp rigidly fastened to one end of each bar, said clamp engaging beveled faces on the corresponding ends of the associate bar, each bar having a vertically-disposed recess, the recess in one bar registering with the recess in the other bar, the web of each bar having obliquely-disposed openings registering with said vertical recesses, and a tie-bolt passed through said openings, substantially as described.

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

EWALD E. BAHR.

Witnesses:

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