

C. W. REINOEHL & B. L. WEAVER.
H. B. REINOEHL, ADMINISTRATRIX OF C. W. REINOEHL, DEC'D.
RAILROAD STRUCTURE.
APPLICATION FILED JUNE 3, 1910.

983,839.

Patented Feb. 7, 1911.

Fig. 1.

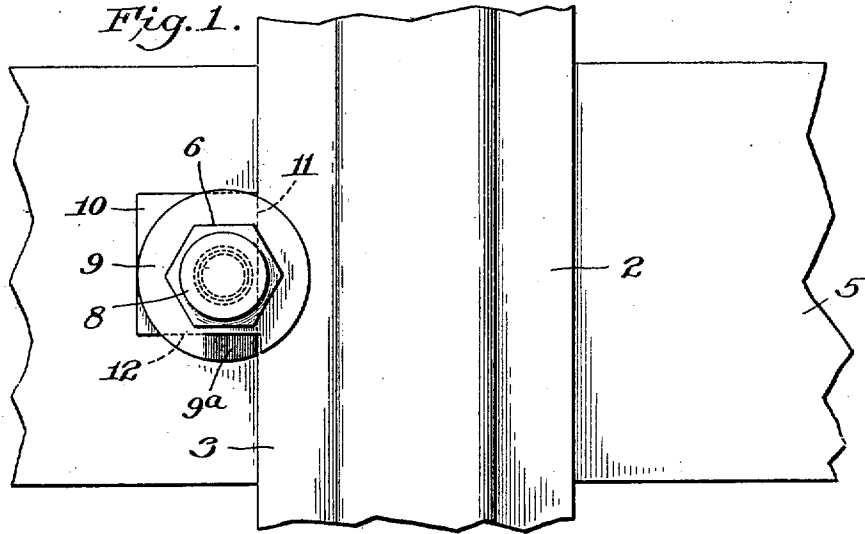


Fig. 3.

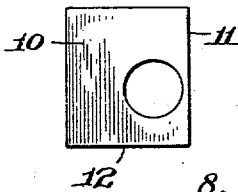


Fig. 2.

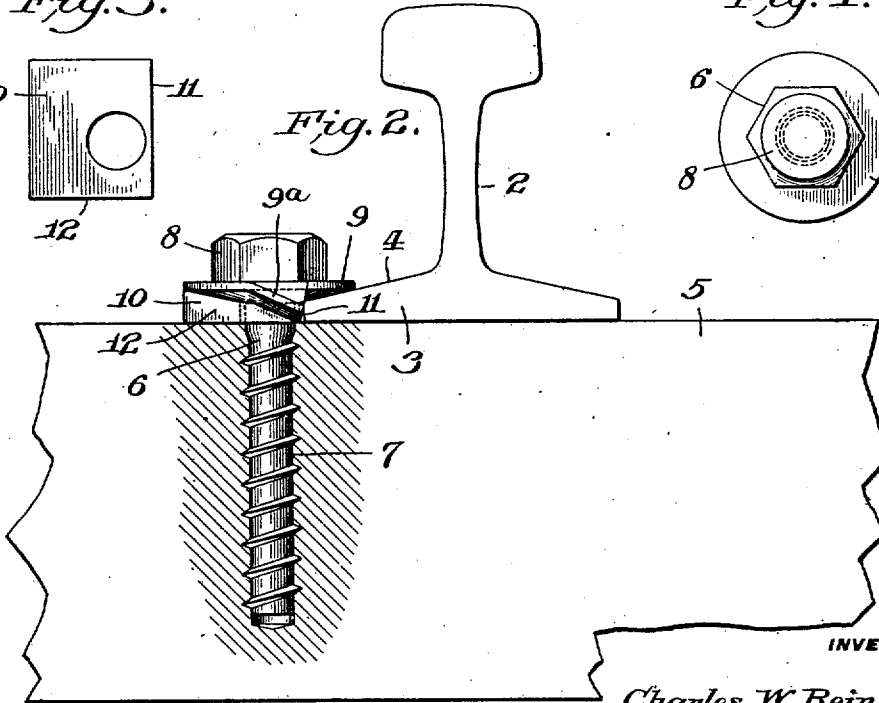
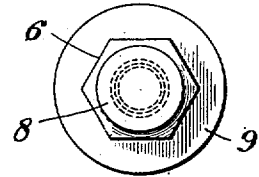


Fig. 4.



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BY

A. V. Grouse ATTORNEY

WITNESSES:

Florence E. Tunney
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UNITED STATES PATENT OFFICE.

CHARLES W. REINOEHL, OF STEELTON, AND BENT L. WEAVER, OF MIDDLETOWN, PENNSYLVANIA; HELEN B. REINOEHL, OF STEELTON, PENNSYLVANIA, ADMINISTRATRIX OF SAID CHARLES W. REINOEHL, DECEASED.

RAILROAD STRUCTURE.

983,839.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed June 3, 1910. Serial No. 564,749.

To all whom it may concern:

Be it known that we, CHARLES W. REINOEHL, citizen of the United States, residing at Steelton, Dauphin county, State of Pennsylvania, and BENT L. WEAVER, citizen of the United States, residing at Middletown, Dauphin county, State of Pennsylvania, have invented certain new and useful Improvements in Railroad Structures, of which the following is a specification.

This invention relates to that class of railroad structures wherein are employed a cross tie, a railroad rail supported thereon, and a screw screwed into the cross tie and provided with means for engaging the railroad rail and holding it in place.

The object of our invention is to provide a novel, simple and efficient means whereby the screw is prevented from backing out of the cross tie after it has been screwed into the same and engaged with the rail.

To this end the invention consists in the novel construction and combinations of parts which will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a plan view, partly broken away, of a railroad structure embodying our invention, showing the screw set to prevent it from backing out of the tie. Fig. 2 is an elevation of the parts shown in Fig. 1, showing a portion of the cross tie in section. Fig. 3 is a plan view of the washer. Fig. 4 is a plan view of the screw before being applied to the other parts of the structure and locked in place.

2 designates a railroad rail of usual, well known construction, including the flange or base portion 3, provided with the upper incline face 4. The rail 2 is supported as usual upon the underlying cross tie 5, as shown.

Screwed into the tie 5 adjacent the outer edge of the flange or base portion 3 of the rail 2, is a screw 6 comprising a threaded body portion 7, a head 8 and a flange 9 projecting from the lower portion of the head 8; the body portion 7, head 8 and flange 9 being formed integral with each other and from a single piece of metal. The lower face of the flange 9 is beveled to conform to the upper incline face 4 of the base portion 3 of the rail 2, as shown.

Surrounding the body portion of the

screw 6 and located between the flange 9 and tie 5 is a washer 10, provided with a face 11 substantially parallel to and engaged with the outer face of the base portion 3 of the rail 2, whereby the washer is prevented from turning about the axis of the screw. The washer 10 is also provided with a face 12 extending at an angle with respect to the face 11 and located beneath the flange 9 inwardly of the outer edge thereof for a purpose hereinafter explained.

The head 8 and flange 9 of the screw 6 extend over the outer portion of the rail base 3; and, when the screw 6 is screwed into the tie, the lower beveled face of the flange 9 engages the upper incline face of the rail base 3 and holds the rail down upon the tie. After the screw 6 has been screwed into the tie and engaged with the rail base, a portion 9^a of the flange 9 is cut or punched from the body thereof and bent down into engagement with the outer face of the rail base 3 and also into engagement with the face 12 of the washer 10. The portion 9^a engages the outer face of the rail base 3 and thus locks the screw 6 in place and prevents it from backing out of the tie 5; and the portion 9^a also engages the face 12 of the washer 10 and prevents the screw 6 from backing out of the tie 5.

In assembling the parts, a hole is usually drilled in the cross tie 5 of a diameter substantially equal to the diameter of the body portion 7 of the screw 6. The washer 10 is then placed over the hole, and the screw is screwed into the tie, the screw threads embedding themselves in the wall of the hole drilled for the reception of the screw. After the screw has been screwed down upon the rail 3, the portion 9^a is cut or punched from the flange 9 and bent into engagement with the rail base 3 and washer 10 by any suitable tool.

We claim:

1. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion supported on said tie; and a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion, said flange having a part cut therefrom and bent into engagement with the outer face of said base portion.

2. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion supported on said tie; a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion; and a washer surrounding said screw between said flange and said tie and having a face substantially parallel to and engaged with the outer face of said base portion and having a face arranged at an angle with respect to the first named face; said flange having a part cut therefrom and bent into engagement with the second named face of said washer.

3. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion supported on said tie; a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion; and a washer surrounding said screw between said flange and said tie and having a face substantially parallel to and engaged with the outer face of said base portion and having a face arranged at an angle with respect to the first named face; said flange having a part cut therefrom and bent into engagement with the outer face of said base portion and also into engagement with the second named face of said washer.

4. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion provided with an upper inclined face; and a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion and having a lower beveled face conforming to the inclined upper face of said base portion; said flange having a part cut therefrom and bent into engagement with the outer face of said base portion.

5. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion provided with an upper inclined face; a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion and having a lower beveled face conforming to the inclined upper face of said base portion; and a washer surrounding said screw between said flange and said tie and having a face substantially parallel to and engaged with the outer face of said base portion and having a face arranged at an angle with respect to the first named face; said flange having a part cut therefrom and bent into engagement with the second named face of said washer.

6. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion provided with an upper inclined face; a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion and having a lower beveled face conforming to the inclined upper face of said base portion; and a washer surrounding said screw between said flange and said tie and having a face substantially parallel to and engaged with the outer face of said base portion and having a face arranged at an angle with respect to the first named face; said flange having a part cut therefrom and bent into engagement with the outer face of said base portion and also into engagement with the second named face of said washer.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES W. REINOEHL.
BENT L. WEAVER.

Witnesses:

A. V. GROUPE,
S. I. HARPER.

Correction in Letters Patent No. 983,839.

It is hereby certified that in Letters Patent No. 983,839, granted February 7, 1911, upon the application of Charles W. Reinoehl, of Steelton, and Bent L. Weaver, of Middletown, Pennsylvania, for an improvement in "Railroad Structures," an error appears requiring correction as follows: In the grant and in the headings of the drawing and printed specification Helen B. Reinoehl appears as "Administratrix of said Charles W. Reinoehl, deceased," whereas said Helen B. Reinoehl should appear as *Executrix* of said Charles W. Reinoehl, deceased; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 20th day of February, A. D., 1912.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.

2. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion supported on said tie; a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion; and a washer surrounding said screw between said flange and said tie and having a face substantially parallel to and engaged with the outer face of said base portion and having a face arranged at an angle with respect to the first named face; said flange having a part cut therefrom and bent into engagement with the second named face of said washer.

3. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion supported on said tie; a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion; and a washer surrounding said screw between said flange and said tie and having a face substantially parallel to and engaged with the outer face of said base portion and having a face arranged at an angle with respect to the first named face; said flange having a part cut therefrom and bent into engagement with the outer face of said base portion and also into engagement with the second named face of said washer.

4. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion provided with an upper inclined face; and a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion and having a lower beveled face conforming to the inclined upper face of said base portion; said flange having a part cut therefrom and bent into engagement with the outer face of said base portion.

5. In a railroad structure and in combination, a cross tie; a railroad rail having a base portion provided with an upper inclined face; a screw screwed into said tie adjacent said base portion and having a head and an integral flange projecting from the lower portion of said head and over said base portion and having a lower beveled face conforming to the inclined upper face of said base portion; and a washer surrounding said screw between said flange and said tie and having a face substantially parallel to and engaged with the outer face of said base portion and having a face arranged at an angle with respect to the first named face; said flange having a part cut therefrom and bent into engagement with the second named face of said washer.

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