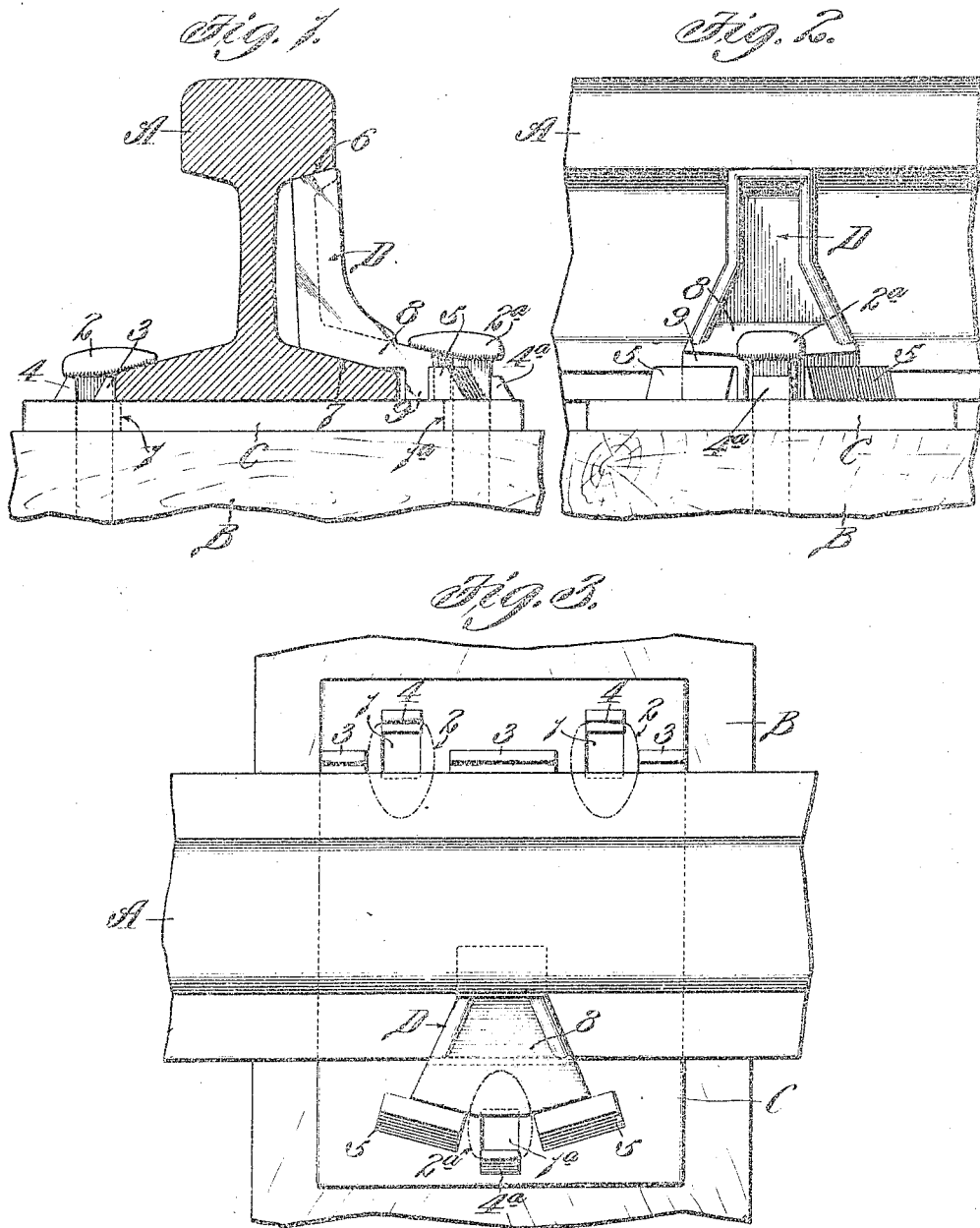


W. H. WINSWORTH;
 COMBINED TIE PLATE AND RAIL ANCHOR.
 APPLICATION FILED JUNE 24, 1912.

1,060,729.

Patented May 6, 1913.



Witnesses:
 Geo. R. Carlson
 C. M. Badger

Inventor:
 William H. Winsworth
 By Bakewell & Church, Attys.

UNITED STATES PATENT OFFICE.

WILLIAM HOWARD WINSWORTH, OF YOUNGSTOWN, OHIO, ASSIGNOR TO THE COLUMBUS RAILWAY SUPPLY COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

COMBINED TIE-PLATE AND RAIL-ANCHOR.

1,060,729.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed June 24, 1912. Serial No. 795,627.

To all whom it may concern:

Be it known that I, WILLIAM H. WINSWORTH, a citizen of the United States, residing at Youngstown, Ohio, have invented a certain new and useful Improvement in Combined Tie-Plates and Rail-Anchors, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to tie plates.

One object of the invention is to provide a tie plate of novel construction that will effectively prevent longitudinal creepage or movement of a rail in either direction.

Another object is to provide a combined tie plate and rail anchor that also operates to brace the rail against lateral strains and thus prevents the rails of a track from spreading.

Another object is to provide a combined tie plate and rail anchor comprising a rail-gripping member that is wedged tightly between the head and the base flange of the rail and which is combined with the rail-supporting member of the device in such a manner that it effectively prevents longitudinal creepage of the rail without nicking or mutilating the rail. And still another object is to provide an inexpensive device embodying the characteristics above-mentioned that can be applied and removed easily.

Figure 1 of the drawings is a cross sectional view of a rail showing one of my improved combined tie plates and rail anchors arranged in operative position; Fig. 2 is a side elevational view of the rail and said device; and Fig. 3 is a top plan view.

Referring to the drawings which illustrate the preferred form of my invention, A designates an ordinary T-rail that rests upon a tie B.

My combined tie plate and rail anchor or anti-creeping device consists of a rail-supporting member C that is interposed between the base flange of the rail and the tie B, and a rail-gripping member D that is wedged tightly between the head and the base flange of the rail and which cooperates with portions on said rail-supporting member C so as to prevent the rail from moving or creeping longitudinally in either direction. The rail-supporting member C is provided adjacent one end with openings 1 for

receiving spikes 2 whose heads lap over the base flange of the rail and thus securely clamp the rail down on the rail-supporting member C, and, if desired, the member C may be provided with upwardly projecting rail-flange-engaging portions 3 and with upwardly projecting spike braces 4 that cooperate with the edge of the base flange of the rail and with the spikes 2, respectively, to take up lateral strains or thrusts on the rail. At the opposite end of the rail-supporting member C are two upwardly projecting lugs 5 which cooperate with the rail-gripping member D to prevent said member from moving laterally away from the rail.

The rail-gripping member D consists of an approximately wedge-shaped portion arranged vertically and provided at its upper and lower ends with oppositely inclined or beveled surfaces 6 and 7 that bear against the under side of the head of the rail and against the top face of the base flange of the rail, respectively. At the lower end of said member D is a laterally projecting portion 8 which is provided with a depending flange 9 that lies between the edge of the base flange of the rail and the upwardly projecting lugs 5 on the rail-supporting member C, as shown clearly in Fig. 1.

In the embodiment of my invention herein shown the lugs 5 are angularly disposed with relation to the base flange of the rail, and are inclined in opposite directions, as shown in Fig. 3, and the depending flange 9 on the rail-gripping member D is provided with oppositely inclined surfaces that conform to the shape or inclination of the lugs 5 so as to prevent the rail from creeping longitudinally in either direction, said lugs 5 being so disposed that any tendency of the rail to creep causes the rail-gripping member to twist or turn slightly and thus causes the wedge-shaped portion of same to be forced tightly into engagement with the head and base flange of the rail. I do not wish it to be understood, however, that my invention is limited to such a construction for my broad idea consists in a rail-supporting member and a rail-gripping member wedged between the head and the base flange of the rail and combined with said rail-supporting member in such a manner that it prevents longitudinal movement of the rail either in one or both directions.

Various means may be employed for preventing the lower end portion of the rail-gripping member D from moving vertically out of the pocket formed by the upwardly projecting lugs 5 on the rail-supporting member C. I prefer, however, to use a spike 2^a for this purpose, as shown in Fig. 1, the spike passing through an opening 1^a in the rail-supporting member C which is so located that the head of the spike will lap over the laterally projecting portion of the rail-gripping member D. If desired, an upwardly projecting spike brace 4^a may be formed on the member C adjacent the spike opening 1^a so as to reinforce and strengthen the spike 2^a.

After the rail-supporting member C has been arranged in operative position between the rail and the tie the rail is raised slightly and the rail-gripping member D is then wedged tightly between the head and the base flange of the rail. Thereafter, the rail is lowered onto the rail-supporting member C, thus causing the depending flange 9 on the rail-gripping member to project into the pocket formed by the upwardly projecting lugs 5 on the rail-supporting member. Finally, the spike 2^a is inserted so as to lock the rail-gripping member D in operative position. To release the rail the operations above-mentioned are reversed.

A device of the construction above described can be manufactured cheaply owing to the simple design of same and to the fact that no machine-work is required in producing the device, and it can be applied and removed easily. It not only forms a very efficient tie plate that reinforces and strengthens the tie spikes against the lateral strains to which they are subjected when in service but it also effectively prevents longitudinal creepage of the rail in either direction owing to the fact that it comprises a rail-gripping member that is wedged tightly between the under side of the head and the top face of the base flange of the rail. In addition to its rail-supporting and anti-creeping functions such a device also securely braces the head of the rail against

lateral strains and thus prevents the rails 50 of the track from spreading or turning.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A combined tie plate and rail anchor 55 comprising a rail-supporting member having angularly-disposed upwardly projecting lugs which form a pocket, a rail-gripping member wedged between the head and flange of the rail and having a rigid portion that fits loosely in said pocket, and a fastening device for securing both of said members to the tie on which the device is mounted.

2. A combined tie plate and rail anchor 65 comprising a rail-supporting member on which the rail rests, an open pocket on said member having oppositely inclined walls, a rail-gripping member having a wedge which fits between the head and the flange 70 of the rail but does not engage the web of the rail, a rigid device on said rail-gripping member that fits in said pocket for preventing relative longitudinal movement of same, and means for locking said rail-gripping 75 member in operative position.

3. A combined tie plate and rail anchor comprising a rail-supporting member on which the rail rests, a rail-gripping member having a wedge-shaped portion that is 80 adapted to be wedged between the head and the base flange of the rail and provided with a rigid laterally projecting portion, a depending flange on said laterally projecting portion extending along one edge 85 of the base flange of the rail and having oppositely inclined surfaces, and upwardly projecting lugs on said rail-supporting member that cooperate with said oppositely inclined surfaces to prevent longitudinal 90 movement of the rail.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 11th day of June 1912.

WILLIAM HOWARD WINSWORTH:

Witnesses:

J. A. COOPER,
H. G. BYE.