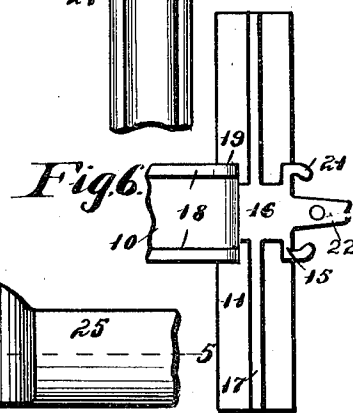
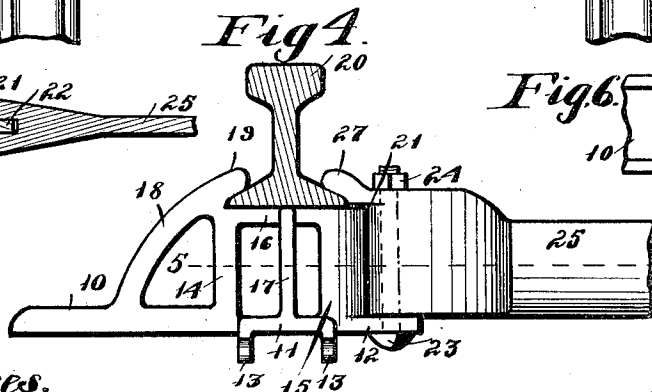
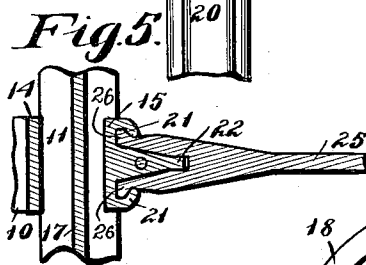
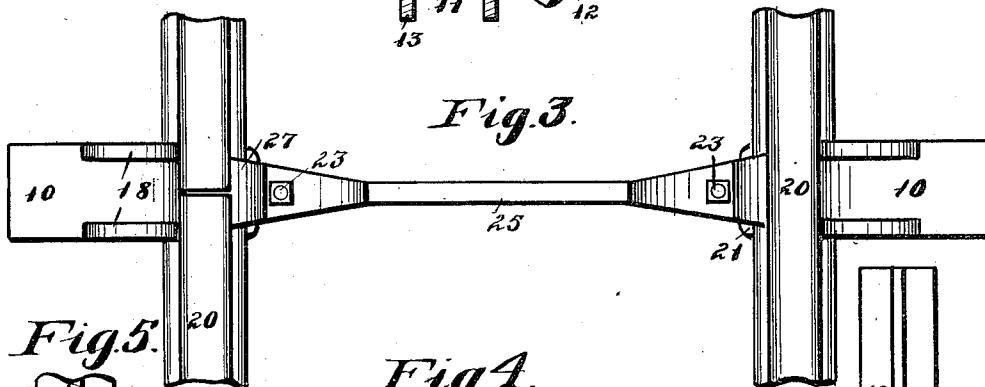
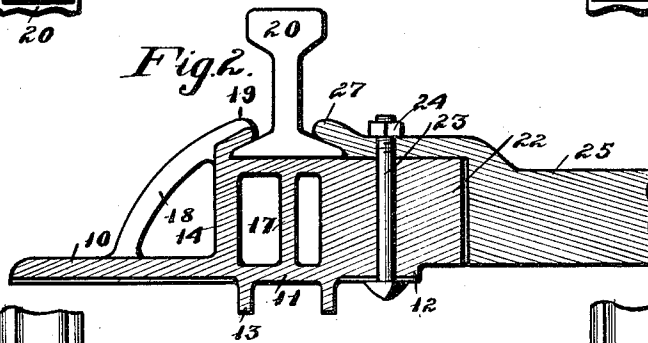
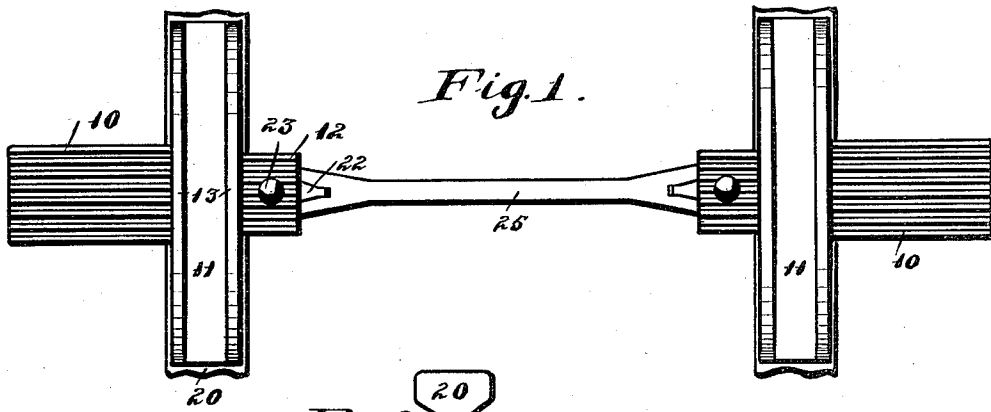


W. A. FLOOK.
RAILWAY TIE.
APPLICATION FILED JAN. 23, 1911.

1,004,765.

Patented Oct. 3, 1911.



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WILLIAM A. FLOOK, OF DES MOINES, IOWA.

RAILWAY-TIE.

1,004,765.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed January 23, 1911. Serial No. 604,212.

To all whom it may concern:

Be it known that I, WILLIAM A. FLOOK, a citizen of the United States, residing at Des Moines, in the county of Polk and State

of Iowa, have invented a certain new and useful Railway-Tie, of which the following is a specification.

The object of my invention is to provide a railway tie of simple, durable and inexpensive construction, comprising two rail supporting members and a connecting piece detachably connected with the rail supporting members and so arranged that the same bolt that connects the connecting piece and rail supporting member will also serve to adjust the rail clamping lug.

A further object is to provide a rail supporting member of simple and inexpensive construction and of light weight designed to be firmly seated upon the ballast and to provide a support for the rail over a comparatively long distance so that the ties may be spaced apart much farther than the common wooden ties now in general use are spaced.

A further object is to provide a tie which may readily and easily be placed under two railway rails and to which the rails may be firmly clamped to hold them against both lateral and longitudinal movement.

A further object is to provide an improved connecting member for the rail supporting members so arranged that it will readily enter into the road bed to stand in line between the rail supporting members so that if the rail supporting members sink into the ballast the connecting piece will also sink into the ballast to a corresponding degree.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows an inverted, plan view of a railway tie embodying my invention. Fig. 2 shows a vertical, central, sectional view through one of the rail supporting members and part of the connecting member with a rail shown in position on the rail supporting member. Fig. 3 shows a top or plan view of my improved railway tie with rails supported thereon. Fig. 4 shows a side elevation of a part of a tie embodying my invention with a rail in position thereon.

Fig. 5 shows a sectional view on the line 5-5 of Fig. 4, and Fig. 6 shows a top or plan view of one of the rail supporting members.

Referring to the accompanying drawings, it will be seen that my improved tie comprises two rail supporting members and a connecting member. Each rail supporting member comprises a base, which base consists of a flange 10 to extend outwardly from the side of the rails and a flange 11 to extend transversely of the tie under the rails and also a small flange 12 to extend inwardly from the inner side of the rails. The lower edges of the flanges 10 and 12 are preferably corrugated, as clearly shown in Fig. 1, so that they will rest upon the railway bed ballast and will not move laterally. On the under surface of the flange member 11 are two transverse ribs 13 which are designed to enter the ballast and prevent longitudinal movement of the tie. They also serve to brace and reinforce the said flange 11. At the central portion of the rail supporting member are two upright webs 14 and 15 near the opposite edges of the flange member 11 and at the center thereof. These webs 14 and 15 are connected at their top by a rail platform 16 and extended transversely of the tie under the longitudinal center of the rail platform is an upright rail supporting web 17 extended from the ends of the platform 16 outwardly in both directions under the center of a rail placed on the tie. The platforms 16 engage the entire under surface of a rail and thereby prevent tilting movements thereof while the rail supporting webs 17 engage the longitudinal center of the rail and thus prevent the wave-like motion of the rail due to the passage of heavy trains over it. Extending from the central portion of the flange 10 to the outer edge of the rail platform 16 are two braces 18 and arranged above the outer edge of the platform is a rail-engaging lug 19. The rail is indicated in the drawings by the reference numeral 20 and this lug is designed to fit over the rail flange as clearly shown in Figs. 2 and 4.

In order to provide means for applying the connecting member to the rail supporting members, I have provided on the inner face of the web 15 two vertically arranged lugs 21 inclined inwardly toward the center of the tie and also in and toward each other,

as clearly illustrated in Fig. 5, and between these lugs is a tapered flange 22 extended inwardly toward the center of the tie. Extended through the tapered flange 22 and through the base flange member 12 is an opening to receive a bolt 23, the head of which is preferably arranged under the flange 12, and a nut 24 is applied to the upper end of said bolt.

10 In order to provide for readily and easily placing my improved tie under the rails of a railway track and for connecting them together I have provided a connecting member, comprising a central body portion 25
15 having its lower edge tapered to a narrow edge, as shown in Fig. 4, and at each end of said body portion is a head having a tapered groove therein arranged vertically to fit against the tapered flange 22 as clearly
20 shown in Fig. 5. On opposite sides of the tapered groove are the vertically arranged ribs 26 to fit between the ribs 21 and the flange 22 to thereby prevent movement of the rail supporting members outwardly relative to said connecting member. At the upper
25 portion of each head on the connecting member is a rail gripping lug 27 designed to project over a rail on the rail platform 16. An opening is provided in the top of
30 the head, as shown in Fig. 2, through which the bolt 23 is extended and obviously after a rail flange has been placed on the rail platform 16 it will be firmly clamped in position relative to the tie by means of the rail
35 engaging lug 27 which is held firmly against it by the nut 24.

In practical use, I first place the rail supporting members in position in the road ballast. The ballast is carefully tamped under the base and on account of the corrugated lower surface of the base and the ribs 13 it is obvious that the rail supporting member will be firmly held against movement in the road bed either longitudinally
40 of the track or laterally; then the rails may be placed in position on the rail platforms very readily and easily from the inner sides of said platforms and the rail flanges may be made to extend under the lugs 19; then
45 the connecting members may be placed in position to thereby positively establish the track gage or the distance between the rails and to firmly hold the rail supporting members in proper positions relative to each other. At the same time the rail engaging
50 lugs 27 clamp the inner flanges of the rails and hold the rails firmly against movement in any direction. At any time the nuts 24 may be readjusted to take up wear or to
55 tighten the rails. By having the tapered flange 22 arranged to enter the tapered openings in the ends of the connecting members it is obvious that the sides of said connecting members are prevented from springing
60 inwardly toward each other to such an extent as would enable one or the other of the rail supporting members to move outwardly relative to the connecting member. It is obvious further that my improved tie can be made with a minimum of material and yet will be strong and durable to withstand all of the strains to which an article of this kind is subjected. The rail supporting platform 16 is firmly and securely held in position by the webs 14 and 15 and by the central web 17 and also by the braces 18. Furthermore by having the webs 17 extended on opposite sides of the tie, it is obvious that they will support the downward pressure applied to the rails to such an extent that the ties may be spaced apart a considerable distance and yet provide a firm and secure rail support with a minimum number of ties. My improved tie is advantageous when used for replacing ties under a track already laid for the reason that the rail engaging members may first be placed in position from the outside of the rails and then after they are thus positioned the connecting member may be attached. By having the under surface of the connecting member provided with a narrow edge I avoid all possibility of breaking the tie by having its center resting upon a solid support and its ends forced downwardly by pressure from above for the reason that the lower edge of the connecting member will cut into the road ballast to such an extent as to avoid all such strain upon said connecting member.

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I claim as my invention:

1. An improved railway tie comprising two rail supporting members, each having an integral lug at the outer edge thereof to engage a rail flange, a vertically arranged tapered flange formed on the inner face of said supporting member and extending upwardly from the base thereof, a connecting member for the rail supporting members having a vertically arranged tapered slot therein to receive said vertical flange, a lug formed on each end of said connecting member and designed to overlap said supporting members and to engage a rail flange thereon, and a bolt for each end of the connecting member designed to hold the rail engaging lug on said connecting member in position against a rail flange.

2. An improved railway tie, comprising two rail supporting members, each having a rail supporting platform, a stationary lug at the outer edge of the platform, a tapered, vertically arranged flange at the inner edge of the platform, two lugs arranged on opposite sides of said tapered flange and inclined inwardly toward the center of the tie and in a direction toward each other, and a rail connecting member provided at one end with a vertically arranged slot to receive said tapered flange and also provided with vertically arranged side pieces to enter between
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the tapered flange and said ribs, a lug on each end of the connecting member to overlap the rail platform and to engage the rail flange thereon, a bolt at each end of the tie
 5 extended through the rail supporting member, through the tapered tie and through the top of the connecting member, and a nut on the upper end of said bolt.

3. An improved railway tie, comprising
 10 two rail supporting members, each consisting of a base flange extended longitudinally of the tie, a base flange extended transversely of the tie, the former flange being corrugated on its under surface and the transverse flange
 15 being provided with downwardly extended ribs on its under surface, two vertically arranged webs extended upwardly from the base, a rail supporting platform connecting said webs at the top, a third vertically arranged
 20 web extending from the base to the rail supporting platform and also extended transversely of the tie with its top surface flush with the top of the rail supporting platform, an integral lug at the outer edge
 25 of the rail supporting platform, braces extending from the outer edge of the rail supporting platform downwardly and outwardly

to the base, the inner face of each rail supporting member being provided with a vertically arranged flange extended upwardly 30 from the base and tapered, and two ribs at the sides of said flange spaced apart from it and inclined inwardly toward each other, and a connecting member for the rail supporting members, comprising a body portion 35 tapered to a thin edge at its bottom, and two heads, each of which is provided with a vertically arranged slot to receive said tapered flange and with two ribs to enter between the ribs and flanges on the rail 40 supporting member, and a lug for each head designed to overlap the rail supporting platform and to engage a rail flange thereon, and a bolt for each end of the tie extended through the base of the rail supporting member, 45 through said tapered flange and through the top of the head of the connecting member, and a nut for each bolt, substantially as and for the purposes stated.

Des Moines, Iowa, August 5, 1910.

WILLIAM A. FLOOK.

Witnesses:

MARY WALLACE,
 ELIZABETH SKAHILL.