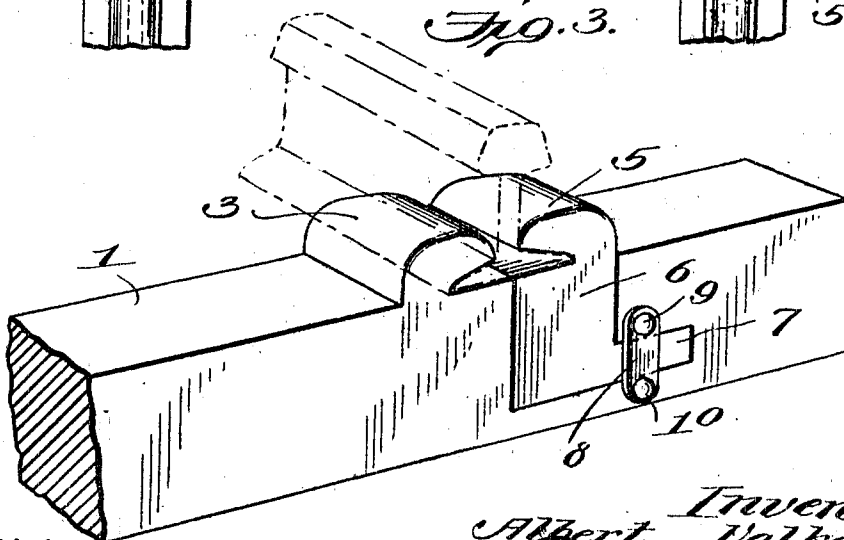
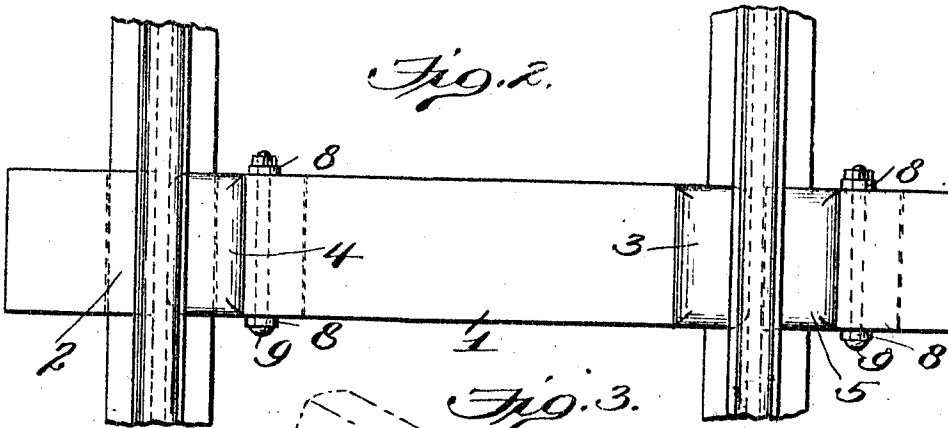
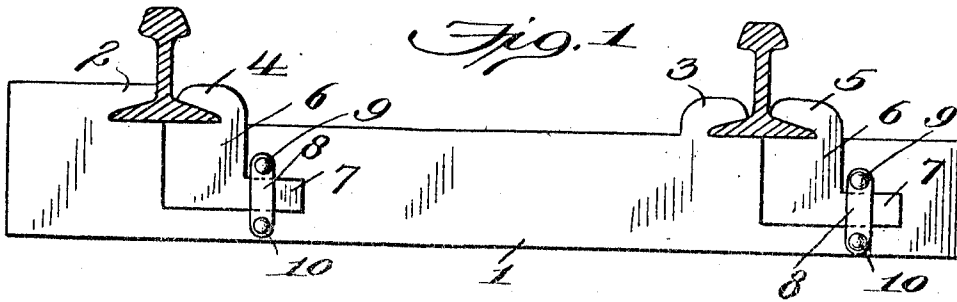


A. VALKELBERG.
RAIL TIE AND FASTENING.
APPLICATION FILED JULY 28, 1911.

1,006,319.

Patented Oct. 17, 1911.



Witnesses:
Wm. Kessler
John Powers

Inventor
Albert Valkelberg
by *Amos L. Morris*
Atty.

UNITED STATES PATENT OFFICE.

ALBERT VALKELBERG, OF HITEMAN, IOWA.

RAIL TIE AND FASTENING.

1,006,319.

Specification of Letters Patent.

Patented Oct. 17, 1911.

Application filed July 28, 1911. Serial No. 640,973.

To all whom it may concern:

Be it known that I, ALBERT VALKELBERG, a citizen of the United States, residing at Hiteman, in the county of Monroe and State of Iowa, have invented new and useful Improvements in Rail Ties and Fastenings, of which the following is a specification.

This invention relates to improvements in rail ties and fastenings and its object is to provide a rail tie and fastening of safe character and which may be readily set up and removed.

An embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of the improved rail tie and fastening. Fig. 2 is a top plan view thereof, and Fig. 3 is an end perspective view thereof.

Similar characters of reference designate corresponding parts throughout the several views.

The body of the tie is indicated by the numeral 1, and is formed at its ends with fixed overhanging lips 2 and 3, the lip 2 having an outside position with respect to the adjacent rail and the lip 3 having an inside adjacent position, with respect to the opposite rail. The lips 2 and 3 cooperate with lips 4 and 5 respectively, the lip 4 having an inside position with respect to the adjacent rail and confronting the lip 2 and the lip 5 having an outside adjacent position, with respect to the opposite rail and confronting the lip 3. The lips 4 and 5 are formed upon chairs 6 and overhanging the same, said lips defining with the upper surfaces of said chairs a recess in which the adjacent rail flange is conformably received. The chairs 6 are each provided at their lower ends with lateral extensions 7, and the tie 1 is formed with recesses or cut away portions in which the chairs 6 with their extensions 7 conformably fit. The lips 2 and 3, together with the adjacent upper surfaces of the tie, also define recesses in which the adjacent rail flanges conformably fit, and which of course are opposite to the recesses defined by the lips 4 and 5 respectively. The chairs 6 are so proportioned that their faces opposite the extension 7, which abut against the adjacent faces of the recesses in which said chairs fit, are coincident with the central longitudinal plane of the rail. To secure the chairs, straps 8

are employed. The straps 8 are located at opposite sides of the tie and at each end thereof and extend across the extensions 7, being fastened in pairs by upper and lower transverse bolts 9 and 10.

Ordinarily, the lips or flanges or equivalent devices which are employed to secure the rails upon the tie are fastened to the tie by spikes which are driven vertically through said lips or flanges into the tie, and which are quite susceptible to vibration, especially when the tie is used upon bridges of like structures. According to the present improvements, however, such spikes are eliminated, and their function is performed by the straps 8 and the bolts 9 and 10, these elements being not susceptible to vibration, at least to any appreciable or dangerous extent, and, when nut locks are used in connection with the bolts, a fastening of the most positive and safe character is had. Aside from these considerations, the lips 4 and 5 are integral with the chairs 6 and overhang the upper faces of said chairs, which chairs provide half of the seating area of the rail. Consequently, there can be no variation of the size of the spaces or recesses in which the rail flanges fit, and therefore there is no liability of the displacement of the rail from this cause. Moreover, the chairs 6 have a snug fit in the recesses which are provided therefor in the tie, and owing to the extension 7 any upward displacement or vibration of said chairs is prevented, while the straps 8 of course prevent any lateral displacement thereof. The construction does not interfere with the ballasting of the road bed, as is obvious.

The improved tie may be readily taken from its place and a new one substituted. For this purpose all that is required is to remove one of each pair of the straps 8, and then to remove the chairs 6. Thereupon the tie may be taken from place with a lateral sliding movement it being only necessary to jack up one of the adjacent rails. Consequently, no removal of the rail sections is necessary for the removal or replacement of a tie. Thus in the embodiment of Fig. 1, assuming that the chairs 6 are removed, the tie may be taken from position by moving it to the left, in which case it is necessary to jack up the left hand rail, so as to enable the lip 3 to pass thereunder. The present construction, in securing the advantages re-

ferred to, does not do so at the expense of economy and simplicity, as is obvious.

Having fully described my invention, I claim:

- 5 A rail tie having a fixed overhanging lip at each end thereof, one lip having an outside position with respect to the adjacent rail and the other having an inside adjacent position with respect to the other rail, the
- 10 tie also having a recess adjacent each lip, a chair arranged at each end of the tie, one chair occupying an inside adjacent position with respect to the first named rail and the other chair occupying an outside adjacent
- 15 position with respect to the second named

rail, each chair having an overhanging lip which cooperates with the corresponding one of the lips first-named, each chair further having a lateral extension, the chairs with their extensions conformably fitting in 20 said recesses, straps arranged to extend across the extensions at opposite sides of the tie, and bolts connecting the straps in pair.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 25 nesses.

ALBERT VALKELBERG

Witnesses:

EDITH SCOTT,

AGNES BARRY.