W. NELSON.

ADJUSTABLE STEEL TIE.

APPLICATION FILED APR. 14, 1919.

1,357,180. Patented Oct. 26, 1920.

Fig. 1.

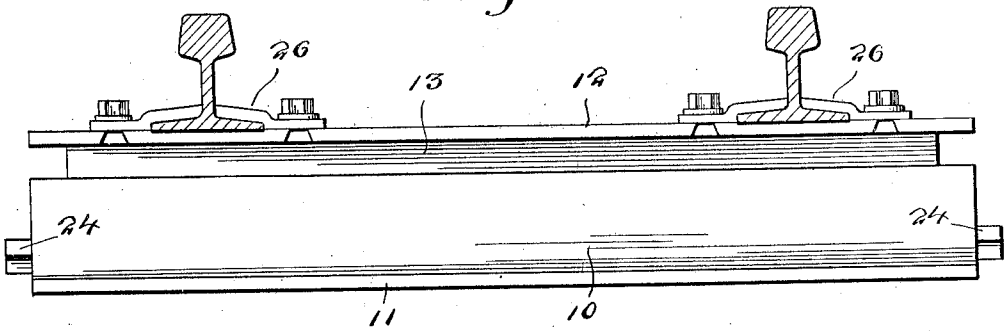


Fig. 2.

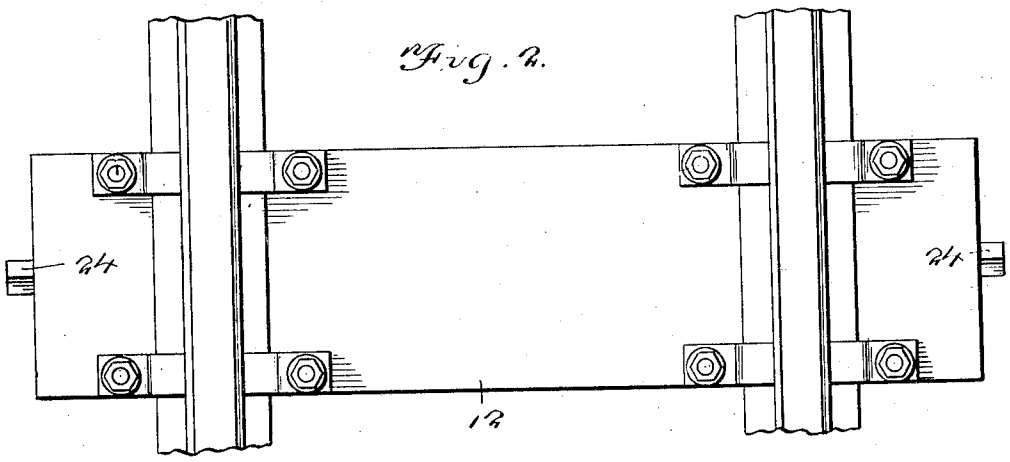
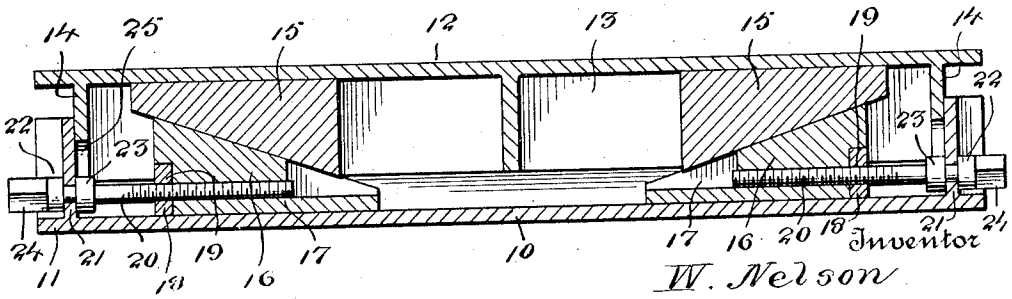


Fig. 3.



Witnesses

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ADJUSTABLE STEEL TIE.

1,357,180. Specification of Letters Patent. Patented Oct. 26, 1920.

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To all whom it may concern:

Be it known that I, WILLIAM NELSON, a citizen of the United States, residing at Patzau, in the county of Douglas and State of Wisconsin, have invented new and useful Improvements in Adjustable Steel Ties, of which the following is a specification.

This invention relates to railroad ties, the object being to provide a tie of simple and durable construction, by means of which the rails may be adjusted and maintained at the proper level at all times. The invention is especially useful, and does away with the use of wooden wedges, for this purpose, the latter being expensive as their life is usually limited.

Another object is to provide a tie of the above character which may be adjusted at either one or both ends to accurately level the rail, the adjustment, being effected from the ends of the ties in a simple and convenient manner without disturbing the tie.

Another object is to provide a tie which includes a metal casing with wooden adjusting or rail supporting blocks therein, thereby taking up the vibration of the same and protecting the blocks from the action of the weather.

Another object is to provide means for removably connecting the rail to the tie in a manner to permit of the removal of the securing bolts, without disturbing the tie.

Other objects and advantages of the invention will appear in the following description as read in connection with the accompanying drawings:—

In the drawings:—

Figure 1 is a side elevation of the rail way tie constructed in accordance with the present invention,

Fig. 2 is a plan view of the same,

Fig. 3 is a central longitudinal sectional view.

Referring to the drawings in detail like characters of reference denote corresponding parts throughout the several views.

As illustrated in the accompanying drawing, the tie is formed of an elongated rectangular casing 10 preferably made of steel or other metal. The casing 10 is open at the top and has its bottom edges extending beyond the sides thereof to form flanges 11, which when properly embedded in the ballast will serve to prevent movement of the tie.

The casing 10 is provided with a cover 12, which also extends beyond the sides and ends of the casing so as to provide a water shed to prevent the entrance of water or moisture within the casing. Depending from the cover 12 are side and end flanges 13 and 14 respectively, which are so spaced from the edges of the cover as to provide a sliding fit within the side and end walls of the casing 10 and as the cover is adjustable these flanges will act as guides for the cover in its vertical movement.

To accomplish the vertical adjustment of the cover, there is positioned beneath each end thereof and secured against relative movement, a block 15. This block is wedge-shaped and has its tapered end projecting outwardly or toward the end of the tie. Located within the casing 10 at each end thereof is a wedge shaped block 16, whose point extends inwardly or in a direction opposite to that of the point of the block 15 so that a relative movement of the blocks 15 and 16 will cause a vertical adjustment of the cover 12. The block 16 is provided with a longitudinal bore 17 and has secured to one end a plate 18, the latter being provided with an opening 19 which registers with the bore 17. The opening 19 is threaded for engagement with a threaded bolt 20, one end of which projects through an opening 21 in the end of the casing 10. This bolt is provided with a shoulder 22 upon the outside of the casing and with a collar 23 upon the inside of the casing, this shoulder and collar bearing upon the outer and inner sides of the end wall of the casing so that the bolt may be permitted to rotate within the opening 21 and be held against longitudinal movement with respect to the tie. The extremity of the bolt 20 is formed with a squared portion 24 for the reception of a wrench or other tool by means of which the bolt may be rotated to adjust the block 16.

It will thus be seen that the height of the tie may be adjusted from either one or both ends to level the rails, so that the latter may be at all times maintained at a proper level without disturbing the tie.

In order to provide for the passage of the bolts 20 through the end flanges 14, these flanges are notched as at 25 so as to straddle the bolts and permit of a free rotary movement of the latter.

The invention is susceptible of various changes in its form, proportions and minor

details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

I claim:—

1. A rail tie comprising a substantially rectangular casing open at the top, a cover for said casing, flanges projecting from the sides and ends of the cover within the casing, a wedge shaped block secured beneath each end of the cover, an adjustable wedge shaped block located at each end of the casing beneath the first mentioned blocks and spaced from the side walls of the casing to permit of the entrance of the cover flanges, which flanges provide guides for the adjustable wedge shaped blocks and threaded bolts engageable with said blocks and extending without the casing for regulating the height of the cover.

2. A rail tie comprising a substantially rectangular casing open at the top, a cover for said casing, depending side and end flanges carried by said cover for contact with the walls of the casing, a wedge shaped block located at each end of the casing, a wedge shaped block located at each end of the cover and rods threadedly engaging the blocks and extending through slots in the cover flanges and swiveled in the ends of the casing for adjusting the blocks to regulate the height of the casing.

In testimony whereof I affix my signature.

WILLIAM NELSON.