E. A. MUSE.

RAILROAD TIE.

APPLICATION FILED MAR. 13, 1916.

1,209,477. Patented Dec. 19, 1916.

Fig. 1.

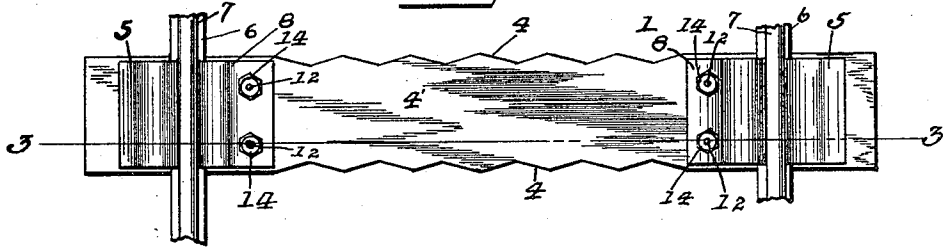


Fig. 2.

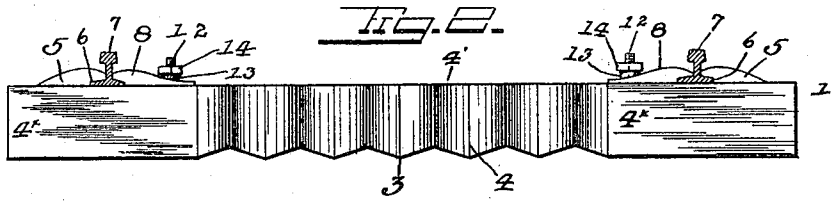


Fig. 3.

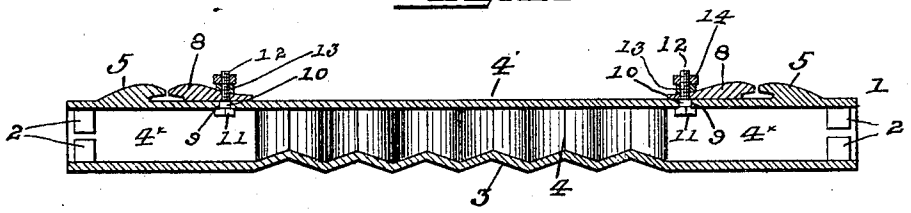


Fig. 4.

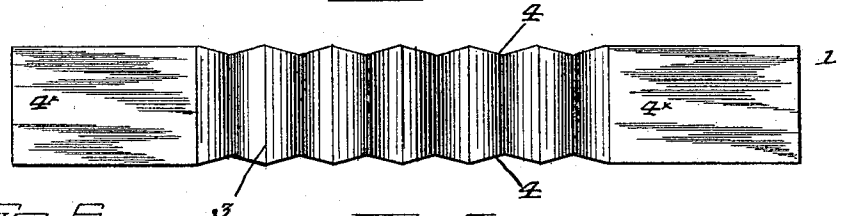


Fig. 6.

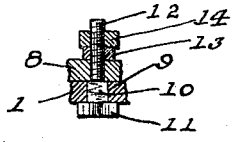
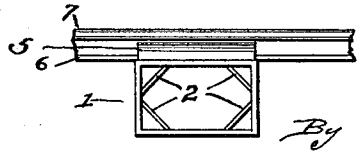


Fig. 5.



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RAILROAD-TIE.

1,209,477. Specification of Letters Patent. Patented Dec. 19, 1916.

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To all whom it may concern:

Be it known that I, EDWARD A. MUSE, a citizen of the United States, residing at Hamlet, in the county of Richmond and State of North Carolina, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

My invention relates to improvements in railroad ties and refers particularly to a tie constructed entirely of metal.

One object of my invention is the provision of a metal tie which while initially costing more than the wood tie, by reason of its long life will prove in the end cheaper and more desirable than the common wood tie in general use.

Another object of my invention is the production of a metal tie which will provide a perfect support and fastening for the rails; which will prevent working loose or spreading of the rails; and which will have the necessary resiliency to form a proper cushion support for the rails.

Another object of my invention is the provision of a tie which will allow for the usual contraction and expansion due to the weather, which will be simple, strong and durable in construction and thoroughly efficient and practical from every point of view.

With these objects in view my invention consists of a metal railroad tie embodying novel features of construction and combination of parts for service, as herein shown, described and claimed.

Figure 1 is a top plan view of a metal tie constructed in accordance with and embodying my invention. Fig. 2 is a side view of the tie. Fig. 3 is a sectional view taken on line 3—3, Fig. 1. Fig. 4 is a bottom plan view, Fig. 5 is an end view and Fig. 6 is a detail view of the novel form of fastening and locking means.

Referring by numeral to the drawings in which similar characters of reference denote like parts in all the views, the numeral 1, designates the tie proper, which is a rectangular open casing or box like structure of metal, having the end corner braces 2, and upon the bottom of the tie is disposed or formed the corrugated or ribbed base portion 3, and upon each side are formed the similar corrugated or ribbed portions 4. The top 4′, of the tie is flat or smooth as well as are the portions 4^{x}, of the bottom and sides contiguous to the corrugated portions 3 and 4. The corrugated portions 3 and 4 receive the ballast or filling and serve to anchor the tie when in use and the box like hollow construction insures a proper cushion support for the rails.

On the upper face, the tie is formed with the integral rail engaging portions 5, which fit upon the foot 6, of the rail 7, while the other side of the foot 6, is engaged by the removable plates 8. The tie is formed in its upper walls near each end with the square or angular openings 9, which receive and retain from turning the angular portion 10, of the securing bolts 11, which have the threaded end 12, passing through the removable plates 8, and which threaded ends receive the nut locking means 13 and the nuts 14. This forms a novel means for securing the plates and rails and for locking the nuts, but such means permit of the laying and taking up of the rails, when found necessary.

From the foregoing description taken in connection with the drawings, it will be evident that I provide a metal railroad tie which will perform all the functions for which it is designed in an efficient and practical manner and that a rail support is provided which will form a proper cushion support to insure smooth and noiseless riding of the train and which will avoid accidents by preventing spreading or working loose of the rails.

I claim:—

A hollow metal tie having the bottom and sides corrugated for a certain distance of its length with its top smooth and having end corner braces, integral rail engaging portions formed on the top of said tie near each end, and removable rail engaging portions arranged and secured to the top of the tie, parallel with said integral portions, said tie having squared openings, bolts having squared portions fitted in said openings, and having threaded ends, and nut locks and nuts fitting on said threaded ends.

In testimony whereof I affix my signature in the presence of two witnesses.

EDWARD ARTHUR MUSE.

Witnesses:

W. B. CARSON,

J. E. SHAW.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D C."